Malaysian Higher Education and The United States As A Model: Policy Borrowing or Policy Learning?

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Submitted in total fulfilment of the requirements of the degree of Doctor of Philosophy

December, 2013

Melbourne Graduate School of Education
The University of Melbourne
ABSTRACT

Higher education plays an important role in many developing countries. Graduates are being equipped with professional knowledge and skills to fulfil the demands of the labour market in a knowledge economy. Developing countries tend to adopt models of higher education organization from developed nations, especially those that are world leaders. Progress in science and technology and national wealth itself point to the success of these systems and suggest that they represent a suitable and feasible path to take. Malaysia is amongst those developing nations that have looked to advanced economies to provide a model of mass higher education which would raise educational levels and national income.

But has a process of policy-borrowing achieved both the growth and the equity that governments have promised? Has the expansion and diversification of higher education in Malaysia created more equitable access for all students in order to ensure that increased higher education is undertaken by a wide range of population who have the ability and motivation to succeed? This study aims to contribute to policy learning in higher education in the developing world (as distinct from uncritical policy borrowing). It focuses on Malaysia’s efforts to learn from the US experience. The findings of this study may assist the Malaysian policy makers in designing new improved policies to widen access in higher education and to further strengthen Malaysian higher education sector.

In the first section of this thesis, a review is made of US efforts to expand higher education, while improving equity. Two barriers to participation in higher education – school dropout rates and low achievement among young people who do graduate – are examined in greater detail. This then leads to a key discussion on the types of higher educational institutions in the US, their enrolment patterns and the challenges faced by each institution. At the end of this section, the findings that developing countries can learn from the United States’ experience are highlighted.

In the second section, the study focuses on Malaysia. It starts with historical overview pre independence, focusing on economic, social and educational
developments. The growth and structural transformation of the Malaysian economy are also examined and compared with educational attainment. Trends in primary and secondary public education expansion and challenges facing this public system are then discussed, leading to a detailed discussion on the development of the Malaysian public and private tertiary education sector.

The findings presented in this study show that the challenge for Malaysia is not to become like the USA, but to learn from the US experience and to develop its own strategic plans for higher education that fit with the social and economic needs of the country. The study suggests policy directions to making higher education in Malaysia more effective and equitable, which includes strengthening and improving Malaysia’s public schools, enhancing the quality of higher education and assisting students from disadvantaged families. Such initiatives may assist Malaysia to become the best provider of higher education in the South East Asian region and a high-income developed country by the year 2020.
DECLARATION OF ORIGINALITY

This is to certify that:

(i) the thesis comprises only my original work towards the PhD,
(ii) due acknowledgement has been made in the text to all other material used,
(iii) the thesis is fewer than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices.

(Arnida Abdullah)
ACKNOWLEDGEMENTS

The writing of this thesis has been one of the most challenging experiences of my academic life. Words can never be enough in expressing how grateful I am to those who have contributed to this thesis and supported me during this amazing journey.

Foremost, I would like to express the deepest appreciation to my principal supervisor, Professor Richard Teese, for encouraging and helping me to shape my interest and ideas. Without his guidance and persistent help this thesis would not have been possible.

I would like to thank Professor Stephen Lamb for giving opinions, suggestions and ideas for improvement. My sincere thanks also goes to all the members of staff at Centre for Research on Education System for their support and assistance, in particular to Anne Thomas, Rosa Brezac and Esther Doecke.

Very special thanks to the Malaysian Government and Universiti Putra Malaysia for granting me leave from work and giving financial support throughout my doctoral study at The University of Melbourne.

Words cannot express the feelings I have for my husband – Arif, my children – Dafeena and Daniel for their patience and being particularly supportive through all the ups and downs of my research. To my parents, thank you. Your unconditional love and support allow me to eventually finish this journey. Many thanks also to friends and family in Malaysia and Melbourne for their words of encouragement.
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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Higher education plays a key role in economic development by helping form skilled and trained people who can take their part in a knowledge-based society reflecting directions of industry and social change. The International Institute for Educational Planning reminds us about the fact that:

“In today’s information societies, knowledge drives economic growth and development. Higher education is the main source of that knowledge – its production, dissemination and its absorption by any society.” (2007, p.3)

This implies that dissemination of advanced level knowledge through higher education is able to tailor a solution for achieving greater social and economic progress. Investment in higher education, both in public and private sectors, therefore becomes an important indicator of an effective government responding positively to the knowledge economy.

Many countries are investing heavily in tertiary education to equip graduates with professional knowledge and skills to fulfil the demands of the labour market in the knowledge economy. In 2009, the United States of America was ranked as the country spending the highest on tertiary education as a percentage of its gross domestic product, which was far above the OECD average 1.5 per cent, as presented in Figure 1.1.
From the chart, the USA spends 2.6 per cent of its GDP on tertiary education, with the largest funding – 1.6 per cent – coming from the private outlays. It is followed by Canada, spending 0.1 per cent lower than the USA. These large and rich nations that invest the most in tertiary education also tend to have a more highly educated population and are regarded as the greatest in providing top quality higher education in the world. This view is supported by Williams et al. (2012) in their report entitled ‘U21 Ranking of National Higher Education Systems 2012’. Williams et al. (2012, p. 25) state that “the top six countries on our ranking of national higher education systems are the United States, Sweden, Canada, Finland, Denmark and Switzerland.” These are wealthy nations and are able to pursue aggressive investment in their higher education sectors, both in quality and in quantity.

Due to their international reputation as providing the world’s top quality higher education, leading developed countries have captured the attention of many developing nations. Rich nations have become reference models for higher education policy development in those developing countries that are seeking to expand their
higher education sector following the path of the Western world. The same types of policies and programs tend to be transferred from the developed countries to the developing world. As Evans (2004, p. 3) argues, “policy transfer remains largely a rational process in the sense that such states (the developing countries) still need to engage in lesson drawing from successful exemplars in order to engineer effective national development or reconstruction planning and programming.” This in turn will mean that the adoption of the higher education policies in the developing world is expected to accelerate the pace of growth of higher education sector, even though little or no attention may be given to policy modification.

Malaysia, like many other developing countries, aims to become as rich, powerful, and successful as the developed countries. As one of the fastest-growing economies among the developing nations, Malaysia has initiated a new direction to become a high-income developed country by the year 2020. Vision 2020, which was introduced by the former Prime Minister, Tun Mahathir Mohamad, in February 1991, states that,

“by the year 2020, Malaysia can be a united nation, with a confident Malaysian society, infused by strong moral and ethical values, living in a society that is democratic, liberal and tolerant, caring, economically just and equitable, progressive and prosperous, and in full possession of an economy that is competitive, dynamic, robust and resilient.” (Economic Planning Unit, 1991, para. 5)

In order to realize Vision 2020, Malaysia needs to enhance the quality and productivity of its workforce by having a large pool of highly educated and skilled workers. In addition, increasing social mobility through higher education is another important aspect since higher education promises higher wages, better job prospects and quality of life of individuals. As Oriahi and Aitufe (2010, p. 309) remind us, “no country has succeeded if it has not educated its people. Education is important in reducing poverty and also increasing the wealth of a nation.”
Recognizing the link between higher education and human capital as well as the link between social development and sustained economic growth, the Malaysian government has decided to drive major reforms toward mass participation in higher education. In 2002, the Ministry of Education released a new education blueprint, known as The Education Development Plan for Malaysia 2001-2010. This Plan was to guide the direction of all levels of education over the period 2001-2010. The focus was “to provide opportunities for quality education to all Malaysians from preschool to tertiary level in terms of access, equity, quality, efficiency and effectiveness of education management” (Liu et al., 2013). One of the aims for higher education was,

“to increase access and participation rates in tertiary education (to be) implemented in stages by increasing student intake at tertiary level from 25 per cent (17+-23+cohort) in 2000 to 30 per cent by 2005 and 40 per cent (16+-22+ cohort) by 2010, and to realize lifelong learning” (UNESCO International Institute for Educational Planning, 2001, p. 9)

To meet the above target, the government has been working hard to increase the number of public schools and to improve the quality of school education. At the same time, new public universities have been established to offer more opportunities for higher education to all Malaysian students. More polytechnics and community colleges have been set up to make tertiary education more accessible by offering programs leading to the award of certificates, diplomas and advanced diplomas.

The Malaysian government’s efforts to increase higher education participation show good signs of progress. The rise in school attendance at primary and secondary levels has increased the demand for higher education. More and more parents seem to realise the importance of obtaining higher education for their children and they want the very best for their children. Enrolment has risen at many public and private universities across Malaysia. The number of students at polytechnics and community colleges is growing every year.
As part of the reform agenda, the Malaysian government through the Ministry of Higher Education has taken another major step toward a mass system of higher education by making higher education more diversified. The development of alternatives to public universities has led to the greater expansion of non-university public institutions, polytechnics and community colleges. Public universities have been differentiated according to their roles, with the private sector being urged to contribute distinctively in the provision of higher education. This has created an environment for a mushrooming of privately-driven, for-profit higher institutions in all parts of the country. Students now have a huge choice of higher institutions, much greater than ever before, and they are free to pick which ones suit their specific needs. At the same time, public and private higher institutions are competing against each other for the best candidates.

To have a strong future, expansion and diversification of higher education institutions both in the public and private sector are indeed ‘effective’ strategies toward democratization of higher education. This is, however, not just about democratization, but also to support the most recent government’s aspiration to have at least 45 per cent of its population, in the 17 to 23 age cohorts, to receive higher education by the year 2015, and subsequently 50 per cent by the year 2020 (National Higher Education Strategic Plan Approaching 2020, 2007). More capital therefore has been poured into the higher education sector. It was recently reported that Malaysia is one of four countries which are equal second in higher education spending as a percentage of GDP (along with Denmark, Finland and Ukraine, with Saudi Arabia the top spender). Malaysia’s high position is in part due to its high capital expenditure (Williams et al., 2013, p. 11). This confirms that the Malaysian government has taken serious measures to increase the number of Malaysians gaining access to the higher education.

Although the movement towards the provision of mass higher education in Malaysia is considered a key strategy to boost economic growth, it is important to highlight that Malaysia needs a more equitable higher education system, not just a bigger one, especially if a much larger and more expensive system is also not equitable. This is
to ensure accelerated economic growth for the benefit of all segments of Malaysian society and to avoid economic collapse and social crisis.

The experience of some developed countries shows that expansion of higher education does not necessarily lead to more equality and may favour only a certain part of society. A 2008 OECD publication entitled “Growing Unequal? Income Distribution and Poverty in OECD Countries” finds that income inequality in the US was the highest among other developed countries in the mid-2000s, in which the Gini coefficient was 0.381 (OECD, 2008a). The comparable figures for the other developed countries were: United Kingdom 0.335, Germany 0.298, Canada 0.317, France 0.270, Sweden 0.234, Australia 0.301 and Finland 0.269. This indicates that a big, rich country like the US has succeeded in building up a mass higher education system, but continues to lag behind other countries when it comes to providing equity. The experience of the United States should be taken as a warning to less developed countries with regard to the priorities they set and the strategies they develop to ensure educational growth is accompanied by equity.

Thus, which way forward for Malaysian higher education? This study is to investigate Malaysia’s approach to relying on models of higher education from the developed countries, in this case the USA. The study begins by examining how American higher education has tried to create equity through massive expansion and diversification. Findings from the two countries are then compared to identify specific areas where Malaysia can learn from the US experience.

1.2 Research objectives and questions to be examined

This study focuses on Malaysia’s efforts to learn from the US experience. The first section of this thesis starts with a review of US efforts in expanding its higher education system in the years after 1940. A main question that needs to be addressed
is, does a system of mass higher education bring greater equity to the US? Two barriers to participation in higher education – school dropout rates and low achievement among young people who do graduate – are examined in greater detail. To explore further, a key discussion of the types of higher educational institutions in the US, their enrolment patterns and the challenges faced by each institution is also presented. The end of this section deals with a question, what developing countries can learn from the US experience.

The second section and the core work of this thesis focuses on the growth of higher education in Malaysia. A main question to be raised in this section is whether the expansion and diversification of higher education in Malaysia can create a more equitable access for all students in order to ensure that increased higher education is undertaken by a wide range of population who has the ability and motivation to succeed. The section opens with an historical overview pre-independence, focusing on economic, social and educational developments. It then explores the growth and structural transformation of the Malaysian economy and a comparison is made with educational attainment. Afterwards, trends in primary and secondary public education expansion and challenges facing the public system are then discussed, leading to a detailed examination of the development of the Malaysian public and private tertiary education sector.

The final section is a conclusion that draws together the main findings from this study. This section describes and discusses the development strategies for achieving growth with equity in Malaysian higher education. Some of key questions that are addressed include:

1) What lessons can be drawn from the US experience?
2) How to achieve growth in higher education system with equity in Malaysia?
3) What policy options can be recommended to achieve both objectives of access and quality in the Malaysian higher education sector?
1.3 Aim of study

The aim of this research is to contribute to the understanding of policy learning in higher education in developing countries. The focus is on Malaysia – a successful developing country in the ASEAN region – to learn from the USA – one of the most well-known developed countries. This is because many pressures push developing nations, including Malaysia, to adopt strategies and policies of higher education from developed countries – mostly represented by OECD countries – in an effort to create systems of mass higher education.

Developed countries' ‘successful’ development policies, however, do not necessarily imply effectiveness and ensure success. To learn and understand the experience of higher education growth in developed countries is therefore very important to serve as a guide and reference for developing countries in determining the right policy approach to expand higher education with greater equity. The research should assist policy makers to identify and make changes to ensure that every student has an equal access to higher education, regardless of sex, race or socio-economic background. Therefore, an important feature of this research is lessons learned from the US experience and suggested recommendations for promoting growth with equity in Malaysian higher education system.

1.4 Significance of the study

This research adds to a growing body of knowledge on policy learning, mainly in developing countries. The focus is to highlight a better culture in the policy development process that is policy learning and lesson drawing, as opposed to policy transfer (or policy adoption). This approach enables developing countries to learn
from the experience of more developed countries instead of repeating the same challenges which may affect the growth of higher education from bad to worse. Policies in developed countries – even if they are proven effective – may not produce the same results in developing countries due to contextual differences. The development of effective policies that are most appropriate within the country is essential to sweep away the existing barriers and make higher education more equitable.

The complex relationship between expansion and equity in higher education has been widely investigated. This is one more study to add to the growing body of evidence about expanding higher education system without necessarily creating greater equity. Expansion is not equitable if students from low income families can only afford to attend low-priced public or private institutions that are more likely to offer low quality courses. The current policies for expanding higher education, particularly in developing countries like Malaysia, have only increased the number of those entering higher education without widening access. Measures must be taken to balance the neglect within the system to allow for an expansion with quantity, quality and equity.

The findings of this study may also assist the Malaysian policy makers in designing new improved policies to widen access in higher education and to further strengthen the Malaysian higher education sector. The focus will be on how to implement equity in admissions and access to higher education among all students regardless of student origins or family circumstances. This includes the need for a closer look at student achievement in primary and secondary levels since academic performance is known to be a good predictor of access to higher education. By looking deeper into the root of the problem, this research explores possible causes underlying inequalities in higher education and comes up with potential solutions to reduce them. Transformation must start at primary level and continue through all levels of education.
1.5 Methodology

In this section, research design, data collection and data analysis used in this study are described. The reasons for these choices are explained. Challenges encountered by the researcher in conducting this study are also discussed.

1.5.1 Research design

According to Taris (2000, p. 5), “any study can only be as good as its design.” Research design, therefore, is one of major steps in conducting a study in order to ensure smooth sailing of research operations and heading in the right direction. It guides a researcher in answering specific research questions that have been set. Kerlinger in Beri (2008, p. 61) defines a research design as “the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and control variance.” In line with this, Grove et al. (2013, p. 43) describe a research design as “a blueprint for the conduct of a study that maximizes control over factors that could interfere with the study’s desired outcome.” De Vaus (2001), however, has defined a research design in a different way. He claims that,

“A research design is not just a work plan. A work plan details what has to be done to complete the project, but the work plan will flow from the project’s research design. The function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible. ... In other words, when designing research we need to ask: given this research question (or theory), what type of evidence is needed to answer the question (or test the theory) in a convincing way?” (p. 9)
Thus, it can be said that a research design refers to a detailed outline of a full process in which the research will take place, starting with choosing appropriate methods to use in collecting data, followed by selecting the type of data to be collected and finally to reporting data analysis. It is always important to develop a design which is suitable to the research questions being addressed.

‘Policy borrowing and policy learning’ is the guiding concepts of this research. The goal is to contribute to the understanding of policy learning in higher education in developing countries by exposing the limitations of ‘policy borrowing’. A major conclusion to be drawn from this study is lessons learned from the US experience and suggested recommendations for promoting growth with equity in Malaysian higher education system. An approach which is appropriate to these concerns is one in which comparison is used as a tool of critical policy analysis, based on developed and developing country case studies, notably the USA and Malaysia. The rationale for using this method is to explore the principles and policies guiding the two systems of higher education. The first case study examines the biggest and most powerful American model of higher education in creating equity through massive expansion and diversification. The findings from the first case study are to help lead to the second case which investigates higher education in a developing country, with a special focus on Malaysia, and its relationship with economic growth. The Malaysian part of the study, however, is organized differently from the American case study as it presents an analysis of the historical development of Malaysia until the present. Findings from these two countries are then compared to identify specific areas where Malaysia can learn from the US experience.

There are many ways to define the idea of comparative education in the work of classic authors and also contemporary authors. The classical author Carter Good (1962) cited by Benovat (2012, p. 3) defines comparative education as a “field of study dealing with the comparison of current educational theory and practice in different countries for the purpose of broadening and deepening understanding of educational problems beyond the boundaries of one's own country.” Stewart Fraser and William Brickman (1968), as cited by Rust (2002), agree with Carter Good about
comparative education. They claim that comparative education is “the analysis of educational systems and problems in two or more national environments in terms of socio-political, economic, cultural, ideological, and other contexts.” Noah and Eckstein (1969) cited by Manzon (2011), on the other hand, perceive comparative education to be more than a comparison of educational systems of countries. They state that,

“Comparative education is potentially more than a collection of data and perspectives from social sciences applied to education in different countries. Neither the topic of education nor the cross-national dimension is central to any of the social sciences; nor are the social science concerns and the cross-national dimension central to the work of educators. The field of comparative education is best defined as an intersection of the social sciences, education and cross-national study” (p. 121)

Some authors, on the other hand, define comparative education as a tool for educational planning. As Arnove et al. (1992) put it, comparative education “is a loosely bounded field which is held together by a fundamental belief that education can be improved and can serve to bring about change for the better in all nations.” George Bereday (as cited by Sodhi, 1998), also points out that comparative education aims

“to make sense out of the similarities and differences among educational systems. It catalogues educational methods across national frontiers and in this catalogue each country appears as one variant of the total store of mankind’s educational experience. If well set off, the like and contrasting colours of the world perspective will make each country a potential beneficiary of the lessons thus received” (p. 4)
In term of country reference guide, Kubow and Fossum (2003, p. 5) alert us that “comparison draws upon multiple disciplines to examine education in developed and developing countries. Comparative inquiry often leads to an examination of the role that education plays in individual and national development.” That is to say, comparative education can also be defined as a study that examines education systems of other countries in order to better understand the systems and to learn accomplishments and failures they face in solving similar problems (Oni, 2013).

Comparative study was first introduced in scientific disciplines particularly in the fields of anatomy, paleontology and embryology (Rust, 2002). In 1817, Marc-Antoine Jullien de Paris came up with the idea of a ‘science of education.’ He conducted a study with the aim “nothing less than to compare educational establishments throughout Europe, to set up a ‘Special Commission on Education’ and an ‘Educational Institute’, and to found an ‘Educational Newsletter’” (Gautherin, 1993, p. 5). The ‘science of education’ was built up by arranging the collected data in tables and charts in order to compare the different education systems. This study makes him a well-known figure in comparative education and it marks the beginning of comparative studies in education. Since then, various kinds of studies have been conducted in comparative education field over the years which lead to the formation of research trends as follows:

a) 1880s - Knowing the “other”

- At the end of the 19th century, the transfer and circulation of ideas, in relation to the worldwide diffusion of mass schooling, created a curiosity to know other countries and educational processes. International missions, the organization of universal exhibitions and the production of international encyclopedias, all led to the emergence of the discipline of Comparative Education, which was intended to help national reformers in their efforts to build national systems of education.
b) 1920s - Understanding the “other”

- World War I inspired an urgent sense of the necessity for international cooperation and mutual responsibility. Concomitant with this impulse was a desire to understand the “other”, both “other” powers and “other” countries, bringing with it an interest in different forms of knowledge production, schooling and education. To build a “new world” meant, first of all, to educate a “new man” which implied a “new school”. The need to compare naturally arose, concentrating on educational policies as well as on pedagogical movements.

c) 1960s - Constructing the “other”

- The post-colonial period witnessed a renewal of comparative approaches. The need to construct the “other”, namely in terms of building educational systems in the “new countries”, led to the dissemination of development policies, at a time when education was considered a main source of social and economic progress. The work accomplished within international agencies, as well as the presence and influence of a “scientific approach” that was developed as the basis of comparative studies, created educational solutions that were exported to different countries and regions.

d) 2000s - Measuring the “other”

- In a world defined through flux of communication and inter-dependent networks, the growing influence of comparative studies is linked to a global climate of intense economic competition and a growing belief in the key role of education in the endowment of marginal advantage. The major focus of much of this comparative research is inspired by a need to create international tools and
comparative indicators to measure the “efficiency” and the “quality” of education


In the quotation above, comparative education is shown to have evolved from studying foreign education systems in order to seek solutions to problems faced by our own educational systems, followed by copying or borrowing other countries’ systems and a step further, comparing data between different countries, also known as cross-national comparisons. This view is also supported by Noah and Eckstein (1969) in Bray et al. (2007). These two authors, however, claim that the development of comparative education can be divided into five stages: first, travellers’ tales, second, educational borrowing, third, understanding of other nations, fourth, recognizing factors and forces that shape national systems of education, and finally, using quantitative methods to describe relationships between sectors of education and society. Bereday (cited by Zajda and Rust, 2009), however, has different approach to classifying the historical development of comparative education. He claims that the phase starts with “the period of borrowing”, then, “the period of prediction” and finally, “the period of analysis.” The various stages of development in comparative education indicate that this type of study has undergone much change over the years and become increasingly more complex and comprehensive.

A long historical background of comparative education as a tool of policy research has involved different methods of comparison. As Philips and Schweisfurth (2014) write:

“Comparativists use all the research methods that other investigators of aspects of education employ in their research. They can therefore call upon a huge body of established approaches specific to the particular task of comparison” (p. 101).

This indicates that there is no single set of methodologies in comparative education since each scholar is able to blend different methodologies from previous studies,
resulting in considerable variety of approaches. Rust (2002), however, claims that pioneer scholars of comparative education used an historical approach in their country studies. This type of study outlines the history in order to understand contextual conditions and social settings that contribute to educational problems. Rust also mentions that “because early comparative education was global in nature, the historical studies these pioneers of the field produced were based almost exclusively on secondary sources” (Rust, 2002, p. 8). Similarly, Faas (2010) also highlights the detailed use of secondary data in the early development of comparative education in order to look for specific descriptions of each educational system available to all. This approach is the earliest example of educational borrowing since the emphasis is placed on collecting descriptive educational data as a strategy to identify best practices in education and also to consider adopting them.

In 1900, Michael Sandler proposed a new approach which offers totally a different view from historical method. “Sandler’s interpretive approach to understanding educational phenomena (involved) binding up what today we would call social, cultural and historical studies” (Jones, 2002, p. 92). He rejected uncritical borrowing in education and claimed that each nation state has a unique education system. For that reason, different approaches to education are employed. Faas (2010) also identifies a more holistic approach in comparative education which put more focus on outside school factors such as social and political ideas. The approach, called ‘forces and factors’, was presented in 1950s by several scholars, such as Nicholas Hans and Isaacs Kandel. According to Babatunde (1984), Kandel emphasizes the analysis of causes which have influenced educational systems. The differences in reasons are then compared between various types of systems in order to look for solutions to the problems. It can thus be suggested that this approach is not only about compilation of statistical data, but also understanding the educational systems in the context of historical, political, social, and cultural practices.

The next approach to comparative education, which evolved during the 1960s, is called positivist. This approach was inspired by the idea of applying scientific methods to “ensure a more certain and precise future for comparative education, in
which knowledge and facts would play a major and determinate role in educational reform” (Arno vector and Torres, 2000, p. 22). The scholars who have developed this scientific method are Brian Holmes, Harold Noah and Max Eckstein (Ben-Peretz et al., 2000). Methods that have been introduced by these scholars are:

a) Bereday’s Comparative Method in Education (1964)

Bereday presented his masterwork with a model of comparative method in education which involves four steps for undertaking comparative education in two countries (Bray & Koo, 2005; Bray et al., 2007). This method focuses on two main elements that are known as ‘area studies’ and ‘comparative studies’ (Zajda & Rust, 2009). The ‘area studies’ is focussed on pedagogical data of one country, while ‘comparative studies’ concentrate on many nations or regions at a time. The process for this model is illustrated in Figure 1.2

Figure 1.2 Bereday’s model for undertaking comparative studies
Form the figure, the first step is description in which pedagogical data for two countries is collected and presented separately. This is followed by interpretation which involves evaluation of each country data based on contextual background such as historical, political, economic and social. The third step requires juxtaposition. This step is a preliminary comparison between the two countries in which similarities and differences are analyzed. The final step involves simultaneous comparisons and hypothesis testing in order to reach a conclusion. Gordon (2013) claims that this approach is adding a new perspective to studying the developing countries. It is, however, too ambitious because it requires broad exposure of many aspects.

b) Holmes’s problem approach (1965)

Holmes’s problem approach, an adaptation of blended basic ideas of Dewey’s theoretical thinking and Popper’s critical dualism (Babatunde, 1984), involves making an observation to identify a problem, examining conditions of the problem and suggesting solutions. In contrast to Bereday’s model, Holmes’s approach, which is considered as ‘discovery of scientific fact,’ is not looking for reasons but more to hypothesis verification. This view is supported by Mundy et al. (2008) who write,

*Holmes felt comparative educators should identify important problems in education, look for solutions in the experiences of different societies, then predict which solution would produce desirable educational results in the specific conditions of one society. These predictions would be tested not in laboratory, but in the future unfolding of educational developments (p. 12)*

Holmes, therefore, recommended a problem approach to tackle educational issues. According to Provenzo and Renaud (2009, p. 159), this approach involves several steps which can be summarized as: “problem analysis; policy formulation; identification, descriptions, and weighting of relevant factors in a
given context; and anticipation, prediction, and monitoring the outcomes of policies.” The sketch in Figure 1.3 illustrates the model of this approach.

Figure 1.3 Holmes' problem approach and prediction model

Source: Malao, 1983, page 28

c) Noah and Eckstein’s scientific approach (1969)

Noah and Eckstein’s scientific approach relies on the analysis of numbers and quantitative data. This approach is the best for hypothesis formation, testing and validation (Gordon, 1996) in which a generalized conclusion is also formulated. It has been claimed that this approach make some changes to the term normally used from country names to variable names (Jones, 2002). Noah and Eckstein also point out a successful educational planning requires the use of quantitative data to examine practices in education systems and
educational outcomes (Marshall, 2014). In addition, cross-national comparisons of data are important in order to identify connections between schools and society (Gordon, 1996), and also teaching practice and learning outcomes (Menlo & Popplleton, 1999). According to Dede and Baskan (2011, p.3539), “the more countries’ data is used, the more ‘scientifically’ reliable the findings would be.” Noah and Eckstein proposed method consist of seven steps: identifying problem; developing hypothesis; defining concepts and indicators; selecting cases for study; collecting data; manipulating data; and, interpreting results (Hussam A. Al Qu’ran, 2012).

In brief, there are many approaches in comparative education and the above are some of examples closely related to social science. Since there is no one method that is best suited for a particular context, it is up to the researcher to design his or her study based upon data available from previous studies or databases. Which approach is used in this study?

This study is a comparative educational research study. It employs the concept of ‘policy borrowing’ and ‘policy learning’ to understand different approaches to higher education provision in building mass systems of higher education with equity. The study follows Holmes’ insight that the identification or formulation of problems should guide the conduct of a comparative study. The key ‘problems’ are how to create mass systems of higher education and how to ensure that they are equitable. Each case study is approached from this ‘problem’ angle. The researcher gather national data to study the road to ‘massification’ in the United States and to highlight the ‘solutions’ adopted—diversification and privatization. But the examination of the solutions is conducted critically to bring out the implications for equity, that is, the failure of diversification to produce a high level of equity. This case study prepares the way for the second case study, which is Malaysia. The researcher then reviews the history of higher education in this developing country from the vantage point of the road taken by its ‘model’ country, the United States. This is because Malaysia faced the same ‘problems’, i.e., growth and equity, and also because it adopted the same ‘solutions’ (diversification and privatization). The researcher also draws on
national data from Malaysia to tell the story of higher education development in that country. Data are not always available at the level of analysis that is desirable for this study (and I have flagged this in relevant parts of my discussion).

A mixed approach to comparative education based on two-country case study design is the best method to adopt for this study. Noah and Eckstein’s scientific approach is used to explore educational outcomes (differences by gender, ethnicity, socio-economic status, and location) for both case studies. The ‘forces and factors’ approach is then applied to understand phenomena and problems of education from the perspectives of social and historical studies.

Looking at the same challenges in school and higher education systems for both countries, this study is more likely related to Holmes’s problem approach. However, it only involves two steps - problem analysis and policy suggestions. Bereday’s comparative method in education is also practical since two case studies were investigated separately. However, aspects of evaluation between the two countries are different.

1.5.2 Data collection methods

Bray and Koo (2005) points out that comparative studies have been conducted in many approaches in which it can be categorized as either primarily quantitative or primarily qualitative. For that reason, comparison may rely on different tools for collecting data such as questionnaires, interviews, documentary analysis, and many other sources. A study by Foster et al. (2012), however, reports that the most common method used in comparative studies was document review and historical analysis (53 percent), followed by survey and quantitative analysis (35 percent) and next, interviews and focus groups (27 percent). This finding is also supported by Gordon (2013, p. 385) who writes “like all social science or educational researchers
the comparativists will use historical research methods – analysis of data, archives, records, legal documents and interviews; or survey research techniques, which might include questionnaire, opinionaires, interviews, and attitude scales.”

In this study, the researcher decides to mainly focus on secondary source of data. This type of data involves the use of existing data that have been collected by other researchers for some other purpose (Boslaugh, 2007). For example, the existing data are examined to find answers to new research questions that are totally different questions than the original research (Vartanian, 2010). Hakim (1982) in Thomas (2004, p. 191) elaborates more on the fact that “secondary analysis is any further analysis of an existing dataset which presents interpretations, conclusions, or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results.” This means that re-use of existing data may lead researchers toward a new understanding, or even an unexpected finding (Anderson et al., 2011).

Secondary sources are commonly regarded as written materials such as books, magazine, journals, and newspaper articles. However, it also includes sources of non-written materials, such as voice and video recordings, pictures, drawings, films and television programmes (Lewis et al., 2009). The researcher, on the other hand, is more likely to categorize the sources used in this study as either numeric or non-numeric secondary data. An article by Emma Smith in a book titled, ‘Research methods and methodologies in education’ states that “non-numeric, or qualitative secondary data can include data retrieved second-hand from interviews, ethnographic accounts, documents, photographs or conversations” (Arthur et al., 2012, p. 125). In contrast, numeric secondary data basically deal with statistical information such as population census, government surveys, cohort and other longitudinal surveys and administrative records. (Smith, 2008) also claims that there is huge potential for using secondary analysis of numeric data. In this study, examples of numeric and non-numeric data include the following:
a) Numeric or quantitative data -- census, electoral statistics, websites and other related databases.

- National Center for Education Statistics, US
- U.S. Census Bureau
- The International Labour Organization (ILO) Statistics and databases
- OECD Online Education Database
- The World Bank Open Data
- UNESCO Institute for Statistics (UIS) and publications
- ACT Institutional Data Files, US
- Ministry of Education Malaysia website
- Ministry of Higher Education Malaysia website
- Economic Planning Unit, Malaysia website

b) Non-numeric or qualitative data -- books, journals, newspapers, government and NGO published documents, magazine articles and other research-related documents.

- Report for The World Bank
- OECD documents such as Education at a Glance and No more failures: Ten steps to equity in education.
- US government documents such as Blueprint for change.
- U.S. News and World Report
- US Department of Education documents such as Digest of Education Statistics and The Condition of Education
- Malaysia online newspapers such as BERNAMA Online and mStar Online.

The use of various sources in the study is necessary to check for consistency and accuracy of data. The purpose of this is to avoid mistakes and errors when reporting
the findings. A comparison of data is primarily carried out for the numerical sources. This approach is the same as that suggested by Steward and Kamins (1993). They write,

“The best strategy is to find multiple sources of information. Ideally, two or more independent sources should arrive at the same or similar conclusions. When disagreement among sources does exist, it is helpful to try identify reasons for such differences and to determine which source is more credible” (p. 30)

In addition to consistency checks, visual material such as tables, figures, charts and diagrams are cited so that it will be easy to refer back to the original source. A complete bibliography page will be inserted at the end of the thesis.

The decision to rely on secondary data is due to time constraints and funding resources faced by the researcher. As a Malaysian government scholar, the researcher is given a maximum period of four years to complete her study. In addition, several stages of data collection in Malaysia and US were more time-consuming than expected, including to obtain permission in both countries. Travel costs were an additional factor. In view of that, the use of secondary data in conducting comparative education study was more feasible and practical than primary data. A number of writers highlight that secondary data is usually much less expensive than primary data, and less time-consuming to obtain (Stewart and Kamins, 1993; Smith, 2008; Boslaugh, 2007; Fink, 2014; Stimson, 2014). A further motive for using secondary data is that it is much more suitable to better understand historical context and to examine patterns and predictors as well as consequences. According to Smith et al. (2011, p. 920), “secondary datasets can provide access to large sample sizes, relevant measures, and longitudinal data, allowing junior investigators to formulate a generalizable answer to a high impact question.” In addition, secondary data can serve as a useful tool in order to compare the old data with the new data (Stewart and Kamins, 1993) and in making international educational comparisons. Over time,
secondary data becomes richer, more refined and grow larger than primary data sets (Vartanian, 2010).

Secondary data, however, is unable to give all the necessary information required by the researcher. It has proved challenging and time consuming to gather reliable data on Malaysia. During the planning process for all the chapters in this second case study, various problems with data collection have been identified, including the following:

1) Difficulties in collecting and accessing reliable and relevant data
2) Various definitions of categories being used and some definitions do not always present similar types of data over the years
3) Inconsistencies in published statistical data such as the age, cohort and year
4) Not all data can be shared thanks to confidentiality requirements

For example, data on enrolments and academic performance at schools were obtained from various government publications, periodicals, reports and journals. Often, these official statistics for Malaysia were found to be classified into categories that are too broad. The indicators used to measure enrolments are reported only by state and type of schools, and there has been no detailed analysis of students' academic performance in national examinations – reported at a too-general level. In addition, some important categories are treated as confidential and are not available for public disclosure such as by region, race, and ethnicity. In other instances, the data published by the government are not the same as data sources produced by the World Bank, OECD and UNESCO. Thus, consistency checks are required to make sure that the data are accurate and reliable.

An even greater challenge is when there are not enough data available to examine the current state of higher education in Malaysia. Just like the school data, data on higher education published by the government are overly broad in order to protect the confidentiality of the institutions. Enrolment data are only available by gender, type of institutions, levels of study and state of origin. Data by racial/ethnic, regional, and
rural/urban differences are not revealed to public. And, there are no statistical data available on annual dropout rates, graduation rates, transfer rates, and progression rates (by gender, race/ethnicity, family income, types of institutions, region, rural/urban). Lack of available data, in turn, hinders the researcher exploring issues in greater depth.

Several studies have also revealed the same drawbacks of this method. Perhaps the most serious disadvantage of this method is unreliable data. According to Anderson et al. (2011), although secondary data is considered to be of high quality, but it may not entirely true for all data. All data must be evaluated carefully and unsuitable data must be rejected. This is to avoid conflicting and misinterpreting of conclusions (Stewart and Kamins, 1993). Boslaugh (2007) and Smith et al. (2011), on the other hand, draw attention to the problem of inapplicable data. This arises when the existing or primary sources have incomplete information that are required to answer research secondary questions. This problem exists because every research has been designed with a specific purpose (Smith, 2008; Lewis et al., 2009). Boslaugh (2007), Lewis et al. (2009) and Anderson et al. (2011) also report a similar weakness, that is, the use of unstandardized definitions of variables. They claim that two data sets may not be suitable for combination due to different definitions or to the fact that the definitions have been revised over time.

### 1.5.3 Data analysis and presentation techniques

In order to explore expansion of higher education and challenges facing higher educational institutions in the US and Malaysia over a period of time, it is suitable to carry out trend analysis. According to OECD (2014),
‘Trend analysis means looking at how a potential driver of change has developed over time, and how it is likely to develop in the future. Rational analysis of development patterns provides a far more reliable basis for speculation and prediction than reliance on mere intuition. Several trends can be combined to picture a possible future for the sector of interest, such as schooling. Trend analysis does not predict what the future will look like; it becomes a powerful tool for strategic planning by creating plausible, detailed pictures of what the future might look like” (OECD website, http://www.oecd.org/site/schoolingfortomorrowknowledgebase/futuresthinking/trends/trendanalysisasamethod.htm)

Using secondary data as a main source, this study obtains statistical data from the late 1960’s through to the present for both countries. The data collected is then edited, and converted into tables, charts or figures to look for patterns and trends. The process even includes comparing trends when they are represented on the same graph. In addition, there are graphs with 2 y-axes in order to get a more accurate picture of the trends. In order to identify key factors that led to the trends, 5 Ws approach (who, what, when, where, and why) is applied. This type of information is very helpful to understand “what has been happening in the past, what the present situations reveals, and on the basis of these data, what is likely to happen in the future” (Catane, 2002).

In conclusion, this study aims to contribute to ‘policy learning’ in higher education in the developing world by exposing the limitations of ‘policy borrowing’. It focuses on Malaysia’s efforts to learn from the US experience. A comparative education design has been selected as appropriate for this study. It involves two-country comparisons, the USA and Malaysia. A case study design is conducted as a strategy to answer all research questions and to meet the objectives and secondary data is used to collect both quantitative and qualitative data. This study employs a trend analysis technique in order to examine trends and patterns in the data.
1.6 Structure of thesis

This thesis is divided into three major parts – two introductory chapters (background of study and literature review), main research sections (case study one and case study two) and conclusions from the whole thesis. All chapters are organized according to themes, which are broken into sub-themes.

Case study one examines American higher education. The approach is to examine trends in higher education enrolment and to identify social and institutional barriers to equity in the American higher education system. The insights offered by the analysis of this case study guide the study of Malaysia which makes up the second case in the thesis.

Second case study starts with the history of higher education development in Malaysia from colonial times to the present day. The angle of approach is on the long-term goal of creating an equitable system of higher education in a multi-racial society. The main question raised in this section is whether Malaysian higher education system appears to be creating the same issues as in the American system, although in a different national context. In other words, has Malaysia simply “borrowed” policy or has the country “learnt” to make better policy by reflecting critically on international experience. A summary of each chapter is as follows:

Chapter One introduces the study. It presents the background, the aim, the significance, research objectives and questions to be examined, research design and the structure of the whole thesis.

Chapter Two provides a review of the relevant literature dealing with this issue. This chapter reviews models of policy borrowing and policy learning. The differences between the two approaches are discussed. The second section focuses on the mass system of American higher education. Previous research findings are reviewed to discuss the forms of inequality in the US higher education. This chapter also
discusses previous research on expansion of higher education in Malaysia and equity as a goal of higher education development.

Chapter Three examines the emergence of mass participation in US higher education and the trends of enrolment in US higher education institutions to the present day. Factors influencing the expansion of higher education have both economic and social components are also provided in this chapter.

Chapter Four and Five discuss two barriers to participation in higher education – school dropout rates and low achievement among young people who do graduate. It will also detail the factors sitting behind these two barriers.

Chapter Six discusses two types of higher educational institutions in the United States, namely two and four-year institutions in both the private and public sectors. It will then compare the enrolment patterns at two- and four-year institutions.

Chapter Seven examines the factors which affect how choices are made by people entering (or not entering) American colleges. The aim is to highlight the kinds of constraints on equitable participation which will potentially check equity in developing countries.

Chapter Eight goes into further details on two-year institutions, while Chapter Nine presents the four-year institutions. Each chapter covers the enrolment trends which are disaggregated by gender, race and socio-economic background and some of the challenges or problems faced by those institutions.

Chapter Ten is the conclusion of the American case study. It explains what the USA has accomplished, the problems it has faced in transitioning from an elite to a mass system, and the policies it has implemented to improve access to higher education. It concludes with a discussion on what less developed countries might learn from the US experience.
Chapter Eleven is the first chapter on Malaysia. It starts with colonial times and leads up to independence in 1957 and the legacy of British rule. This chapter also examines The First Malaysia Plan (1966-1970), mainly focusing on economic and social development as well as education.

Chapter Twelve presents the growth and structural transformation of the Malaysian economy, resulting in a shift in the occupational structure of the economy. It then examines trends in educational attainment and how these have influenced changes in the labour force, requiring more highly educated workers to meet the demands of the knowledge-based economy (k-economy).

Chapter Thirteen focuses on identifying the significant developments in the Malaysian public school system by examining the trends in expansion of primary and secondary education and exploring the factors that have affected growth. It then identifies the policies of the Ministry of Education to increase student participation in primary and secondary schools.

Chapter Fourteen examines the problems and challenges facing the Malaysian public school system, highlighting the need to strengthen the weak areas before moving to massive growth in higher education.

Chapter Fifteen divides the development of Malaysian tertiary education into three stages: Stage 1 is the establishment stage of tertiary education, Stage 2 the expansion stage, and Stage 3 the diversification stage. Diversity in public university education is also examined in this chapter.

Chapter Sixteen explains recent trends and the development of polytechnics and community colleges. The chapter also justifies the need for these non-university institutions. The issues within technical and vocational tertiary education are identified.

Chapter Seventeen discusses the nature and growth of private tertiary education providers in Malaysia. It explores the ways in which the private sector has provided
educational opportunities to a range of students. Along with the benefits, however, there are several issues emerging from the expansion of private tertiary education.

Chapter Eighteen summarizes the key findings from the Malaysian case study, as well as drawing major conclusions from the whole case study on Malaysian tertiary education. The chapter explains several key findings such as a mix of economic and social objectives, the strategy for achieving economic and social objectives, the division of labour in academic structure and developing Malaysia towards a knowledge-based economy.

Chapter Nineteen focuses on the development strategies for achieving growth with equity in Malaysian higher education. First, some important lessons from the US experience are reviewed. Second, ways to improve equity in higher education are suggested for Malaysia. To finish, a series of possible policy options is proposed to achieve both objectives of access and quality in the Malaysian higher education sector.
Most developing countries have realized the importance of education for upward social mobility and economic growth. An individual’s social status can change from one social class to another as higher education brings higher wages, better job prospects and quality of life. Ultimately, there could be a reduction and eventually an end to global poverty, and also greater social equity in education. Greater equity should promote economic growth, as rising levels of education contribute to rising consumer demand. The links between economic growth and education have encouraged developing countries to expand and reform the education system. Policy makers, therefore, have always referred to the world's big rich economies as representing approaches to system expansion in higher education. But this has also led to an uncritical borrowing of foreign models in which a set of policies is considered as transferable regardless of the context.

The aim of this chapter is to provide a clearer understanding that policy learning is a better approach to international policy transfer than policy borrowing. Every country has its own unique history, culture, and people. Developing countries’ higher education policies must suit the needs and resources of the country and ideally be aimed at producing benefits for the entire society rather than a select few. The need to expand higher education may be set as a priority, but it must be accompanied by increasing educational opportunities for all. Policies should ensure that increased education is undertaken by a wide range of population, regardless of background and social status, who have the ability and motivation to succeed.

The chapter is divided into three sections. The first section looks at the key concepts of policy borrowing and policy learning to help elucidate the transmission of ideas
from developed countries to the developing world, particularly in terms of changes and reforms of the higher education sector. The differences between “borrowing” and “learning” are discussed, including why policy borrowing is more likely to occur in developing countries than policy learning. Case-studies of policy borrowing are also provided.

The second section is focused on the United States as a major source of ideas about how to grow higher education into a mass system. Although the USA has been able to build a successful mass higher education system, many researchers doubt whether equity has been realized in that country. Previous research findings, therefore, are reviewed to discuss inequalities in access to higher education and the negative experiences that are sometimes overlooked. Previous studies in developing countries that have sought to learn from the American experience are then identified. The final section of the chapter is devoted to Malaysian higher education. This section discusses previous research on the expansion of higher education in Malaysia and equity as a goal of higher education development.

2.1 Policy borrowing versus policy learning

Today higher education plays a leading role in the overall development of a great many countries, including those with limited income and resources. In developing countries, the role of higher education has become increasingly important as a way of driving economic growth and social development. Expanding and strengthening higher education are seen as essential to support the development objectives and to move forward to a much stronger position in the world economy. The trend to massification of enrolment in higher education is apparent in most developed nations. But is also increasing in the developing world. A World Bank report on “Higher Education in Developing Countries” has highlighted that “approximately half of today’s higher education students live in the developing world” (The Task
Force on Higher Education and Society, 2000, p. 10. Lee and Healy (2006) in their article, ‘Higher Education in South-East Asia: An Overview’, have also reported the expansion patterns in several developing countries of South-East Asia through the gross enrolment ratios in tertiary education between 1965 and 2000. Note that enrolment data from UNESCO have been added to their report to show the latest trend, as presented in Table 2.1.

Table 2.1 Gross enrolment ratios in tertiary education between 1965 and 2010

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>2</td>
<td>4</td>
<td>20</td>
<td>20</td>
<td>32</td>
<td>46</td>
</tr>
<tr>
<td>Philippines</td>
<td>19</td>
<td>18</td>
<td>38</td>
<td>30</td>
<td>30</td>
<td>28\textsuperscript{II}</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>11</td>
<td>23</td>
<td>40\textsuperscript{IV}</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>11</td>
<td>n.a</td>
<td>23</td>
</tr>
<tr>
<td>Vietnam</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>4</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1</td>
<td>2</td>
<td>n.a</td>
<td>6</td>
<td>8</td>
<td>n.a</td>
</tr>
<tr>
<td>Cambodia</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
<td>2</td>
<td>3</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Lee and Healy (2006) and UNESCO Institute for Statistics, online data 2013
Note:\textsuperscript{I} Data are for 2009

From the table, most of the countries show an upward trend in enrolment between 1965 and 2010. Thailand and Malaysia have faced strong and steady success in enrolment growth, while Indonesia and Vietnam shows slower, but positive progress. The other three countries (Myanmar, Cambodia and Lao PDR) show sustained improvement, but they need more time to catch up with the others. The Philippines, on the other hand, has seen its growth rates fall in recent years.

As most developed nations have been engaged in building up their higher education systems from elite to mass participation for many decades, most developing nations feel under pressure to follow the same trend in a much shorter time period. There is a growing concern for strong policy actions to reform existing structures. Most of these countries have confidence that the developed countries can serve as positive role models, leading to a process of copying or emulation. As Dale (1999, p. 9) points out, this “involves particular policies that one country seeks to imitate, emulate or
copy, bilaterally, from another. It is the product of conscious decision making, and it is initiated by the recipient.” This situation exhibits a process of policy borrowing and policy lending, resulting from the transfer of policy (also known as educational transfer). Perry and Tor (2007, p. 216) state that “educational transfer captures a complex range of processes and interactions, such as the ideational, covert, or implicit mechanism referred to as soft transfer, as well as overt and explicit policy borrowing and lending referred to as hard transfer.” Policy borrowing arises when countries require a fast solution method to solve a problem and they do not have enough time to create a new one (Dolowitz, 2000).

The central idea underlying policy borrowing is to identify the most successful elements – the ‘best practices’ – in the developed countries and to implement them in developing countries (Raffe, 2011; Steiner-Khamsi, 2012). The developed countries’ successful experiences are used to provide compelling solutions for the developing world. By applying the ‘best practices,’ the developing countries are expected to move in the same direction and respond more quickly to achieve faster results. However, they are actually engaged with risks and challenges because opportunities for improvement in policy borrowing are often overlooked (Raffe, 2011).

The pressure to follow ‘best practice’ comes in different forms. One of the most common is the requirements of international funding agencies, such as the World Bank and the Asian Development Bank. According to Dolowitz and Marsh,

“International governing organizations (IGOs), such as the OECD, G-7, IMF and the UN and its various agencies, are increasingly playing a role in the spread of ideas, programs and institutions around the globe. These organizations influence national policy-makers directly, through their policies and loan conditions, and indirectly, through the information and policies spread at their conferences and reports. In addition, international nongovernmental organizations (NGOs) are also increasing their influence over global
Steiner-Khamsi (2010, p. 331) has the same argument. He said that “the main reason why education reforms in developing countries look similar to those in developed countries is because international donors (development banks, international organizations) provide funding under the condition that a specific reform package – presented as “best practices” – is imported and implemented.”

Second, global economic forces for a knowledge-based economy pressure the developed countries to follow the same path taken by the world's richer nations. Instead of being passive recipients of current economic transformations, policy borrowing is regarded as strategic planning and active engagement with the global trend. “In other words, nations adopt ideas not because they are truly better, but because policymakers perceive them as modern, progressive and inevitable” (Verger et al., 2012, p. 204).

Finally, globalization has increased the speed of policy transfer across borders and triggered greater education borrowing. Salmi and Bassett (2010) said that “the influence of policy documents prepared by development agencies such as the World Bank should not be overestimated. At the end of the day, what actually makes the difference on the ground is not what the donors (the persons preparing the documents) think, but rather the determination of national governments to build up and modernize their tertiary education system.” In addition to the World Bank reports, international student assessment reports such as TIMMS and PISA which reveal the differences in educational achievement in rich and poor countries may also be regarded as a guide for reform policies and strategies.

Taken together, it seems that the different types of policy influence constrain governments of developing countries in the choice of options for higher education growth and favour policy borrowing over policy learning, a more discriminating and more drawn out process of evaluation. In the context of this study, policy borrowing
refers specifically to a process of uncritical adoption of policy where developing nations, as borrowers, adopt the same types of policies implemented by developed countries (in this case, the lenders). This, in turn, is more likely to lead to homogenization of higher education when higher education trends in developing countries are following a similar pattern in developed countries.

Simply borrowing higher education policies used by high-performing countries, higher education systems in developing nations risk reproducing western systems which have expanded opportunities, but have achieved only limited equity. Research by Ali (2002) has shown that policy borrowing has failed to improve access to education in Pakistan. Ali claims that Pakistan has adopted the policy of public-private partnership, also known as PPP, from the 1990s. Since then, many programs – sponsored by international agencies in particular the World Bank – have been conducted to address access and quality issues in education. Due to this policy, the growth of private institutions (all levels of education) in Pakistan has increased significantly up to 33.4 percent in 2005. Even though the policy shows some evidence of positive outcomes, in term of teachers’ and students’ attendance and time spent on tasks, it appears to be creating a system of “educational apartheid” in Pakistan. Ali, therefore, suggests that the Pakistan government should reconsider the PPP policy.

A study by Joshi (2007) in the Philippines also suggests that privatisation has not worked for education. According to Joshi, the Philippines university system has been modeled after the American university system since the Philippines sought help from the US to rebuild its educational institutions and economy after the World War II. An entrance program, therefore, has been adopted for use in both the private and public sectors in order to measure student ability and achievement for admission to post-secondary institutions. An unequal outcome appears to have been the result as opportunities are skewed toward the affluent students. They are well-prepared for higher education with more and better access than the poor. Although some private higher education is within reach of poor people, they can only afford and demand low-cost institutions that typically offer low-quality courses. This is because fees at
non-exclusive private institutions are seven times more costly than public institutions, and twenty times more in exclusive institutions. From the research, it is obvious that policy adoption in higher education runs the risk of creating benefits for the rich rather than the poor.

Agarwal (2006) investigated policy borrowing in India. An increase in demand for higher education has caused the rapid growth of higher institutions in that country. Higher education is being diversified as many new types of providers have been established such as private institutions, distance education providers, foreign education providers, non-university establishments, and also self-financing courses in public institutions. A very small number of these institutions, however, provide good quality education, while the majority offer poor-quality education and there are many non-accredited institutions in the country. Due to that, entry into good-quality institutions is highly competitive. The situation is even worse when tuition fees in public institutions have increased due to funding cuts and there are no proper financial aid packages for poor students. This study underlines the fact that higher education in India remains a dream for the great majority of poor students. Although the higher education system in India has experienced a rapid expansion, the diversification strategies have failed to maintain quality, accessibility and affordability in the higher education system.

Similar to policy borrowing, policy learning also refers to another country as an external reference, but the system is compared and then simultaneously aligned to suit national priorities and policies (Steiner-Khamsi, 2010). Raffe (2011) agrees with Steiner-Khamsi (2010) when he says “a policy learning approach supports the development of tailored national policies rather than policies taken off-the-peg.” One major difference of policy learning from policy borrowing is to consider cases of policy failure as a resource to find more alternatives (Brynard, 2009). There are six guidelines to policy learning including, “use international experience to enrich policy analysis and not to short-cut it, look for good practice not best practice, don’t study only ‘successful’ systems, use international experience to understand your own system, learn from history and devise appropriate structures of governance” (Raffe,
Thus, it can be said that policy learning is a very critical approach to policy transmission that looks at two angles, the good and bad points.

Policy change has a strong connection to policy learning. Not all change in policy, of course, can be linked to policy learning (as, e.g., from international conferences, engagement of international consultants, publications of international organizations, like the World Bank), but may occur for domestic political reasons or spring from local factors. But there are numerous vehicles through which policy change does appear to occur through policy learning or adaptation (Hall, 1993), while it remains very challenging to determine when this does occur (Brynard, 2009). As highlighted by Cerna (2013, p. 7), “countries, regions and systems can change policies by learning from others and hence shifting their beliefs,” Based on changed perceptions of possibilities, governments may have to add, update or modify existing goals and policies to get better performance or greater student participation. When policy change is framed openly with reference to international experience, this acts as “a source of peaceful change that adds a new aspect to politics, which is often perceived as being dominated by interests and power” (Afenanger, 2012, p. 39). It is important to emphasize that governments learn from both policy failure and policy success. Even though policy failure provides valuable opportunities for policy learning, it has been a largely overlooked. This is supported by Brynard (2009, p. 16) who writes that “weaknesses are not analysed, unless a crisis arises or there is demonstrated repeated policy failure.” It may however be noted that policy failure is more likely to encourage learning because governments are not locked into the same solutions and they have to figure out different policy approaches to find success. Three key elements that make policy learning successful are “building on international experience to find country-specific pathways,” “experimenting with alternatives and making strategic choices” and “reflecting on and potentially reconsidering overall policy objectives” (Altenburg, Johnson & Engelmeier in Pegels, 2014).

Policy learning promises greater benefits than policy borrowing. In meeting the urgent need for policy reform, it is essential that developing countries learn from successful, wealthy nations. However, the developing countries must bear in mind
their national aims and needs as well as circumstances. Policies that are borrowed may seem more convincing because of their origins or because international agencies favour them, but ‘best practice’ in the developed countries can be worst practice in the developing countries. Steiner-Khamsi (2010) stresses that “policies cannot simply be borrowed from one country and rolled out in another simply because those policies appear to be in favour in a number of other countries.”

There have been several studies in the literature reporting on categories of policy learning. Wu et al. (2012) point out of four types of policy learning, including social learning, policy-oriented learning, lesson-drawing and government learning. What are the differences between these four categories? Social learning involves major changes in public attitudes, while policy-oriented learning relates to a shift in existing goals and policy beliefs in response to past experiences of evaluating the existing policies. Lesson drawing is to draw lessons from past experiences and other sources and government learning deals with policy and program reviews. Bennett and Howlett (1992), on the other hand, discuss in greater detail a number of types of policy learning, such as political learning (by Helco), policy oriented learning (by Sabatier), lesson-drawing (by Rose), social learning (by Hall) and government learning (by Etheredge). They highlight that policy learning comprises three complex processes involving learning about organisations, learning about programmes, and learning about policies. In the concluding section, they have proposed a summary table to categorize policy learning, as presented in Table 2.2.

Table 2.2 Three types of learning and policy change

<table>
<thead>
<tr>
<th>Learning types</th>
<th>Who learns</th>
<th>Learns what</th>
<th>To what effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government learning</td>
<td>State Officials</td>
<td>Process-Related</td>
<td>Organizational Change</td>
</tr>
<tr>
<td>Lesson-drawing</td>
<td>Policy Networks</td>
<td>Instruments</td>
<td>Program Change</td>
</tr>
<tr>
<td>Social learning</td>
<td>Policy Communities</td>
<td>Ideas</td>
<td>Paradigm Shift</td>
</tr>
</tbody>
</table>

Source: Bennett and Howlett (1992), p. 289
Form the above table, policy learning is classified into three groups including government learning, lesson drawing and social learning. The actors of each learning process are identified as well as the subjects and the results of learning.

In line with this thesis, lesson-drawing fits with the overall research design. This work by Richard Rose suggests an approach to learning from other's experiences for effective policies, practices, and programs. As highlighted by Rose (1991),

*Confronted with a common problem, policy makers in cities, regional governments and nations can learn from how their counterparts elsewhere respond. More than that, it raises the possibility that policymakers can draw lessons that will help them deal better with their own problems. If the lesson is positive, a policy that works is transferred, with suitable adaptations. If it is negative, observers learn what not to do from watching the mistakes of others (p. 4)*

By implementing lesson drawing, policy makers are helped to decide whether or not to copy or to adapt foreign programs rather than blindly adopting them. This is because “finding a programme that has brought political satisfaction elsewhere does not guarantee that it can be transferred effectively” (Rose, 1991, p. 5). Thus, two ways of drawing lessons are a backward-looking strategy and a forward-looking strategy. The first is to learn the lessons from the past (what has worked before) and the latter deals with “establishing a proxy evidence base by learning lessons from similar policies deployed in similar contexts elsewhere” (Squires & Heurkens, 2015, p. 7). Here, policy makers are encouraged to be more skeptical about adopting foreign ‘best practice’ policies (Rose, 2002) and to be suspicious that the policies do not necessarily guarantee success.

The lesson-drawing process consists of four steps. Rose (2005) describes that,

*The first is searching experience for programs that, in another place or time, appear to have brought satisfaction. Second, it is necessary to abstract a cause-and-effect model from what is observed. The third*
stage is to create a lesson, that is, a new program for action based on what has been learned elsewhere. Finally, a prospective evaluation is needed to estimate the consequences of adopting the lessons, drawing on empirical evidence from elsewhere, and speculating about what will happen in the future if the lesson is applied (p. 58).

In other words, the process of lesson drawing starts with looking for programs that works, followed by making a cause-and-effect model and later creating a lesson. The final stage involves evaluation of the proposed program. At stage 3, Rose describes different methods of drawing a lesson. A summary of the methods is presented in Table 2.3

Table 2.3 Alternative ways of drawing a lesson

<table>
<thead>
<tr>
<th></th>
<th>Copying</th>
<th>Enacting more or less intact a program already in effort in another jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Adaptation</td>
<td>Adjusting for contextual differences a program already in effect in another jurisdiction</td>
</tr>
<tr>
<td>3.</td>
<td>Making a hybrid</td>
<td>Combining elements of programs from two different places</td>
</tr>
<tr>
<td>4.</td>
<td>Synthesis</td>
<td>Combining familiar elements from programs in a number of different places to create new programs</td>
</tr>
<tr>
<td>5.</td>
<td>Inspiration</td>
<td>Using program elsewhere as an intellectual stimulus to develop a novel program</td>
</tr>
</tbody>
</table>

Source: Rose (2005), p. 60

Copying is the simplest and most straight-forward form of lesson drawing. Adaptation rejects copying of a program since the emphasis leads to making adjustments based on contextual differences. Hybrid and synthesis methods involve combining elements. The hybrid, however, deals with combining elements of programs from two dissimilar regions, while the synthesis deals with more than two different places to create a totally new program. Inspiration is the hardest method to use and the least likely to apply (Nash, 2003).
In sum, policy learning is more appropriate to developing countries than policy borrowing. The notion of policy learning allows these countries to develop their own policy solutions. Using lesson drawing as an analytical tool, developing countries may able to take a closer look at other countries in order to find reliable solutions to avoid similar problems. According to Rose (1991, p. 4), “one cannot borrow blindly or condemn blindly, for the success of a programme is affected by the specifics of context as well as generic attributes.”

2.2 Growth and equity in American higher education

As the most important source of experience in the implementation of mass higher education, the United States is understandably of great interest to policy makers in developing countries. Problems of equity attract less interest. Yet there is no shortage of research literature on these problems, as the following brief review will reveal. Within the framework of this literature review, it is only possibly to summarize observations. But in the first main part of this thesis much fuller attention is given to the experience of equity in US higher education, both the patterns and the underlying structures and processes.

The USA was one of five countries – including Sweden, Canada, Finland and Denmark – judged to be providing the best higher education in the world (Williams et al., 2012). American higher education is delivered by more than 4,314 degree-granting institutions (public and private, two-year and four-year) to approximately 17 million students in 2006/2007. This country was named as one of the countries with highest participation rates in higher education and also with the largest proportion of workers with a higher level education in 2012 (Williams et al., 2012). In spite of being internationally recognized and respected for its accomplishments, the overall performance of this nation's higher education system nevertheless displays an unevenness – it fails to provide the same access to resources and opportunities to low
income students as compared to their more affluent peers, or to minority students as compared to non-minority. In fact, inequality in higher education has become one of the most significant and pressing issues facing the Obama administration.

Inequality in education can be found in a wide range of educational indicators including grades, test scores, drop-out rates, college enrolments, and college completion rates across many dimensions, such as gender, ethnicity, socio-economic status and geographic location. Equity should go hand-in-hand with quality (OECD, 2012), but lack of equal opportunities begins early in a child’s educational career, runs through school education, and ultimately impacts on access to higher education. A large volume of published studies has investigated the connection between unequal higher education opportunities and socio-economic background (as measured by parental education, wealth and occupational status), ethnicity, and geography.

Children who grow up in educated homes enjoy cultural advantages in that they normally have high aspirations. However, children in poor families often have low aspirations due to several reasons. Numerous research studies in the USA have suggested that there are four main barriers to pursuing higher education – economic, social, individual and cultural.

Economic or financial constraint is the biggest barrier to higher education for middle and low SES groups (Gorard et al., 2006; O'Mahony & Sillitoe, 2001; Brezovsky & Silvernail, 2000). These groups do not have the ability to pay for the high cost of education due to financial constraints. In addition, young people from poorer backgrounds may lack information on financial aid opportunities. However, if they are well-informed and do take the decision to take on financial aid, this also means debt on graduation. Aspirations for higher education can be dampened by debt aversion. Consequently, students are in a dilemma between incurring the direct and indirect costs of higher education, and the opportunity cost of not participating.

Family factors range from financial to cultural. Families may not encourage aspirations, in part because of the loss of income or increased costs connected with
higher education. So financial and cultural factors tend to merge. In addition, the school environment may not act to encourage high aspirations amongst students. Some researchers argue that teachers and school counsellors do not expose, motivate, and guide students from low-income families and fail to provide them with a clear path to success after high school (Teran, 2007; Brezovsky & Silvernail, 2000).

Individual factors include student persistence and success in higher education (Teran, 2007; Brezovsky & Silvernail 2000). Many high school students are not fully prepared for academic challenges at high levels. They do not perform well in examinations and do not complete certain courses that are necessary for college.

Young people living in rural communities experience conflict between deciding to stay in the community in which they grew up or move out from that community to pursue a college education. Rural males are less likely to aspire to and pursue college education than rural females (Grimard & Maddaus, 2004). Research by Rodriguez (2000) on Latino participation in higher education in the United State indicated children from lower socio-economic backgrounds often come to school with “cultural capital” that contrasts with the institutional setting. Cultural capital includes implicit and internalised beliefs and values, including attitudes and perceptions towards education.

Institutional diversification of American higher education promises to open up higher education opportunities to all Americans - including those from a variety of socio-economic positions and ethnicity – and to help bridge the gap between the rich and the poor. The system, however, is driving these groups further apart. American higher education is not as effective as it should be because of a number of weaknesses within the system. According to Wong (1998) in Goastellec (2010, p. 5), “once the earlier stages of education become accessible to all, regardless of their social status or background, as is the case in industrialized countries, the selection shifts to higher education in terms of limiting access to students from poorer socio-economic backgrounds”. Thus, although participation in higher education has grown for all groups, gaps still remain and there has been little progress in narrowing the
disparity between rich and poor students. Students from advantaged groups have made tremendous progress over the years, while poor students from ethnic minority group continue to lag behind. Growth does not translate to equity in US higher education.

One of the significant weaknesses is that higher education has been built resembling a pyramid with a large base and a narrow top. The pinnacle consists of a small group of highly selective, very famous, and most expensive institutions, while many less selective, less prestigious and less expensive institutions make up the base. This ranking of American institutions can negatively impact student opportunities in higher education when considering both race and social class. In order to maintain reputation and quality with regard to revenue, test results and graduation rates, some highly selective institutions are less likely to accept low income students (Berg, 2010). Market forces are also putting pressure on the most prestigious institutions to rely more heavily on SAT scores in their admission process, and this is most likely to hurt low income and minority applicants as they are less likely to achieve high scores (Schmidt, 2008).

Differences in academic preparation and readiness for higher education have led to unequal access to college and university education by SES groups and between Blacks and Whites. As reported in Carnevale and Strohl (2013, p. 7), “the education system is colorblind in theory. In fact, it operates, at least in part, as a systematic barrier to college for many minorities who finish high school unprepared for college.” This means that socio-economic and racial segregation in higher education originates in inequalities within the American school system itself. For example, the majority of Hispanic students are more likely to be in large schools that often have larger class sizes. These schools are normally underfunded and they employ inexperienced, non-certified teachers (Schneider et al., 2006). One study by the Manhattan Institute in 2002 reported that of all college-ready graduates in Wisconsin, only 11 per cent are Blacks, 15 per cent Hispanic, and 20 per cent American Indian, compared with 40 per cent Whites (Greene & Forster, 2003). Surprisingly, although many minorities are most likely unprepared for college in the
USA, Whites who are equally unprepared still have more postsecondary opportunities (Carnevale & Strohl, 2013).

Finally, students from disadvantaged backgrounds are currently underrepresented at elite and expensive colleges and universities. A considerable amount of literature has been published on access to top-tier institutions among high-achieving, low-income students and most of the studies have revealed that these students are less likely to apply to any selective college or university even though they are more than qualified for admission (Hoxby & Avery, 2012; Institute for Higher Education Policy, 2012 Shamsuddin, 2013). It has been found 30 per cent of African-American and Hispanic students with high school GPAs of 3.5 or higher (“A” student) enrolled in community colleges compared to 22 per cent of their White peers in 2007-2008 (Carnevale & Strohl, 2013). As the costs of attending elite institutions are normally high, money is the main factor influencing low income students' college choice. Fergus et al. state that,

“Family income also has an impact on the type of postsecondary institution a student chooses to attend. Minnesota undergraduates from families with incomes less than $30,000 were more likely to attend public two-year institutions than public or private four-year institutions. Undergraduates from families with incomes of $60,000 or more were more likely to attend public or private four-year institutions” (2008, p. 9)

On this basis, low income students have very limited options in higher institutions and they definitely cannot afford a degree from an elite institution due to financial constraints. After all, they cannot borrow enough to pay the expensive tuition fees. In order to avoid debt and to reduce their costs, attending community colleges is more economically affordable than four-year institutions. Burdman goes on to admit that:

“Students who attend community colleges, typically the lowest-cost institutions, work more and borrow less than students at other
institutions. Only 12 per cent of community college students take out student loans, versus 40 per cent or more of students at other institutions. Two-thirds of community college students and one-third of low-income community college students did not request financial aid” (2005, p. 5)

The above findings, therefore, suggest that debt aversion is another significant barrier to higher education faced by students from low income families, making it more difficult for them to apply to a selective institution. In this situation, high-achieving students from lower-income backgrounds are hurt the most as compared to other lower-income students (Wyner et al., 2007).

To sum up, America's higher education system fails to provide equal educational opportunities between students from high and low income families. Many developing countries, however, do not consider analyzing the limitations of this system in more detail. So far, no research in developing countries has been found looking into lessons learned from the American higher education experience. Instead, most developing countries are largely focused on the system's greatest strength – its diversification approach – and they are moving further towards the American model of higher education.

2.3 Higher education development in Malaysia and the goal of equity

There have been powerful economic and social drivers of higher education development in Malaysia. Industry change, globalization and rising aspirations have all contributed to government decisions to rapidly expand provision and increase participation. International experience with the mass development of higher education has been a major source of guidance, particularly the experience of the
world’s largest economy and the tools of expansion which have been used in the United States. While there are no studies on policy transfer in the Malaysian context, the higher education sector in Malaysia has been researched, in some cases with reference to equity issues. However, the literature on higher education in Malaysia is very limited overall.

Wealthy families have most benefited from the growth of higher education in Malaysia. They are able to spend very large amounts of money sending their children to good schools and choosing the best universities or colleges for better academic programs. Hassan and Rasiah (2011, p. 63) report, “richer parents tend to spend more on their children’s tuition and other educational materials such as books and computers.” By contrast, students from low income families, particularly those living in rural areas, are falling behind their peers in education due to poverty. Even though families are aware of the importance of education, their limited resources and low levels of parental education are barriers to obtaining a good education (Abdul Rashid, 2008). In addition, Adam et al. (2009) highlight that some low income parents do not care about their children’s schooling as they feel that it is the schools that should be most responsible for their children’s success. Similar problems exist among the Orang Asli community (Malaysia's indigenous peoples). Salleh et al. (2009) found that Orang Asli parents realized the importance of education. Thus, they sent their children for school education in the city. But as most of them had low levels of education, they were unable to help in their children’s education and handed over the full responsibility to the school. However, most Orang Asli youth were only able to complete either lower secondary or upper secondary level of education, while progression to higher education was almost impossible due to financial constraints.

The differences in social background and location eventually lead to achievement gaps between different groups of students. A study by Baharun et al. (2008) has demonstrated a large gap in mathematics performance among 720 students from rural and urban areas in Kinta District, Perak, Malaysia. It was reported that the gap was due to demographic factors – family, school, peer and mass media influences, the impact of extra tuition classes, and the impact also of English as a medium of
instruction. The Preliminary Report on Malaysia Education Blueprint 2013-2025 observes that Malaysian states with more rural schools, such as Sabah and Sarawak, have lower performance scores than states with fewer rural schools (Ministry of Education, 2012). Disparities between urban and rural schools still exist in the Primary School Evaluation Test, also known as *Ujian Penilaian Sekolah Rendah* (commonly abbreviated in Malay as UPSR) – a national examination taken in the final year of primary education, Year 6 – and the gap continues to grow in the Malaysian Certificate of Education, also known as *Sijil Pelajaran Malaysia* (commonly abbreviated in Malay as SPM) – a national examination taken in the final year of upper secondary education, Form 5.

Strong segregation by socio-economic status is also likely to affect school quality. Urban schools have greater funding to cover expenses, they employ high-quality teachers and offer special academic programs for students. Facilities in urban schools are much better than in rural schools that serve poor children, for instance, the use of modern ICT equipment. Mohamed et al. (2012) investigated whether ICT skills do contribute to narrowing the gap between the rural and urban areas through a case study in a rural area, Kundang Ulu, Muar Johor. They found that the digital gap was a persistent issue in rural areas due to the small percentage of computer ownership, low ICT usage, and moderate levels in acquiring basic ICT skills. In another study, Puteh and Zailani (2009) conducted an action research for one month at four schools in the rural areas of Kedah, Malaysia. He found that 80 percent of teachers in these schools did not meet standards of effectiveness in teaching and learning processes.

In the context of Malaysia, therefore, disparities in educational opportunities are based on several factors, such as the school location, student socio-economic background, academic achievement and language differences. These challenges mostly faced by disadvantaged students, indirectly serve as barriers for them to educational progression as they may seem not to be interested in going to university to advance themselves. In 2002/2003, only 16 per cent of secondary school graduates enrolled in higher education, far below the OECD average of 37 percent (Ministry of Higher Education, 2007b). This situation certainly has some effect on national
planning for increasing participation in higher education and producing skilled workers for the needs of local industry.

While numerous studies by individual researchers, government departments, non-government organisations and international agencies have attempted to explore access and equity in primary and secondary education in Malaysia, much less attention has been paid to such issues in higher education. Although two drafts reports prepared for the World Bank by the same author, Mukerjee (2010) and Mukerjee et al. (2011), set out preliminary findings in relation to access and equity in Malaysian higher education, these reports, however, cannot be cited in this thesis. The findings presented in the reports are intended only for discussion purposes.

A number of studies have addressed access and equity issues in relation to financing higher education. For example, Yean (2010 & 2011) shares his findings on the growth of private higher education in Malaysia as a strategy of increasing access. He also provides a comparison between public and private sector in terms of their student enrolments, the number of loans approved and scholarships awarded to the students. He claims that private higher education has widened access and improved equity, but there are some matters that need to be addressed, such as the student loan repayment scheme and quality monitoring programs. Ismail (2007) has also investigated student support schemes in higher education. She highlights the ideal solution of financial aid in the form of student loans to replace scholarships in order to reduce reliance on public funding. Loan schemes, however, need to be formulated appropriately to ensure fair access to higher education for all students. The other study by Bakar and Tuah (2006) investigates the relationship between subsidization of higher education with educational inequality from 1975 through 2003. They highlight that access to educational opportunities in Malaysia have seen improvements. However, increasing allocation of funding to higher institutions is less likely to meet the growing demand for higher education since the system has a very broad base and a sharp narrow peak. The study also found a positive relation between inequality of educational access and income. According to the authors,
“given a limited places especially at the higher level, an increase in income will further exacerbate the inequality of educational access” (Bakar & Tuah, 2006, p. 6).

In addition to education financing, Rao (2007) has carried out a study on globalization, affirmative action and higher education in Malaysian. Rao reports that globalization is likely to increase inequality as it does not serve the poor and low income people. Students from disadvantaged families are at risk of being left out of higher education due to lack of financial resources as well as inadequate preparation for university education. Thus, this leads to a continuation of inequality as higher education has been transformed into a “business” in both public and private sectors. Symaco (2010) further recognises the link between the Malaysian New Economic Policy (NEP) as an affirmative action policy (from 1970 to 1990) and higher education opportunities. This study, however, involves looking specifically at access to higher education according to ethnicity and race. Symaco highlights limited opportunities for non-Malays in higher education due to the ethnic quota system and the risk of quality decline as better qualified applicants have less access to public and private higher education institutions.

While all these papers provide relevant information on access and equity from different points of view, to date, there has been no single study – not one study – that provides an in-depth discussion and detailed explanation of equity issues in Malaysian higher education. This thesis, therefore, will first provide an historical overview of national development strategies and programs which have affected the growth of higher education in Malaysia. Then, the discussion will focus on access to and equity within the higher education structure in Malaysia. Finally, an attempt will be made to compare the experience of expansion in Malaysia and the USA in order to present key lessons to be learned from the US experience which would benefit developing countries as a better guide to develop good policies and practices in higher education.
Globalization and the challenges for Malaysia

A variety of definitions of the term globalization have been suggested by many authors. It can be defined in many different ways. Boyes and Melvin (2012, p. 398) distinguish three different forms of globalization:

1) *Economic globalization* - long distance flows of goods, capital and services as well as information and perception that accompany market exchanges.

2) *Social globalization* – spread of ideas, information, images and people.

3) *Political globalization* – diffusion of government policies

Robertson (1992, p. 8) highlights “the compression of the world and the intensification of consciousness of the world as a whole…the increasing acceleration in both concrete global interdependence and consciousness of the global whole in the twentieth century.” That is to say, the contraction of space and distance is also emphasized by many authors. For example, Waters (2001, p. 5) describes globalization as “a social process in which the constraints of geography on economic, political, social and cultural arrangements recede and in which people become increasingly aware that they are receding and in which people act accordingly” and Marginson (2008, p. 2) defines globalization as “the convergence and partial integration of the different parts of the world and of its nations, institutions and people.”

Ratananukul, on the other hands, defines globalization as,

>“the flow of technology, economic activities, people, values, and ideas across borders. Globalization affects each country in a different way owing to its individual history traditions, culture, and priorities.”
Globalization increases and reflects greater interdependence and interconnectedness in the world” (2009, p. 3)

The wide implications of globalization are stressed by Abo Gazleh (2001), who points to the

“re-shaping (of) human life through globalizing certain values which include economic patterns related to free trade, production, consumption and distribution; cultural patterns related to entity, language, and lifestyle; and political patterns related to democratic process and human rights” (p. 7)

In a simple definition, globalization can be defined as opening of borders between countries in which the world shrinks as a result of technology and information transfer. Globalization allows the movement of goods, services, people, as well as a spreading of cultures and values.

While globalization creates a framework for cooperation, it also stimulates competition between countries. Carnoy (2005, p. 2) asserts that “globalization means more competition, not just with other companies in the same city or the same region. Globalization also means that national borders do not limit a nation’s investment, production, and innovation.” New opportunities for economic activity and cultural exchange are opened up, both in developed and developing countries. Arguably, however, developed countries, receive more benefits as they have comparative advantages in capital, technology and skills. According to Caporaso and Madeira,

“globalization is inherently a competitive process, with the potential to create winners and losers, and when markets are so big that they stretch across continents, the stakes are extremely high. The efficient firms that ‘win’ the competition will reap profits from all over the globe, and those that ‘lose’ will be left with a drastically smaller market share” (2012, p. 141)
In order not to lose out in the globalization game, developing countries have to take advantage of the opportunities created by the globalization process. As a result, most of these countries have no choice as they must integrate into world markets if they wish to succeed. As Ouattara (1999, p. 38) states; “developing countries cannot escape globalization, and they should not try to avoid it.”

2.4.1 Globalization and the knowledge economy

Globalization has increased economic competition within and between countries and knowledge is becoming an important tool for enhancing international competitiveness. Kefela writes,

“A knowledge economy is one where organizations and people acquire, create, disseminate, and use knowledge more effectively for greater economic and social development. Increased importance of knowledge provides great potential for countries to strengthen their economic and social development by providing more efficient ways of producing goods and services and delivering them more effectively and at lower costs to a greater number of people” (2010, p. 68)

Malaysian policy-makers, therefore, have committed the country to a transition from being a production-based economy to a knowledge-based economy (k-economy) in order to be competitive in the global economy. Part of this transition involves a shift away from labor-intensive to high-technology manufacturing industries. The shift to the k-knowledge economy has been formalized the nation’s Vision 2020. The first defined by Malaysian policy-makers is to have a well-educated workforce. Mustapha and Mohd Salleh (2007) in Mustapha and Abidin (2008, p. 502) also points out that “to become fully developed nation, Malaysia needs a labour force that is well educated, dynamic and skilled.” Workers need to improve and continually update
their skill levels in order to improve workplace productivity. Highly skilled workers are likely to be more innovative and they are adaptable, efficient, and flexible.

Knowledge is identified as a new factor of production, imposing new and extensive demands on the educational attainment of the population. While Malaysian public higher education has grown tremendously, existing higher education infrastructure in Malaysia is not able to keep pace with the growing demand for higher education. For this reason, the Malaysian government has adopted structures and models of higher education from developed nations. As highlighted by Marginson, (2008, p. 2), “in many areas such as education, governments tend to imitate each other more than they did. These global flows are the symptoms of globalization.” The Malaysian government has introduced a range of reforms to improve Malaysia higher education system in order to produce quality human capital (Othman et al., 2011). One of the most major changes in higher education is privatisation of higher education in the early 2000s. This action has resulted in a rapid growth of Malaysia's private higher education system which includes locally established universities and colleges, as well as reputable foreign universities that have set up their branch campuses (Arokiasamy, 2011).

The commitment towards a knowledge economy was also stated in The Malaysian K-Economy Master Plan, which was launched in 2002. “Planned reforms in the education sector include further privatization, twinning arrangements with foreign institutions, and the construction of advanced technical institutes and community colleges” (Mustapha & Abdullah, 2004). In addition, upgrading of the skills of manual workers is being encouraged through training programs in a range of industry fields, including manufacturing, services and agriculture. Growth towards a knowledge economy in a context global competition also involves primary and secondary education. The focus is helping students develop their creativity, innovation, and critical thinking. Traditional classroom delivery is now enhanced with electronic learning support. This indicates that “the growth of the knowledge-based economy has led not only to competition among employers worldwide for the
best brains but also among the institutions that train the best brains” (Arokiasamy, 2011, p. 74).

Briefly, Malaysia’s goal is to produce a critical mass of ‘knowledge’ workers. The action plan has included all levels of education -- primary, secondary, vocational and higher education. The expansion of university and non-university higher education providers in public and private is multiplying educational opportunities for many students, while the establishment of more technical and vocational institutions offers less academically successful school leavers the opportunity to acquire necessary skills valuable skills in an evolving economy.

2.4.2 Malaysia under global pressure

Developing countries, such as Malaysia, are not exempt from the competitive stresses of globalization, and both broad economic policy and policies relating to education in particular display many signs of adaptation to international influences. Looking first at the broader economic policy responses, we can see expansion of industrial activities and recently service activities in order to create service-based economy. Then, Malaysia relies on foreign direct investment (FDI) to achieve high economic growth through industrialization by inviting more foreign participation in the manufacturing and services sectors. What is more, the country also encourages multinational corporations (MNCs) to set up operations in Malaysia. These companies provide Malaysia with much needed capital investment, management and technical expertise and jobs.

Malaysia also develops a close partnership with its neighbouring countries. Bilateral relations between Japan and Malaysia -- "Look East Policy", which was introduced in 1982, encouraged a closer look at work ethics in Japan. Under this program, Malaysia government sends students to universities and institutes of technology, and
trainees to industries and training institutes, in Japan to prepare the next generation of technicians and businesses leaders. Malaysian Investment Development Authority (MIDA) reported that Japan was the biggest source of foreign investment in 2011, which involving investments of RM10.1 billion (MIDA, 2012). To strengthen and enhance the strong ties between the two countries, a new "Look East Policy 2.0" has been announced by the Prime Minister during the 20th International Conference on the Future of Asia in Tokyo on May 22, 2014. This new policy focuses on high technology and highly skilled workers, which will enable the Malaysia’s economy to move further up the value chain and becoming high-income status nation by 2020. As stated in The Sun Daily (2013), Prime Minister Dato' Sri Najib Razak says “the second wave should not be limited to training and education, but must also be more progressive with focus on priorities and changes in the current economic structure.”

Turning to education, globalization in Malaysia can clearly be seen through changes taking place in the area of higher education. The nature of the changes made to higher education provision have resulted in very large increases in public and private institution enrollments. The expansion of public higher institutions brings more options and opportunities to take on further education. In addition, liberalization of the private sector in the market for higher education provision responsible for mushrooming growth of local private universities and colleges as well as branches and campuses of foreign universities which offer twinning, franchised and external degree programs. Although the expansion of private institutions demonstrates a positive development for Malaysia, it poses growing threats to economic growth and social equity. Sato (2005) highlights the issues of dual medium of instruction and ethnic imbalance at higher education level, as well as the quality of education provided by private institutions. Kaur and Manan (2010, p. 66) highlight the same issue of ethnic divide in higher education. They claim that “in the long run, this may pose and create serious problems of structural ethnic polarisation given that most Bumiputras dominate the public universities while the non-Bumiputras are largely found in the private institutions.” Similarly, a study by Aihara (2009) reveals that access to private higher education is not evenly distributed across all ethnic groups.
and geographic regions. Three groups that have been identified as being disadvantaged are Malays, *Bumiputra* communities and those from less developed states.

In order to find a correct balance between degree level and non-degree level higher institutions, more polytechnics and community colleges are being established to produce qualified, semi-skilled workers for the employment market. As there are now many higher institutions available, Malaysia aims to become a higher education hub in Southeast Asia, serving increasing number of international students. The global recall on world university rankings since 2003 has affected Malaysia and other countries worldwide. The Malaysian government has ambitious plans to place one public university among the world’s top 50 and two universities in the top 100 by 2015, and two universities in the top 50 by 2020 (Tan & Goh, 2013). In the QS World University Rankings 2014/15, however, only two research universities have been listed. *Universiti Malaya* (UM) has been ranked at number 151, while *Universiti Kebangsaan Malaysia* (UKM) is at 259 (QS TopUniversities website, 2014).

Corporatization of public higher educational institutions following the passing of new Universities Act in 1995 indicates that the government has started to loosen its stranglehold on public universities. In 1998, public universities are allowed to set up their respective companies to generate income (Hawkins et al., 2012), while holding on to their core business of providing high quality tertiary education to as many qualified Malaysians as possible. Thus, most public universities have begun to invest in industrial innovation and commercialization in an effort to increase their profits. However, it is argued that these institutions may tend to neglect their main responsibilities. Kaur and Abdul Manan (2010) argue that certain universities may focus on skill-based courses in order to attract more students which indirectly turn them into vocational institutions. Besides that, they are more likely to emphasis on high-demand programs (such as engineering, biotechnology and economics) and neglecting less marketable ones (such as history, art and literature). Public universities, like their private counterparts, are now providing services which best
meet their customers’ expectations. These high-demand programs are very costly and often out of reach for many low-income families as knowledge is now considered as a commodity (Kaur & Abdul Manan, 2010)

As the world is becoming more unified, the distance has never mattered. This era of globalization offers more opportunities for developing countries like Malaysia to participate in the global economy, but more must be done to ensure it may not put the country's future at risk.

2.4.3 Is globalization good or bad for Malaysian higher education?

With the rapid growth of the public and private higher educational sectors in Malaysia, students have more options than before and they can choose what and where to study and how much they are willing to pay. Othman et al. (2012) in their study report there is an upward trend in demand for pre-university education, higher education, technical and vocational education in Malaysia. The most significant growth has taken place at private higher institutions and technical and vocational institutes. This increasing demand indicates that more and more students are more likely to complete high school and eligible for high education.

A diversified higher education system enables prospective students to travel from one developed nation to another, and from developing or less-developed to the developed countries in search of good high-quality education. In 1995, however, Malaysia spent US$800 million in currency outflow for overseas education, constituting nearly 12 percent of the country's current deficit (Ooi et al., 2010; Lane, 2011; Arokiasamy & Nagappan, 2012). Given this scenario, the growth of private institutions of higher education in Malaysia is the best approach to reduce the currency outflow since students are able to earn a foreign degree at home. According to Suryadinata (2000, p. 156), “Malaysia was moving in the right direction by saving
on the cost of overseas education (about RM3 billion a year in the 1990’s).” Instead of providing more places to qualified local students (Lane & Kinser, 2011), the privatization initiative is also an attempt to attract greater foreign investment and international students to Malaysia (Suryadinata, 2000; Arokiasamy & Nagappan, 2012).

Besides that, the privatisation and corporatisation of higher education reflected the government's agenda to introduce and encourage competition between public and private sector. Both public and private higher education institutions, in turn, are forced to develop a higher standard of teaching and course design, student services, staff development, and efficient administration. In 2007, the Malaysian Qualifications Agency introduced Rating System for Malaysian Higher Education Institution (also known as SETARA) which is a rating exercise to benchmark the quality of teaching and learning for undergraduate study provided by all universities and university colleges in Malaysia. Those institutions that are listed as excellent providers in SETARA gain a substantial competitive advantage over their competitors and they are highly in-demand among students (Hua, 2011).

Globalization is seen by Malaysian policy-makers as creating an environment in which flexibility of institutions is essential, with market levers playing a major role. However, globalization contains serious risks.

Governments have tended to respond to the globalization of higher education by adopting market policies, and these in turn carry risks of rising private costs, increasing inequalities, and segmentation of markets and opportunities. Some groups have been said to be left behind in the system as compared to other groups. For example, Suryadinata writes,

“The number of Malay students who can afford to study in private institutions of higher learning today is very small. Indeed, some of them even find it financially difficult to cope in the highly subsidized public institutions” (2000, p. 157)
This indicates that the Malays, as the majority group, continue to lag behind other ethnic groups due to their economic positions. Another issue highlighted by Tan and Raman (2009, p. 11) is “graduates of the private institutions of higher learning (most of them Chinese) tend to have the advantage over graduates of public institutions of higher learning (most of them Malays) as they have better proficiency in English.”

Again, the Malays are portrayed as falling behind other races due to poor command of English since public universities use Bahasa Malaysia as medium of instruction rather than English. This can cause disparities in employment between ethnic groups in Malaysia. As a result, the Malays are less likely to position themselves into a higher level of social class and higher-earning jobs.

Income gaps are widening between the skilled and the low-skilled, and less educated and lower income groups in the country are more likely to experience long-term unemployment. They may slip into poverty. This shows that the rich are getting richer and the poor are struggling. According to a report on graduates tracer study by Ministry of Higher Education in 2009, monthly incomes among graduates based on level of education were: 60.3 percent PhD holders earned RM5001 and above; 41.6 percent masters degree holders earned RM3001 to RM5000; 26.3 percent undergraduate degree holders earned RM1501 to RM2000; 36.2 percent diploma holders earned RM1001 to RM1500; and, 59.4 percent certificate holders earned RM501 to RM1000. The study also highlights that 26.7 percent were still unemployed and many of them (40.6 percent) were certificate holders. In addition, 73 percent of these unemployed graduates came from families with low incomes who earned less than RM2000 a month (Ministry of Higher Education, 2009).

Education and training are the only routes for these groups to escape poverty and insecurity. Yet if higher education institutions are developed into a hierarchical system (Othman et al., 2011), there is the potential to deprive more disadvantaged groups of access to these routes. As Marginson argues:

“Over time status competition tends to be circular in its operation and effects. The prestige of elite institutions sustains both high numbers of
applications and high student entry scores; the scarcity of places enhances the value of the prize and reproduces the prestige of the institution. Wealth tends to follow prestige: wealthy families invest in high-value positions in education to maintain their social leadership, and in some nations they will eventually donate to the elite institutions that nurtured them” (2004, p. 186)

A study by Kim and Periyayya (2013) draws our attention to most popular type of programs among Malaysian Chinese students at private higher institutions. Kim and Periyayya report that majority (65 percent) of these Chinese students comes from more affluent families and they are more likely to attend local private higher institutions that offer programs leading to a degree awarded by foreign universities as compared to local ones. By getting an international degree, these students are making themselves more marketable for employment than their counterparts in other higher institutions. In another study on marketing analysis of the higher education service sector in Malaysia, Hussin et al. (2000) also claims that three variables influencing college choice are quality of teaching, institutions’ reputation and marketability of degree.

In a nutshell, globalization is big on promises, but has yet to deliver on them, particularly to developing country like Malaysia. This trend, however, cannot be rejected and Malaysia must be ready to face any challenges that the phenomenon will bring in order to become a fully developed nation by 2020. “Leaders of higher educational institutions, need to react to the changes brought by globalization and these changes are sometimes unexpected and complex” (Othman et al., 2011, p. 380). The most important thing right now is Malaysia must aim to strike a balance between economic growth and social needs.
The practice of borrowing or lending higher education policies between nations has increased in recent years due to the forces of globalization. This phenomenon appears to be more common in developing countries in which the policy makers increasingly import the same set of educational practices of high-performing nations to their countries and use them as a well-tested model for progress toward the goal of mass higher education. However, the fact that specific educational reforms are transferred from one country to another is becoming a growing concern for many scholars as to appropriateness and effectiveness. Every country certainly has its own unique features which are different from others including history, language, culture, people and education system. Policy makers, therefore, should be selective in choosing the “best practice” that works well for their countries. A comparative case study enables the historical experience of the “lender” nation to be weighed up in the context of the challenges and situation of the “borrower” nation. For Malaysia to most fully benefit from acquiring higher education policies from a much more developed nation means learning to see the limits in the borrowed model – what has not been achieved in the nation of origin, and then understanding why the “model” does not deliver the benefits which it promises. This study adds to the growing research area that links comparative education with policy studies in higher education.
CHAPTER THREE

EXPANSION IN AMERICAN HIGHER EDUCATION

The United States of America (USA) is widely recognized as among the world’s economic leaders. The financial crisis that began in 2007 has slowed down economic growth, but the US still remains the largest and the most important market in the world. The USA was ranked first by the World Bank in 2008 for having the highest gross domestic product (GDP) (World Bank, 2010). In addition, the Global Social Change Research Project (Shane, 2007) reported that the USA was among the top five economies in the world in 2007. As the world is moving towards a more knowledge-based economy (k-economy), the USA has focused on restructuring its education and training system. To stay ahead in an increasingly competitive global economy, well-educated and skilled workers are in demand to sustain the highly skilled labour force necessary for economic growth. These highly educated and skilled workers are able to create, transfer and make use of their knowledge and stimulate innovation for productivity growth in the US economy. Furthermore, they can adapt successfully to a fast-changing, new work environment which demands higher qualifications and training to become highly paid professionals. Considering this reality, the US government has invested heavily in higher education. Over the fifty-year period 1960 to 2010, government spending on tertiary education increased from $3.3 billion to $289.14 billion. The USA has reaped a return on its investment by being the top ranking country on the Global Competitiveness Index (CGI) over several years since 2001 (World Economic Forum, several years).

In the face of globalisation and the consequent demands from the US service sector for a more highly skilled labour force, the importance of higher education has continued to grow. Highly skilled and qualified employees are viewed as an asset, generating new and fresh knowledge to accelerate growth in the economy. Besides development of human capital for economic purposes, the higher education sector is also contributing to social development. This is reflected in the increasing number of
students in higher education institutions as more and more young people than ever before realise the importance of having a higher degree.

A college degree has the potential to open doors for better job opportunities and higher incomes for individuals. It is no longer a choice, but a necessity to improve the quality of life in a community and to compete for higher social status. Higher ranking socio-economic status affords more power, greater wealth, and wider opportunity. Thus, the transformations within the US public educational system reflect a growing social awareness of the importance of education – from compulsory education in the earlier period to higher education presently.

3.1 Elite to mass education system

The USA was the earliest country to implement mass education system. This has served as a model for the other countries around the world. It started by instituting a mass secondary schooling in the 1920s, followed by mass access to higher education in the 1940s. The USA went through three phases of educational development from 1870 to 1980 as shown in Figure 3.1.
Phase I, between 1870 and 1910, was regarded as a period when academic education was provided to an elite minority. The educational institutions in this era did not need to deal with huge numbers of students. In 40 years, the enrolment rates at high school (as a proportion of the 14-17 year old population) climbed slowly to reach approximately 15 percent in 1910, whereas numbers in higher education (as a proportion of the 18-21 year olds) remained almost constant for 30 years and rose slightly after 1900.

The second phase (between 1910 and 1940) was the period of the ‘massification’ of the secondary system. There was a rapid rise in high school enrolment rates from approximately 15 percent in 1910 to 7 percent in 1940 - an average of 1.9 percent growth each year. While enrolments in high school grew sharply, higher education enrolment numbers also rose, but at a slower rate. This slower rate suggests that higher education continuing to be for an elite: it was accessible to a small, but slowly-growing minority.
The rapid increase in higher education enrolment occurred in Phase III. This started after 1940. The chart shows that the number of students going on to higher education was substantially higher than in the earlier phase. Higher education was changing from an elite to a mass system. Underlying this change, high schools were being transformed from a terminal to a preparatory system as aspirations for higher education rose in the context of change in the economy (Karabel & Halsey, 1977).

The emergence of mass participation in US higher education in the 1940s was affected by changes in industry and occupational structures in the country. World War II created more job opportunities for Americans since many factories were built to produce war supplies such as guns and ammunition, military transport, tanks, fighter planes and bombers, etc. The positive impact of the war led to economic expansion in 1950 with rapid growth in several industries, such as the automobile and housing industries, and the formation of new industries such as aviation and electronics. The GDP of the country climbed higher and higher, and the composition of the labour force also changed drastically. The participation rate in the service sector increased and reached the same level as the number of people in goods-producing industries (The US Department of State, 2010).

In the early 1980s, the US economy went into recession. This occurred early in the decade and was fairly short-lived (first half of 1980, and from July 1981 to November 1982). Several major industries such as manufacturing, agriculture, transportation and construction were much affected by this recession. However, seven sectors showed significant job growth of more than 1 million workers from 1983 to 1991. In three out of these seven sectors, jobs were more highly remunerated, and a college degree was a job-entry requirement. In the other sectors of the economy, jobs were less highly remunerated. A radical upward trend in the US economy during the 1990s came with the emergence of new technologies and greater use of computers in the workplace. This led to a shift in demand towards more highly skilled workers, particularly in information technology (Anderson & Cook, 2008). The competitive pressure in the workplace created a stimulus for Americans to gain higher degrees in order to fill the vacancies in the national labour market. These changes resulted in a fall in high school dropout rates and significantly increased
graduation rates. Enrolment rates in US higher education institutions have continued to grow to the present day.

The latest reform in the US higher education system is the push to make participation in higher education universal (Trow, 2000). Policy thinking has shifted to put more emphasis on equal opportunities – making sure all students regardless of sex, race, colour, social class family background or nationality have the chance to further their education beyond compulsory schooling. The revolution in information technology is seen as playing a major role in expanding opportunities as universal access to the internet that large numbers of students across the US (and beyond) can enrol in online degree programs across different fields of study and different institutions (Trow, 2000).

3.2 High school graduation rates

The number of students graduating from high school in the US has grown more or less steadily over the last forty years. The level of graduation, trends and comparisons between groups continue to be debated in the US (for a summary, see Heckman & LaFontaine, 2007). However, the broad direction of growth is clear. The new knowledge-based direction of the economy that requires a high degree of skill has made the high school diploma (or a certificate of High School Equivalency based on General Educational Development testing) a minimum requirement for most of jobs in the labour market today. However, people with a high school diploma only will earn a minimum wage or less and might require on-the-job training to progress beyond minimum standards. The path to a well-paying and rewarding job is a college or university degree. This reality may have increased student awareness of the need to consider a degree, and to see high school graduation as the entry point to prepare them for further education rather than termination of their formal education. Figure 3.2 shows the trend in graduation rates at upper secondary level for the years 1995 to 2007.
The above chart illustrates that graduation rates from upper secondary programmes varied between 70 percent and 78 percent for the years 1995 to 2007. It clearly shows a sudden dropping off in 2001 and a slight reduction in 2004. These two years of decline did not correspond to enrolment trends in public secondary schools (grades 9-12), which continued rising each year from 11.3 million in 1990 to 15.1 million in 2007 and are estimated to continue growing up to 15.7 million in 2018 (US Department of Education, 2010). The graduation rates rose again at the beginning of 2005. However, the 12 years of data in Figure 3.2 show that the rates were still below the OECD average. This indicates that upper secondary graduation rates are not the strength of the US education system. The 2009 OECD Education at a Glance review ranked the USA in the bottom third, as shown in Figure 3.3 below. It lagged behind other developed countries, such as Germany, Finland and Japan, by more than 10 percent (see National Science Board’s Science and Engineering Indicators 2012, for a brief discussion of the methodology and US comparison, http://www.nsf.gov/statistics/seind12/c1/c1s4.htm).
Enrolment in the US higher institutions more than doubled in the 37 years between 1970 and 2007. There were 18.2 million students enrolled in degree-granting institutions in 2007 as compared to 8.5 million in 1970. There were 5 million male and 3.5 million female students in 1970. From 1980, the number of female students rose sharply and surpassed the number of males. By 2007, the number of females reached 10.4 million, whereas males were at 7.8 million. The majority of students enrolled in full-time programs. Although the number of students in part-time courses was never high, the 2007 figure more than doubled compared to 1970. The details are presented in Table 3.1.
Table 3.1 Total Fall enrolment in degree-granting institutions, by sex of student and attendance status, selected years: 1970 to 2007 (in millions)

<table>
<thead>
<tr>
<th>Sex and attendance status</th>
<th>Institutions of higher education</th>
<th>Degree-granting institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>8.5</td>
<td>11.1</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Female</td>
<td>3.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Attendance status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>5.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Part-time</td>
<td>2.7</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2009), Table 188.

Note:
Data through 1995 are for institutions of higher education, while later data are for degree-granting institutions. Degree-granting institutions grant associate’s or higher degrees and participate in Title IV federal financial aid programs. The degree-granting classification is very similar to the earlier higher education classification, but it includes more two-year colleges and excludes a few higher education institutions that did not grant degrees. Detail may not sum to totals because of rounding.
The US population increased by 26 percent between 1980 and 2004. Although Whites continued to be the majority ethnic group, their numbers increased by less than 10 percent during this period. The population growth was driven by the remarkable expansion of the minority groups - mostly Black, Hispanic and Asian American (OECD, 2008b). Ultimately, the increasing minority population affected the enrolment rates in degree-granting institutions, as shown in Figure 3.4.

Figure 3.4 Percentage distribution of students enrolled in degree-granting institutions, by race/ethnicity, selected years: Fall 1976 to Fall 2007

The figure above shows the proportional enrolment of students in the US higher institutions in relation to ethnicity for all ages and levels of education. The most significant feature is that the percentage share for whites fell significantly - from 82.6 percent in 1976 to 64.4 percent in 2007. Over the corresponding period, the share held by minority groups rose from 17 percent in 1976 to 35.6 percent in 2007. The highest percentage increase between 1976 and 2007 was among Hispanic students (7.9 percent), followed by Asians (4.9 percent), Blacks (3.7 percent) and American Indians (0.3 percent). Non-resident aliens for whom race is not reported increased from 2 percent of the total enrolment in 1976 to 3.4 percent in 2007.
The number of 18 to 24 year old students enrolled in higher education institutions increased by 13.3 percent in this period from, 25.5 percent in 1967 to 38.8 percent in 2007 as shown in Table 3.2.

Table 3.2 Enrolment rates of 18 to 24 years old in degree-granting institutions, by type of institution and sex, selected years: 1967 to 2007 (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>All students</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Two-year</td>
</tr>
<tr>
<td>1967</td>
<td>25.5</td>
<td>---</td>
</tr>
<tr>
<td>1970</td>
<td>25.7</td>
<td>---</td>
</tr>
<tr>
<td>1980</td>
<td>25.7</td>
<td>7.1</td>
</tr>
<tr>
<td>1990</td>
<td>32.0</td>
<td>8.7</td>
</tr>
<tr>
<td>2000</td>
<td>35.5</td>
<td>9.4</td>
</tr>
<tr>
<td>2007</td>
<td>38.8</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2009), Table 204

A major feature of US higher education is the division between four-year and two-year colleges. The two sectors are themselves diverse (for a discussion of diversity amongst two-year colleges, see Goan et al., 2007). The way growth has been distributed across two-year and four-year colleges is relevant to the issue of equity. For participation is associated with differences in outcomes. First, the broad trends are discussed, then a more detailed picture of what has happened within US higher education sectors is provided.

Enrolments in four-year institutions consistently exceed those in two-year institutions. Four-year institution enrolment rates went up by 9.3 percent in 27 years, while the two-year enrolment rates rose by only 3.8 percent. In addition, female enrolments grew significantly faster than males over the 40-year period, resulting in a smaller proportion of male enrolments in both types of institutions. The number of females increased by 22.9 percent between 1967 and 2007, compared with only 2.4 percent for males. The breakdown by ethnicity appears in Figure 3.5 below.
During the first decade shown in Figure 3.5, enrolment rates for white students fell, before rising slowly till the mid-1980s. There followed a steep rise, peaking in the late 1990s, after which growth in participation grew more slowly and inconsistently. During the early period up until the late 1980s, participation by minority groups was fairly stable. However, from the early nineties, there has been almost continuous growth, both amongst blacks and Hispanics. In general, the number of young students in degree institutions is expected to continue to grow steadily in response to the increasing demand for higher education.

3.4 Number of higher education institutions

Increased demand for higher education in the USA has led to the mushrooming of higher education institutions. These institutions are divided into four precise, though still broad categories: private-not-for-profit four-year schools, public two-year schools, private for-profit schools and public four-year schools (OECD, 2008b).
Public two-year institutions are community colleges that offer associate degrees in a vocational field. Public four-year institutions focus on a comprehensive set of undergraduate, graduate and professional degrees. Private not-for-profit institutions may be faith-based or have a particular philosophical emphasis as in the case of women’s and Black colleges; and private for-profit institutions primarily offer vocational programs (Eekel & King, 2004).

The rapid expansion of private educational institutions is more remarkable than public institutions, as shown in Figure 3.6.

Figure 3.6 Number of educational institutions, by sector and institutional type, selected years: 1980-81, 1990-91, 2000-01 and 2006-07

![Image of bar chart showing the number of educational institutions by sector and institutional type for selected years: 1980-81, 1990-91, 2000-01, and 2006-07. The chart includes bars for non-degree-granting institutions, two-year colleges, and four-year colleges.]

Source: US Department of Education (2009), Table 5
Note: 1) Data for non-degree-granting institutions are not available for 1980-81 and 1990-91. 2) Two-year and four-year colleges are degree-granting institutions.

In Figure 3.6, it is clearly seen that the number of private higher institutions exceeded public institutions between 1980-81 and 2006-07. The private sector has operated majority of four-year institutions which have been the major providers of higher educational services in the USA over the last 25 years, growing in number at a faster rate than public four-year institutions. From 1980-81 to 2006-7, the number of
four-year institutions went up by 672 units. Of these, 581 were private institutions. In addition, private sector non-degree-granting institutions far outnumbered those in the public sector. Two-year public institutions, on the other hand, have consistently outnumbered those run by private providers since 1980-81. There were 1,685 two-year institutions in 2006-07, of which almost two-third were public institutions.

3.5 Factors driving the expansion of higher education

In a knowledge-based economy, the educational achievement of the population is vital for economic growth. The ‘knowledge society’ relies on a high level of labour productivity for global economic competitiveness. For those countries seeking to grow their economies, expanding the proportion of the population with higher education qualifications is arguably one of their most important goals. But have they got the right conditions for growth? What are the factors that need to be considered in how expansion is to be configured? Looking at the United States as a pioneer of mass higher education provides clues as to help answer these questions at a general level. There is also an important advantage in identifying distinctive factors behind growth which may make the US journey not replicable to other countries. For the USA, factors influencing the expansion of higher education have both economic and social components.

3.5.1 Economic factors

The major economic factors affecting the expansion in US higher education have been changes in the industry organization of the economy and in occupational structure. While having a large manufacturing base, the American economy has grown most in the services sector. Between 1990 and 2008, government services and health care were responsible for about 40 percent of total growth in employment
(Spence & Hlatshwayo, 2011, p. 4). Other service industries which grew included “management and consulting computer systems design, finance and insurance”. Manufacturing experienced a loss of jobs. Higher education grew, not only because of this shift in economic activity, but because job entry requirements in the labour market rose, creating an advantage for people with college degrees.

Early in its history, the US economy was dominated by the agricultural sector. Due to labour intensive farming, more than half of the US population lived in rural areas. The agriculture sector grew significantly and contributed to the soaring growth in the US economy. However, with the introduction of technological innovation in the food and agriculture sector, the US economy underwent its first transformation. Farming was no longer a major activity, and by 1930, the agricultural sector contributed only 7.7 percent of the total GDP (Dimitri et al., 2005). The boom in the manufacturing sector began during World War II, and this sector expanded dramatically from the 1940s onwards. It emerged as the most important sector dominating the economy for many decades.

The second transformation in the US economy came about in the 1990s with the growth of information technology (IT) and the proliferation of computers in the workplace. This revolution has changed the global economy with high-technology equipment replacing human labour in the production chain. The service sector has continued to grow, while economic activity in the manufacturing sector has been on the decline. The Global Services Summit (The Coalition of Service Industries, 2009) reports that in 2008 the agriculture sector contributed only 1 percent to total US GDP, construction 5 percent, manufacturing 13 percent, mining 3 percent, while the services sector contributed a massive 78 percent.

The shift in the US economy from agriculture to manufacturing and then to services affected the occupational structure of the labour market as presented in Figure 3.7. In the late 1850s, more than half of the labour market was employed in agriculture, which was the main source of economic activity the US during this period. While economic output from agriculture remained the same in 1900, the number of workers in the sector fell to less than 40 percent. By 1952, the manufacturing sector had grown significantly, employing more than twice as many workers as agriculture. By the year 2000, the service industry had become the main engine for the American
economy. The proportion of the workforce in agriculture and manufacturing declined, while service sector employment continued to grow rapidly and made up nearly 80 percent of the workforce. This sector employed more workers and generated more new jobs than the manufacturing sector. From 2000 to 2005, the service sector grew by more than 80 percent and is projected to increase up to 86 percent by 2014. Two main groups in the service sector which have had higher job growth since 1990 are professional and business services, and private education and health care and social assistance services (US Senate, 2006).

Figure 3.7 Distribution of US employment by industry, selected years: 1850 to 2000 (%)


Educational levels in the workforce are continuing to rise because of the expansion of knowledge-based industries which demand a more highly skilled labour force. In the US Census Bureau report of 2008, the five fastest-growing occupations in 2004 were in health care and IT areas, such as home health aides, network system and data communication analysts, medical assistants, physician assistants and computer software engineers. By 2014, these occupational groups are projected to expand by more than 40 percent over 2004 figures, requiring that workers in these fields have at
least a bachelors or associate degree. These projections are indicative of the upward trend in educational attainment, as presented in Figure 3.8.

Figure 3.8 Employed workers of 25 years old and over, by educational attainment, selected years: 1992 to 2009 (in thousands)

![Graph showing the trend in educational attainment from 1992 to 2009.](image)


In Figure 3.8, the number of employed workers with a bachelor degree and higher has progressively increased since 1992 relative to those with only a college or associate degree or less. This data is evidence that higher education has become essential. Job applicants with higher education are more highly favoured by employers and have access to greater career opportunities. They have the knowledge and skills to perform better at work.

3.5.2 Social factors

Another factor in the growth of higher education is social mobility. Viewed in the long term, it is now possible for individuals from disadvantaged backgrounds to reject low socio-economic status positions as higher education generally leads to
better status jobs, higher earnings and greater household income. Higher household income leads to an improvement in the standard of living and allows upward social mobility. The possibility of mobility has encouraged high expectations and aspirations and have made more and more parents in low- and middle-income groups strive to provide higher education for their children.

Research findings by the National Center for Public Policy and Higher Education (2008) show that more than half of parents across all races view higher education as essential, to be precise, 55 percent for White, 54 percent for Black and 68 percent for Hispanic. Furthermore, the percentage of Americans who believe someone can succeed without a college education has fallen, from 67 percent in the year 2000 to 49 percent in 2007 (Immerwahr & Johnson, 2007).

3.6 Conclusion

American higher education has expanded rapidly in the context of major changes in the nature of the US economy and the pressure placed on parents to give their children access to new and better job opportunities. Mass participation in higher education has contributed to economic growth through human capital formation (as well as being a growth industry in its own right). But while recognising that higher education growth has played a major role in economic development, it should be asked whether all US populations have benefitted equally from this – whether growth has been accompanied by equity. Can developing countries “learn” from the US experience rather than simply “borrow” what appear to be good policies on higher education development?
CHAPTER FOUR

INEQUALITY IN AMERICAN HIGHER EDUCATION

The rapid expansion of student numbers in higher institutions as discussed in the Chapter 3 has had positive impacts on the US economy. The growth in the number of Americans with higher educational attainment indicates significant improvements have been achieved and higher education has become accessible to more Americans. Taking a long view, financial and social benefits are more fairly and equally distributed for all ages, sexes, incomes, and ethnicities as admission to higher education institutions is no longer limited to the elites. A remarkable feature has been the number of ethnic minority and lower socio-economic background students in American higher institutions today.

Since the early post Second World War period, Americans have expected that the expansion of higher educational opportunities would achieve the goal of more equitable life chances as between rich and poor. It was hoped that with increasing student participation, the level of inequality particularly in socio-economic terms, but also racial terms, would diminish. However, expansion need not necessarily lead to an improvement in equity. The participation rates between groups could remain unchanged or slightly worsen over time. The wide separation between rich and poor could conceivably grow further, with the rich dominating higher education through elite universities rather than exclusive participation in a relatively small sector (as before the Second World War). According to James (2007), expansion in participation does not necessarily improve equity. He claims that a single strategy of increasing enrolment offers no guarantee that the participation share of people from lower socio-economic backgrounds will be changed.

Expansion in US higher education has led to issues of unequal opportunity. While benefits have flowed to much of the population, gaps still remain and there has been little progress in narrowing the disparity between rich and poor students. Students
from advantaged groups have made tremendous progress over the years, while poor students from ethnic minority groups continue to lag behind. What is holding them back? This chapter will discuss two barriers to participation in higher education – school dropout rates and low achievement among young people who do graduate. It will also detail the factors sitting behind these two barriers.

4.1 Educational attainment of adult population

Educational attainment refers to the highest level of education that an individual has completed (US Census Bureau, 2010). Trends in two important indicators of attainment of people aged 25 and over are reported in Figure 4.1.

Figure 4.1 Persons age 25 and over by years of school completed, selected year: 1960 to 2008

Source: US Department of Education (2010a), Table 8.
Note:
1 Data for years prior to 1993 are for persons with 4 or more years of high school. Data for later years are for high school completers—i.e., those persons who graduated from high school with a diploma, as well as those who completed high school through equivalency programs, such as a GED program.
2 Data for years prior to 1993 are for persons with 4 or more years of college.
The chart above shows that the percentages of 25 year-olds and over who had completed high school and higher education increased between 1960 and 2009. In 2009, 86.7 percent persons had received at least a high school diploma or equivalent and 29.5 percent had completed a bachelor degree or higher. The overall growth rate of people who had received at least a high school diploma was higher than for a bachelor degree (or above), representing a 45.6 percentage point increase compared to 21.8 points from 1960.

Following on from the previous chart, Figure 4.2 shows the trend of educational attainment of people aged 25 and over by race.

Figure 4.2 Persons age 25 and over, by race or ethnicity, by years of school completed, selected years: 1975 to 2008

The percentages of Whites who completed high school and a bachelors degree (or above) were higher than both Blacks and Hispanics between 1975 and 2009. The high school completion rate increased from 65.8 to 91.6 percent for Whites, from 42.6 to 84.2 percent for Blacks, and from 38.5 to 61.9 percent for Hispanics. In

Source: US Department of Education (2010a), Table 8.
Note:
\(^1\)Data for years prior to 1993 are for persons with 4 or more years of high school. Data for later years are for high school completers—i.e., those persons who graduated from high school with a diploma, as well as those who completed high school through equivalency programs, such as a GED program.
\(^2\)Data for years prior to 1993 are for persons with 4 or more years of college.
addition, the percentage who had attained a bachelors degree or higher grew from 19.4 to 32.9 percent for Whites, from 6.4 to 19.4 percent for Blacks, and from 6.6 to 13.2 percent for Hispanics. Between 1975 and 2009, the gap in high school attainment between Whites and Blacks decreased from 23.2 to 7.4 percentage points and slightly increased from 27.3 to 29.7 percentage points between Whites and Hispanics. However, the gaps between the three races in bachelors degree attainment continued to widen over the years. The gap between Whites and Blacks rose from 8.5 to 13.5 percentage points, while the White- Hispanics gap went up from 8.3 to 19.7 percentage points.

4.2 Barriers to participation in higher education

4.2.1 School dropout

Serious attention should be given to dropout cases in high school. If the students do not finish high school, it is very likely that they will not go on to college. They will spend their lives as unemployed or low-wage workers and depend on government assistance. Government will have a heavy burden in bearing the costs of public assistance and health care as well as juvenile crimes. Therefore, it is important to identify dropout rates and trends among all demographic groups. The uneven gaps across the groups may be due to various factors and associated problems.

High school dropout trend

The US Department of Education has defined two types of dropout rates. Event rates illustrate “the proportion of students in a given age range who leave school each year without completing a high school program”, while status rates are “cumulative data
on dropouts among all young adults within a specified age range” (US Department of Education, 2001, p. 2). In this study, status rates signify the percentage of 16-through 24-year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or equivalent).

The status dropout rates in the US gradually declined from the early 1970s to the year 2000 as shown in Figure 4.3.

Figure 4.3 Status dropout rates of 16 to 24-year-olds, selected year: October 1972 to October 2000

![Graph showing status dropout rates from 1972 to 2000](image)

Source: US Department of Education (2009a), Figure A, pg iv

The above figure shows that the status dropout rate fluctuated from 1972 to 1978, rose slightly in 1979 and gradually declined after that until 1986. The rate again fluctuated and finally reached 10.9 percent in 2000. The most recent data by the US Department of Education (2009) reported that a further decline was seen between 2001 and 2007, from 10.7 percent to 8.7 percent. The difference of 5.9 percent status dropout rates between the year 1972 and 2007 shows an insignificant improvement over the 35-year period. The total number of dropout cases is a major concern for US government because it is a significant barrier to increasing educational attainment.

Status dropout continues to exist in the US among certain students populations. The rates for Whites, Blacks, and Hispanics declined between 1972 and 2007. Generally, Hispanics were more prone to drop out of high school compared with Whites and Blacks as shown in Figure 4.4.
The status dropout percentage of Hispanics was consistently higher than other races throughout the 35-year period, with a range of 25 to 35 percent. After 1998, the rate trended downwards, falling from 29.5 percent to 21.4 percent in 2007. The status dropout rate for Blacks was also higher than Whites between 1972 and 2007. However, the difference between the rates of these two racial groups has narrowed since 1984. It is remarkable that for both White and Black students’ status dropout rates fell by more than half between 1972 and 2007. The rate for Whites decreased from 12.3 percent to 5.3 percent and for Blacks from 21.3 percent to 8.4 percent.

The status dropout rate also varied by gender. Males were more likely than females to drop out of school in the years 1972 to 2007 as shown in Figure 4.5 and 4.6.
Figure 4.5  Male status dropout rates of 16 to 24-year-olds, by race/ethnicity, selected years: 1972 to 2007

Source: US Department of Education (2009b), Table 109, pg 169

Figure 4.6  Female status dropout rates of 16 to 24-year-olds, by race/ethnic, selected years: 1972 to 2007

Source: US Department of Education (2009b), Table 109, pg 169
The male rate decreased from 14.1 percent in 1972 to 9.8 percent in 2007, while the female rate fell from 15.1 percent to 7.7 percent. Both Hispanic males and females were more likely to drop out of high school than the other races, but from 1980 onwards the rates for Hispanic males remained higher than their female counterparts. Among Black students, there were no significant differences between male and female rates, both showing a downward trend to 8.0 percent for females and 8.8 percent for males by 2007. The rates for Whites were consistently lower than for Blacks and Hispanics from 1972. The rates for White males generally exceeded White females over a period of approximately 30 years (1977 to 2007). The significant feature of the graph is the substantial gap between the Hispanic and White dropout rates for both sexes, followed by White-Hispanic and White-Black.

The dropout rates for students from low, middle, and high income families trended downwards from the mid-1970s to 2007 as shown in Figure 4.7.

**Figure 4.7** Status dropout rates of 16 to 24-year-olds, by family income quartile, selected years: 1972 to 2007

Source: US Department of Education (2009b), Table 110, pg 170.
Note: 1974 data are not available

The status dropout rate of students from low income families remained higher than their peers from middle and high income families. The percentage of students from
low income families was about 5 times greater that of students from high-income families in 1972 (27.6 percent versus 5.4 percent) and remained much the same in 2007 (16.7 percent versus 3.2 percent). The highest percentage decrease of 10.9 percent from 1972 to 2007 was for students from low income families, followed by middle-income families (10.5 percent). The students from middle and high income families experienced no significant change as the rate decreased between 2 and 4 percent. The gap difference between students from low and high income families during the period 1972 to 2007 decreased from 22.3 percent to 13.5 percent, with the highest percentage gap being in 1977 at 24 percent.

Reasons why students drop out of high school

The statistics in the previous sections show that student dropouts represent a longstanding problem in the US and the rates remain high to the present day. The US government is taking this problem seriously as it is not a good indication of the country’s future. Seeing the students leave high school without having diplomas directs us to question their reasons for quitting school. There may be numerous factors that influence decisions about graduating, and previous studies have identified several causes for students to drop out of school. Some of the factors interact with each other to compound the issue. However, the reasons for dropping out of school can be grouped into four main categories: 1) economic; 2) family; 3) cultural; and 4) academic.

1) Economic factors

Students from low income families are less likely to finish high school, compared with students from higher income families. Parents from this group are likely to be less educated and working in low wage jobs to support their families. With limited resources they are less able to afford educational benefits for their children’s education, including access to better quality schools, after-school and summer school
programs, and more support for learning within the home (Rumberger, 2001). The event dropout data for the year 2000 indicates that dropout cases among students from families in the lowest 20 percent of income distribution are six times higher than those from families in the top 20 percent. The percentage distribution of students dropping out, based on family income, is: 10 percent of students in the lowest 20 percent of income, 5.2 percent in the middle 60 percent and only 1.6 percent in the top 20 percent of income (Blue and Cook, 2004). This finding strongly suggests that economic pressures force more students from low income families to give up school and search for a job in order to help their families. As families struggle, these students are left with no other alternative but to forego their dreams, move into a different world and work on average 15-18 hours per week (Natrielo, 1985). Rumberger (1983) observed that many Hispanic dropout cases were due to the obligation to work in order to supplement the family income. The American Psychological Association (2010) also concluded that dropout rates are significantly higher for students of colour, particularly African American, American Indian/Alaska Native, and Latino youth. This can be correlated with less access to high quality early childhood education and high rates of poverty among these families.

2) Family factors

The next reason for dropping out of school is associated with certain aspects of family background, in particular, parental educational attainment, family support and family structure.

Previous research by Barro and Kolstad (1987) found that dropout rates were more strongly related to parents’ education than parents’ occupation. In addition, this study found evidence that students with fathers having ‘some college education’ were 50 percent more likely to drop out; those with fathers who graduated from high school were about 100 percent more likely to drop out; and those whose fathers did not finish high school were nearly 250 percent more likely to drop out. The differential in these figures is due to the educational attainment of the father influencing the
children’s educational aspirations. Fathers are the foremost role models of their children and encourage them to have high educational attainment.

The high socio-economic status (SES) families have an advantage to provide not only financial support for learning expenses, but also educational supports which lead to academic success of their children. Research conducted by Velez (1989) found that the more favourable economic environment afforded the high SES families the benefit of giving more attention, time and greater assistance to their children and also keeping an eye on their children's academic progress at school. This focus on the children enhanced their academic ability and reduced their propensity to drop out (Rumberger, 1983; Rumberger & Lim, 2008). They transmitted high educational aspirations to their children, observed their children's progress, have a good parent-school relationship and made friends with the parents of their children's friends (Rumberger & Lim, 2008). A consistent finding in a study by Englund, Egeland, and Collins reported that:

“*Youth who are academically and behaviourally competent rely on their parents as an important source of support for their continued educational success; without parental support, academically able adolescents may divert from a successfully educational pathway to one of failure.*” (2008, p. 89)

Striving to bring in more money for the family, low SES parents are likely to spend less time with their children. They may also have lower expectations that their children stay in school. For instance, Velez (1989) found that female Hispanic students were more likely to dropout than their male counterparts due to the strong emphasis on family gender-role arrangements. The girls were expected to do daily household chores and take care of younger siblings. This creates internal conflict for the girls between their role as student and as daughter which can affect their school performance.

Family structure has been associated with dropout rates. Students who come from single-parent families are at greater risk of dropping out. The divorce or separation of their parents may necessitate both a change in address and a different family structure. They may have to adapt to different schools and friends, and possibly new
sibling in a blended family arrangement. This raises concerns when one or both parents abandon their responsibility to help with their child's school work (Lessard et al., 2009). A report by Barton (2005) stated that living with both parents in the home is a significant determinant of school completion, even after controlling for family income. This finding supports Rumberger and Lim (2008, www.lmri.ucsb.edu/dropouts) finding that “students living with both parents have lower dropout rates and higher graduation rates, compared to students living in other family arrangements”.

3) Cultural factors

Cultural factors are among the reasons for students leaving school early. There were cases of students engaging in early marriage and having children (Rumberger, 1983; Barro & Kolstad, 1987; Velez, 1989; Rumberger & Lim, 2008). Teenage early commitment followed by parenting and childbearing are very stressful for the students who have to manage school and personal life issues. Subsequently, school becomes less important and is regarded as secondary priority to them. As a result, they may start to stay away from school.

Students may lose interest in school when they have emotional problems. Many studies have found that dropout cases frequently occurred among students from single-parent families (Natriello, 1985; Barro & Kolstad, 1987; Velez, 1989; Stevenson and Ellsworth, 1991). Incidents in the family such as family conflict, physical abuse by the father and expulsion from home (Stevenson & Ellsworth, 1991) influence students’ commitment to school because they do not receive support and advice from their parents. As there is no support from the family at home, they seek support from adults at school such as teachers, counsellors and administrators. However, their situation worsens if no one shows concern or is able to assist them (Stevenson & Ellsworth, 1991). A feeling of not belonging, either at home or at school, encourages these students to leave school.

In addition to the above-mentioned factors, the other relevant causes that contribute to student dropout are school, peer and community factors. The strong academic
environment at school also places pressure on low academic achievers. The atmosphere in which more students take academic courses and do homework enhances the decision to drop out of school (Rumberger & Lim, 2008). On the other hand, Velez (1989) in his study pointed out that Chicano students in academic programs were more likely to drop out than their non-academic counterparts. Citing less than adequate preparation for the academic program, low academic self-esteem and discrimination by peers and teachers as the main reasons, as compared to the non-Hispanic white students. This case indicates that minority students are being left out and are not easily accepted by any of the majority student groups. The experience of being isolated from school peers increase the probability of dropping out of school.

Community involvement is also an important factor influencing students' dropout decision (Rumberger & Lim, 2008). Strong support from the neighbourhood and positive role models in the community can change a student’s educational destination. Children from wealthier families benefit from a more supportive environment and have more rewarding educational experiences (Rumberger, 1983). By contrast, the disadvantaged family environment together with the unhealthy community surroundings, have a significant impact on children’s academic achievement once they develop negative self-concepts and beliefs (Suh & Suh, 2007).

** Please note that the final reason – academic factors – which is also the next barrier to higher education will be discussed more fully in the following chapter.
CHAPTER FIVE

ACADEMIC FACTORS

The US government is concerned about the achievement levels of young people who do not graduate from high school. There are students who do not attain a high school diploma or certificate level due to low achievement at school. They are more likely to end up in low skilled and low paid jobs in the labour market if they leave high school without credentials. A lifetime of low wage employment has an impact on the US economy because of the under-utilized human resources. Furthermore, the knowledge economy environment demands better-educated workers to fulfil labour market requirements. To make sure that the higher education sector meets the rising demands of the US economy, it is important to look at the achievement patterns among high school students. In relation to the trends by gender, race and SES, factors that are associated with low achievement will be discussed to understand the phenomenon. Looking at the data, it is remarkable to note that there are certain groups of students consistently achieving below their peers. Since there are many ways of measuring academic achievement, this research will focus exclusively on the SAT Reasoning Test (formerly known as the Scholastic Aptitude Test and Scholastic Assessment Test) and the National Assessment of Educational Progress (NAEP).

5.1 SAT Reasoning Test

The SAT Reasoning Test is a standardized test taken by high school students who wish to apply for higher education. There are three sections in SAT: mathematics, critical reading and writing. Since the 1960s, the results of the SAT Reasoning Test have demonstrated achievement gaps between males and females, as shown in Figure 5.1.
As the SAT-Mathematics mean scores in Figure 5.1 indicate, male students consistently scored above the average compared to females. The performance of both sexes decreased in the 1960s and 1970s and climbed slowly after the 1980s. It is noted that female scores only reached above 500 points after 2001-02, but were still below the average score. The difference in score between males and females was 33-46 points between 1996 and 2008. The biggest score difference was 46 points in 1976-77 and the smallest was 33 points in 2007-08. Although the gap is narrowing in recent times, in fact, the difference between male and female scores remains substantial.

The same pattern has also been found in critical reading as shown in Figure 5.2.
Males performed significantly better than females in the years from 1971-72 to 2008-09. However, the difference in score between males and females was between 2 and 13 points and the largest differences were observed in the 1980s. The notable feature of the graph is the downward trend in student performance for this test. The total mean for all students dropped by 41 points, from 543 points in 1966-67 to 502 points in 2007-08. However, it is notable that females were considerably better at writing than males, as confirmed in Table 5.1, scoring significantly above the national average.

Table 5.1 SAT writing mean scores of college-bound seniors, by sex, selected years: 2005-06 to 2007-08

<table>
<thead>
<tr>
<th>School year</th>
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<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>497</td>
<td>491</td>
<td>502</td>
</tr>
<tr>
<td>2006-07</td>
<td>494</td>
<td>489</td>
<td>500</td>
</tr>
<tr>
<td>2007-08</td>
<td>494</td>
<td>488</td>
<td>501</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2009b), Table 142, pg 208
The average score gap between males and females over the period 2005-06 to 2007-8 was 11.7 points. During this same period, the score gap for males was between 5 and 6 points and for females was 5 and 7 points above the national average.

Most of the low achievers were from the minority groups. The SAT critical reading scores from 1990 to 2008 in Figure 5.3 show that Black, Puerto Rican, Mexican American, other Hispanic, American Indian and other races were persistently ranked below the national average.

Figure 5.3 SAT critical reading mean scores of college-bound seniors, by race/ethnicity, selected years: 1990-91 to 2007-2008

In the figure above, Whites outscored all other groups, while Asian/Pacific Islander students demonstrated substantial progress, increasing their scores from 485 points in 1990-91 to 513 in 2007-08. Among other ethnic minorities, Puerto Ricans showed the greatest improvement from 436 points in 1990-91 to 456 in 2007-08. However, their most recent score was still below the national average. Black students, on the other hand, had the lowest results over the 18-year period, their score in 2007-08 being only marginally better than in 1990-91.
Similar trend to critical reading were demonstrated in mathematics scores as shown in Figure 5.4.

Figure 5.4 SAT mathematics mean scores of college-bound seniors, by race/ethnicity, selected years: 1990-91 to 2007-2008

Most of the ethnic groups showed improvement in their 2007-08 results compared with 1990-91. As with critical reading, Blacks were consistently located at the bottom of the graph, and together with most of other minorities scored below the national average. The outstanding feature of the graph is that Asian/Pacific Islander students were situated above Whites and well above the national average score. They showed significant gains in mathematics scores, achieving 581 points in 2007-08. What this means is that most of the minorities are facing serious obstacles in entering higher education institutions and are unlikely to gain admission to Ivy League or other prestigious institutions. The next paragraph will present more details on the SAT achievement gap between White and ethnic minority students in critical reading and mathematics.

The achievement gap between majority and minority students has been a major concern under the Obama administration. The poor performance of the minorities in Critical Reading and the consequent gap between them and White students did not
change over the years 1990-2008 as presented in Figure 5.5. They scored below 500 points in each year, which was far behind their White peers who scored over 500 points, significantly more than the national average.

Figure 5.5  Trends in SAT-Critical Reading gap scores of college-bound seniors, by race/ethnicity, selected years: 1990-91 to 2007-2008

Source: US Department of Education (2009b), Table 141, pg 207

For some minority groups, the score gap widened between 1990 and 2008 - for Black by 7 points, Mexican American by 10 points and other Hispanic by 13 points, while for Puerto Rican and American Indian students the gap narrowed. In 2007-08, the widest score gap of 98 points was between White and Black students, followed by Puerto Rican, Mexican American, and other Hispanic students. American Indian students had the smallest gap at 43 points. The largest improvement was seen in the performance of Puerto Rican students for whom the gap narrowed by 10 points, from 82 point in 1990-91 to 72 points in 2007-08.

Similar trends in Critical Reading have also been found in Mathematics scores. As shown in Figure 5.6, Black students once again scored below all other students.
Figure 5.6  Trends in SAT-Mathematics gap scores of college-bound seniors, by race/ethnicity, selected years: 1990-91 to 2007-2008

The largest score gap of 111 points was between Black and White students with Black students achieving the lowest score in each year and improving by only 7 points over the 18-year period. The score gaps for all other minorities except for American Indians also widened between 1990-91 and 2007-08, increasing 17 points for Blacks, 10 points for Puerto Ricans, 25 points for other Hispanics and 20 points for Mexican Americans over the 1990-91 figure. American Indian students had the narrowest score gap of 43 points in 2007-08, nevertheless an increase of 1 point over their 1990-91 score.

To sum up, the academic gulf between White and minority students in SAT will remain large for several years to come unless actions are taken to improve the minorities’ learning experiences. The data clearly shows that White students are
improving in their SAT scores each year, while the minorities are lagging behind, and having a difficult time in ‘catching up’ with them.

The recent data in 2007-2008 indicates that even though the percentage distribution of the students from high income families is smaller than that from low income families, they perform much better.

Figure 5.7 SAT Critical Reading, Mathematics and Writing mean scores, by family income, selected year: 2007 and 2008

![Figure 5.7 SAT Critical Reading, Mathematics and Writing mean scores, by family income, selected year: 2007 and 2008](image)

Source: US Department of Education (2010a), Table 145

Figure 5.7 shows that students from middle and high income families managed to achieve mean scores of more than 500 points in reading, mathematics and writing. In contrast, low income students achieved less than 500 points in the three subjects and the highest mean score was 496 points in mathematics. Students from the highest income families (more than $200,000) obtained the highest mean scores in all of the three subjects. The score gaps between the highest and the lowest income students were considerable - 120 points in reading, 114 point in mathematics and 122 points in writing.

Parental level of education does have a positive influence on student academic success as shown in Figure 5.8.
Figure 5.8  SAT Critical Reading, Mathematics and Writing mean scores by highest level of parental education, selected years: 1995-96 to 2007-08

Source: US Department of Education (2010a), Table 145
The above figure shows that the majority of parents in the data had only a school diploma. However, the percentage decreased by 3 percent in 2007-08 from the 1995-96 figure. At the same time, the percentage parents with a bachelors degree went up slightly from 28 percent in 1995-96 to 30 percent in 2007-08, while the other educational levels remained relatively stable. It is clear from the figures that students with well-educated parents scored higher than those with less educated parents. Students with college or university educated parents (bachelors degree and above) earned more than 500 points in reading, mathematics and writing. In addition, students with the highest educated parents (graduate degree) had the highest mean scores in the three subjects. Notably, the mean scores of the three subjects did not change significantly from 1995-96 which may indicate that student achievement has not improved over the years to 2007-08.

5.2 NAEP

NAEP is a periodic assessment of students performance in various subject areas such as mathematics, reading, science, writing, the arts, civics, economics, geography and US history. The NAEP results are not for individual students or schools. They are all-state results based on subject matter achievement, instructional experiences and school environment for populations of students (for example, all fourth-graders) and groups within those populations (for example, female students, Hispanic students). “NAEP is conducted on representative samples of students at grades 4, 8, and 12 for the main assessments, and on samples of students at ages 9, 13, and 17 years old for long-term trend assessments. These grades and ages are chosen because they represent critical junctures in academic achievement” (National Center for Education Statistics, n.d, http://nces.ed.gov/nationsreportcard/about/). The next paragraphs in this section will focus on assessment in mathematics and reading.

The 2008 NAEP average score in mathematics for 9, 13 and 17 year old students were not significantly different from the scores in 2004, as presented in Figure 5.9.
The average scores for 9, 13 and 17 year old students increased by 4, 2 and 1 points respectively. It is remarkable that average scores for 9 and 13 year old students in 2008 were the highest of all previous assessment years. Nine year old students scored 24 points higher and 13 year olds went up by 15 points over 1973 scores. Remarkably, the average score for 17 year old students in 2008 increased by 2 points over the 1973 figure.

The pattern of average score for male and female students was mixed over the 35-year period from 1973 to 2008 as shown in Figure 5.10.

**Figure 5.10** Trend in Male-Female NAEP mathematics average scores for 17 year old students, selected years: 1973 to 2008
The overall performances for both genders were not significantly different, but male students consistently accomplished slightly better results than females. They attained above 300 points each year as compared to females who performed less well from 1973. By 1990, they managed to catch up to males when they accomplished an average score of 303 points. Between 1990 and 2004, females stayed within 3 to 5 points of males, widening to a 6-point score gap by 2008. From the data, it is clear that female students were left behind by their male counterparts in mathematics during the period since 1973.

Over the same 35-year period, Black and Hispanic students achieved greater gains than White students in mathematics average scores. As shown in Figure 5.11, their scores improved significantly by 2008 compared with their 1973 assessment score.

Figure 5.11 Trend in White-Black and White-Hispanic NAEP mathematics average scores and score gaps for 17 year old students, selected years: 1973 to 2008

Source: Rampey et al. (2009)
The mathematics score gaps between White students and their counterparts were smaller in 2008 than in 1973. The score gap between Whites and Blacks narrowed by 14 points and between Whites and Hispanics by 12 points in 2008 over the 1973 figure. However, the fact that average scores for Blacks and Hispanics in 2008 were still below those of Whites in 1973 is evidence of the racial disparity that continues to the present day.

Parents’ education also influences student achievement in NAEP mathematics. Students with well-educated parents accomplish better results than students whose parents have less education. Figure 5.12 illustrates substantial differences in the average scores of 17 year old students based on parental education.

Figure 5.12 Trend in NAEP mathematics average scores 17-year-old students, by highest level of parental education, selected years: 1973 to 2008

Students whose parents had some education after high school (or above) achieved better results, maintaining scores above 300 points over the period 1978 to 2008. The score gaps between students whose parents at least graduated from high school, have some education after high school and graduated from college stagnated because the average scores of all groups did not rise high enough to reduce the gap. However, there was a significant change in the score gap between the highest and the lowest educated parents during this period. The score gap narrowed from 37 points in 1978 to 24 points in 2008.

Source: Rampey et al. (2009)
Next, we look at the trend in NAEP reading scores. Average scores in reading for 9, 13 and 17 year old students were higher in 2008 than in the previous years as shown in Figure 5.13.

Figure 5.13  Trend in NAEP readings average scores for 9, 13, and 17 year old students, selected years: 1971 to 2008

The scores for 13 and 17 year olds improved slowly from 1971 and started to go down after 1992. In contrast, the scores for 9 year olds old kept on rising slightly until 2008. The average score went up by 12 points for 9 year olds; 5 points for 13 year olds; and by 1 point for 17 year old students as compared to 1971 figures. In general, the average scores for 13 and 17 year olds were not significantly different from the scores in 1971. However, 9 year old students showed an improvement with the average score in 2008 being 12 points higher than in 1971.

Female students were more likely to perform better than males in NAEP readings as shown in Figure 5.14.
The figure above shows that female and male reading gaps narrowed from 1971 to 1988, but the gap increased between 11-15 points after 1990. The data clearly shows that the score in 2008 was not much different from that in 1971. However, there was little difference between the score gap of both sexes in 2008 for the past 16 years because the score gap has gone back to the same level as in 1992.

In the years 1971 to 2008, all races showed some improvement in NAEP reading scores, with White students performing better than their Black and Hispanic peers. However, as shown in Figure 5.15, the average scores for Whites remained relatively flat from 1971 while Blacks and Hispanics, by contrast, showed marked progress in their results.
Figure 5.15  Trend in White-Black and White-Hispanic NAEP readings average scores and score gaps for 17 year old students, selected years: 1971 to 2008

White – Black

From the graph, Blacks scored 27 points higher than in 1971 and Hispanic scores increased by 17 points from the first assessment in 1975. These academic improvements by Blacks and Hispanics reduced the gaps in reading between the three races. The White-Black score gap decreased from 53 points in 1971 to 29 points in 2008, while the White-Hispanic score gap declined from 41 to 26 points between 1975 and 2008.

The average reading scores of students at age 17, as correlated with students’ reports of parents’ highest education level, were lower in 2004 than in 1980, as presented in Figure 5.16.
Figure 5.16 Trends in NAEP readings average scores for 17 year old students, by student-reported parents’ highest level of education: 1980 to 2004

Figure 5.16 shows that the average scores for students whose parents graduated from college, graduated from high school and less than high school dropped by 3 points over 1980 scores, while students whose parents had some education after high school reduced by 9 points. The students whose parents graduated from college achieved better results than their counterparts. However, the fluctuation pattern of the average scores for all groups indicates that the students’ performance did not improve significantly.

5.3 Causes of low results and achievement gaps

The achievement gap between White and minority students in the US has existed since achievement scores were first recorded. Although the gap has narrowed over the years, minorities continue to record poorer academic performance. It is apparent that these groups have been neglected and continue to be second-class citizens in their own country. Why is it that this gap has not yet closed? A major factor that
correlates with low achievement among minority students is socio-economic status (SES) (Bond, 1981).

SES which is determined by parental education and family income among other factors is a significant indicator of academic outcomes among youth minorities (Koa & Thompson, 2003). Most of the minority students are from the lowest SES backgrounds in US society. Their parents have not attended college or universities, nor obtained a degree. Without having high educational attainment, these parents have little idea about higher education, nor do they necessarily place a high value on education and schooling. They are not able to give support and motivate their children to achieve excellent grades in school, finish high school, and eventually attend college (Anderson & Johnson, 1971). It is completely different from the experience for Asian Americans where they have positive cultural beliefs about the benefits of education. The Asian American youth are concerned about family commitments and their responsibilities to achieve well in school (Koa & Thompson, 2003).

Children with well-educated parents have a big advantage over the children of poorly-educated parents. Such parents are less able to provide learning assistance when their children are struggling to understand aspects of the lesson in school. Research by Zady and Portes (2001, p. 225) showed that these parents could not assist their children in solving science problems. They found that “when the parents want to help their children or to be involved, the lack of background knowledge and familiarity with the sets and the difference in ‘out of school’ factors show up”. In addition, Zady and Portes also discovered that educated mothers normally used elaborate verbal cues while assisting their children with homework, by using science concepts at home, but low educated mothers were dependent on printed directions.

Parents need to be involved in their children’s academic development by monitoring their children’s progress and guiding them through the learning process. They can, for instance, encourage them to do their homework, and provide them with information, ideas and advice. In doing so, the parents know that their children are on the right track and are not falling behind their peers. In their study on high school students’ achievement in reading, Flowers and Flowers (2008) suggested that African American parents spend more time reading and discussing books with their children.
at home so as to develop a stronger appreciation for reading. They also suggested that parents should act as role models by reading with their children and taking part in learning opportunities. Stewart (2007) also agrees that parents’ commitment to education-related discussion with their children was an effective tool for increasing children achievement.

Family income remains a significant factor in academic performance. The higher the family income, the greater the family stability. High-income families are able to provide adequate resources and support for the children. Their high income permits them the flexibility to take part in their children’s school activities. Parental involvement in schools has a significant effect on children's academic performance (Tapia, 2004). In contrast, those from low-income families have limited financial resources for children’s education. Slaughter (2006, p. 19) reported that “low SES and African American families regularly lack the human and material resources required for a positive academic environment in the house.”

Another factor affecting students’ academic performance is the school’s learning environment. Students’ academic success is strongly correlated with curriculum and teaching method. Barton (2003) reported that there were gaps between the minority and majority student populations due to “the rigor of the curriculum”. He said that “in the research literature, terms such as challenging curriculum, academic environment, and academic press are used to denote rigor” (Barton, 2003, p. 8). Academically challenging content might affect students' academic performance. The understanding of basic concepts was important in order to further advance knowledge which required high-order thinking.

Students' low academic performance in school may be a consequence of poor school resources. These are related to the professional development of the teachers, as well as school facilities. The Education Trust (Jerald & Ingersoll, 2002) reported that there was a high percentage of core academic secondary school classes taught by teachers who did not have a major and minor in the subject (also known as ‘out-of-field teaching’). Notably, this percentage increased in high-poverty and high-minority schools. According to this report, “about 70 percent of middle-grade math classes in high-poverty and high-minority schools nationally are assigned to a teacher who lacks even a college minor in math or a math-related field (including math
education)” (Jerald & Ingersoll, 2002, p. 7). In addition, some teachers are not aware of cultural differences when teaching students from different backgrounds. They should apply suitable methods when working with diverse students in the classroom because students from different ethnic and social backgrounds have different daily experiences and attitudes. The examples and scenarios used in teaching may work well for only some students. For instance, effective teaching strategies for the non-minorities may not work well with the minorities (Nelson-Barber, 1999 in Goodwin, 2000). This is because different cultural groups are raised in diverse backgrounds. They have different prior knowledge, experiences, ideas and styles of learning. It is important for teachers to understand their student's background in order to plan a variety of teaching strategies which cater for the diverse needs of these students.

Low teacher expectations and negative perception of minority students have an impact on student achievement. The social class and ethnicity of these students are commonly associated with poor academic performance (Becker & Luthar, 2002). Some teachers believe that these students lack the motivation to succeed in school and they are not capable of high achievement. They are paid less attention and given fewer opportunities to participate in class due to their underachievement. They do not receive enough support from the teachers to achieve higher level academic competencies. Instead, they spend less time on academic tasks and more time on remediation and low level activities (George & Aronson, 2003). These students are not able to cope with the demands and expectations of school due to family or personal problems. They struggle to handle their own personal issues and at the same time meet a heavy schedule of academic requirements at school in order to graduate. When they fail to achieve the expected level, they choose to pull out of school (Stevenson & Ellsworth, 1991).

School facilities make a positive difference in student success. They may affect students' and teachers' ability to perform. The important ingredients in successful teaching and learning are quiet, safe, comfortable and healthy environments (Schneider, 2002). However, Neighborhood Capital Budget Group (NCBG) (1999) reported that a major problem faced by the USA education system was the poor condition of many school buildings. Only two-thirds of the 75,000 schools in the USA were adequate, while the other third of schools needed to be repaired or
replaced due to the aging buildings. Most of the poor schools in Chicago, for example, were constructed in the 1970s. The other problem was that of overflowing classrooms. There were too few classrooms to accommodate the growing number of students. As they were operating beyond their capacities, some schools had to use portable classrooms and change to double sessions.

Personal factors also contribute to low educational achievement. Students may not have high educational aspirations (Rumberger, 1983; Velez, 1989) and they are not interested in attending school. They are involved in various disciplinary problems at school such as suspension, misbehaviour, delinquency, fighting, skipping classes, absence when not ill and expulsion (Natriello, 1985; Barro & Kolstad, 1987; Velez, 1989; Suh & Suh, 2007; Rumberger & Lim, 2008). Some of them engage in serious problems such as drug and alcohol use (Stevenson & Ellsworth, 1991; Rumberger & Lim, 2008). All of these problems may affect student attendance patterns at school.

Past studies have shown that high absenteeism causes many students to drop out of school. (Stevenson & Ellsworth, 1991; Suh & Suh, 2007; Rumberger & Lim, 2008). Poor academic performances can be linked to low grades with students rating at one or more years below grade level (Natriello, 1985). Consequently, these students have to repeat subjects, thereby delaying their advancement. As the oldest in the class or also known as ‘verage’, they lack a sense of belonging, perform below grade level, and tend to drop out of school. Regular students who have poor academic achievement lose their commitment to stay focused and finish high school (Velez, 1989). Barro and Kolstad (1987) reported that students in the lowest quartile level were eight times more likely to drop out than students at the highest rank.

Language barriers may contribute to academic failure among Mexican-American children. As Spanish is the major language spoken in the home, they tend to start school with language difficulties. Even though several generations of the family may have lived and worked in the USA, they still continue using Spanish in the home (Anderson & Johnson 1971).
There is no independent single factor or cause leading to student dropout in the USA. The decision to quit school before graduation is made by the students through a combination of several factors – economic, family, personal, academic achievement, peer and community. These factors differentiate outcomes by sex, ethnicity and socio-economic status. The risk of school dropout is most pronounced among minority students as they mostly come from disadvantaged backgrounds. A minority student from a low-income family faces financial constraints and family obligation to take on an adult role rather than to gain a better education in life. However, low SES does not directly contribute to school dropout, but tends to work through related factors such as low parental expectations, parents’ lack of education, poor academic achievement, and low commitment to school, and poorer average resources, both physical and human, in schools.
CHAPTER SIX

INSTITUTIONAL DIFFERENTIATION

Much of the expansion in US higher education has occurred through differentiation of provision. Different institutions tend to play different roles and tend to have somewhat different student profiles. The structure is hierarchical, dominated by elite institutions, but at the same time widely accessible. As a result, American higher education offers a model of growth which up to a point also delivers equity. This makes it attractive to developing countries as the model offers both elite recruitment and training and on the other hand broad access.

This chapter discusses two types of higher educational institutions in the United States, namely two and four-year institutions in both the private and public sectors. It will then compare the enrolment patterns at two- and four-year institutions. The subsequent chapters go into further details on each type of institution covering the enrolment trends which are disaggregated by gender, race and socio-economic backgrounds and some of the challenges or problems faced by those institutions.

6.1 Types of higher educational institutions

The US degree-granting post-secondary institutions are divided into four distinct categories: public two-year institutions (also known as community colleges), public four-year colleges and universities, private not-for-profit institutions and private for-profit institutions. Two-year institutions are associate degree-granting institutions that offer programs in vocational fields, including a range of programs for specialised training, recreational courses and English classes. In addition, these institutions are
also preparing students for university entrance. In contrast, four-year colleges and universities offer undergraduate and post-graduate degree programs in various fields.

Private not-for-profit institutions are independent colleges, universities, and technical training schools, including religion-supported higher institutions, women’s colleges, and historically black colleges and universities (Eckel & King, 2004). For-profit institutions “range from small vocational and technical schools that offer hands-on career training to large fully-accredited colleges and universities that offer a traditional classroom experience” (Bennett et al., 2010, p. 5). Similar to private not-for-profit institutions, for-profit institutions in the present day also offer associate, bachelor, and doctoral programs.

Among all these institutions, public institutions are more likely to be responsive to student demand due to their lower tuition fees and reputation. Consequently, the majority of the students in the USA choose to enrol in public two- and four-year institutions, although enrolments in private institutions have expanded rapidly in recent times. Figure 6.1 displays the institutional profile on American higher education in 2007.

Figure 6.1 Institutional profile of four-year and two-year colleges in 2007

![Bar chart showing the enrollment in public, private not-for-profit, and private for-profit institutions in four-year and two-year colleges in 2007.](image)

Source: US Department of Education (2010a), Table 187
Figure 6.1 shows that the public education sector is still dominant when compared with its private counterparts. It also highlights that there are very few students in private for-profit two-year colleges. Most provision of this kind is public.

6.2 Enrolment trends in two- and four-year institutions

Over the last forty years, there has been a great expansion in student numbers in both four-year and two-year colleges. The former have increased their numbers by about 180 percent, while the latter have increased numbers by 287 percent. This big difference in the overall rate of growth is almost all due to the early and very rapid expansion of two-year college intakes between 1970 and 1975.

In the early decades, the two-year institutions became a more and more popular option among students. This is shown by the tendency for the two-year college trend to converge on the four-year college trend. But after 2005, growth in two-year college enrolments slowed markedly, while the four-year colleges trended upwards. The gap between these two sectors was thus about as great at the end of the period (2007) as at the beginning (1970).
Figure 6.2  Actual total undergraduate enrolments in degree-granting two- and four-year institutions, by sex: 1970 to 2007 (in thousand)

The most important feature of Figure 6.2 is the almost continuous upward growth in American higher education enrolments over the entire period, including in both two-year and four-year colleges. This long period spans several recessions (1973-5, 1981-2) which lasted for more than a year. There were only two periods when growth really slowed. The first was from 1980 to 1985 (covering the first Reagan presidency). The other occurred only in recent years in the two-year colleges (2005-2007).

6.2.1  Gender differences

Continuous overall growth does not mean that there has been the same history for different groups of students. In 1970 there were more men than women in four-year institutions. This was equalised in 1980-1985, before women overtook men. More and more there is a gender divide. This is partly because male enrolments in four-
year colleges were flat for almost 30 years. About the same history applies to two-year colleges in the United States.

Today women outnumber men in higher education institutions. This phenomenon has occurred not only in the USA, but in university enrolments worldwide. However, the experience in the United States is particularly significant. One equity gap in which women had lower access has been replaced by another in which men have lower access rather than gender disappearing altogether. Will developing countries that follow the path of massification also go through this history? The gender gap in US higher education is significant, and is growing wider, as shown in Table 6.1.

Table 6.1 Percentage distribution of enrolment in degree-granting institutions, selected years: 1995, 2000 and 2007

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</tbody>
</table>


The gender gap at two-year institutions is wider than at four-year institutions (and has been wider through the period 1995-2007). The gap in four-year institutions was 8.4 percentage points in 1995 and increased to 11 points by 2000, and 13.2 points by 2007. Conversely, the gender gap at two-year institutions narrowed slightly from 15.2 points in 1995 to 14 points by 2000. The gap then expanded to 16.2 points by 2007. Overall, the male enrolments at four-year institutions trended downwards, while the females continued their upward trend. The enrolments for males and females at two-year institutions, however, varied over time.

Why are there gender gaps in a rich country with a mass higher education system? There are several generally held explanations for the fact that there are many more females in higher institutions. Williams (2010, http://www.nytimes.com/2010/02/07/fashion/07campus.html) in the New York
Times stated that “women tend to have higher grades; men tend to drop out in disproportionate numbers; and female enrolment skews higher among older students, low-income students, and black and Hispanic students.”

Data sources from the US Department of Education can also provide pointers to the gender gap factors. Firstly, the high school dropout rate among males between 16 and 24 years old was higher than females in 2007 (9.8 percent versus 7.7 percent). Correspondingly, high school completion rates for 18 to 24 year olds in 2007 were 90.6 percent for females and 87.4 percent males (US Department of Education, 2009a). However, males have always scored higher in Mathematics and Critical Reading SAT (Rampey & Donahue, 2009). In addition, NAEP mathematics average scores of 17 year-olds indicate that males have scored slightly higher than females since 1973. This probably indicates that while males are less likely to finish high school, those who do complete are more qualified to apply for higher education than females. However, fewer of them in relative terms apply for admission and fewer are being admitted to higher education. These findings put the spotlight on (a) high school dropout and (b) application rates. These are potential lessons for developing countries to learn from the country which has pioneered mass higher education.

6.2.2 Race/ethnicity differences

Race or ethnicity is another dimension of unequal participation in a mass system. Looking back to the 1990s in the United States, the percentage of students enrolled at public and private institutions in 1996 varied substantially according to race or ethnicity (Figure 6.3). Ignoring the type of institution, the distribution of students by race/ethnicity in that year were: White (71 percent), Black (11 percent), Hispanic (8 percent), Asian/Pacific Islander (6 percent), American Indian/Alaska Native (1 percent), and non-resident (3 percent).
The above figure clearly shows race-based preferences when students select a higher educational institution. Of all the races, White students were dominant in all types of institutions in the USA. The highest enrolment of White students was in private four-year institutions which accounted for about 74 percent, followed by 73 percent in public four-year institutions. By contrast, the enrolment of Black students was lowest in four-year institutions, indicating that this type of institution was either the least accessible or the least preferred. Of the minority groups, African Americans have the strongest relative (percentage) presence in two-year colleges (16 percent), while more Hispanic students (12 percent) attended public two-year colleges. Overall, White students were more likely to study at four-year institutions than two-year colleges, whereas the minorities selected the other way round.

Have race/ethnicity differences persisted in American higher education since the mid-1990s? By 2008, notable changes in enrolment patterns had occurred among students entering two- and four-year institutions. Figure 6.4 shows the 2008 enrolment in degree-granting institutions by race or ethnicity. This chart reveals that
Whites were still the majority in all higher education institutions, but their representation among all races decreased by 8 percent compared with data from 1996. Between 1996 and 2008, the percentage of minorities increased by 1 percent to 4 percent.

Figure 6.4 Institutional profile of Fall enrolment in degree-granting institutions, by race/ethnicity, selected year: Fall 2008 (%)

A remarkable decrease in the overall proportion of White student enrolments between 1996 and 2008 had a significant impact on enrolment in public two- and four-year institutions. The percentage of White students fell from 68 percent to 59 percent in public two-year institutions and from 73 percent to 67 percent in public four-year institutions. Meanwhile, the proportion of Black and Hispanic in public two- and four-year institutions in 2008 increased. There were more Hispanics enrolling in public two-year institutions compared to Blacks, but Black enrolments in public four-year institutions were slightly higher than Hispanic enrolments. White enrolments were highest at private not-for-profit four-year institutions (69 percent), while the strongest relative (percentage) presence of Blacks was in private for-profit institutions.

**Detail may not sum to totals because of rounding**

Source: US Department of Education (2010b)
four-year institutions (27 percent). Hispanic students were most strongly represented in public two-year institutions (17 percent).

Selected comparisons are presented in Figure 6.5. This looks only at public institutions (2- and four-year) and “all institutions”. Private for-profit and private not-for-profit institutions were not separately reported in 1996, thus, no comparison can be made with the 2006 data.

Figure 6.5 The race profile of public four-year, public two-year and all institutions, 1996 and 2008 (%)

It appears that between 1996 and 2008 a significant shift occurred in the race/ethnicity profile of public higher education institutions in the United States and also in the profile of “all institutions” taken as a group (in which public institutions predominate). Figure 6.5 helps reveal where shares of enrolments for different groups have most changed. This varies somewhat between two-year and four-year institutions, but is biggest in respect of Hispanic students and to a less extent, African Americans, while Asian/Pacific Islanders have also pulled ahead.
The next paragraphs will look in more detail at the pattern of enrolments by ethnic group. Figure 6.6 shows the percentage distribution of undergraduate students by race or ethnicity and by type of institution attended for the years 1999-2000 and 2006.

Figure 6.6  Student profile of each group, by type of institutions attended, selected years: 1999-2000 and 2006 (%)

**Detail may not sum to totals because of rounding

Looking at the statistics above, it is apparent that most of the students regardless of race are more likely to attend public over private, higher institutions. From 1999 to 2000, two-year public institutions had the largest percentage enrolments for all races: 41 percent for Whites, 44 percent for Blacks, 45 percent for Hispanics, 39 percent for Asian Americans and 53 percent for American Indians. In 2006, the percentage of White, Black and American Indian students in public two-year institutions fell slightly due to increasing enrolments in public four-year institutions. As shown in the figure above, Whites enrolments at public four-year institutions increased from 33 percent in 1999-2000 to 39 percent in 2006. This is similar among the minorities where the percentage rate in public four-year institutions increased between 3 and 14 percent over the same period. Even though minority student enrolments at public
four-year institutions grew slightly, many of them opted to attend two-year public institutions, while White students had an almost equal numbers of students in both institutions in 2006. Overall, the number of students across all races studying in public universities increased slightly between 1999-2000 and 2006. A similar rise occurred in not-for-profit private universities among White, Black American and Asian American/Pacific Islander students.

### 6.2.3 Socio-economic status

Students from low-income families are more likely to attend two-year rather than four-year institutions as shown in Figure 6.7. Two-year institutions are more affordable because of their lower tuition rates and the shorter period of time required to earn an associate degree.

Figure 6.7 Undergraduate enrolment by institution level, income and race/ethnicity, selected year: 2003 (%)
In 2003, a total of 50.4 percent of students from low income families enrolled in two-year institutions while 46.2 percent attended four-year institutions. This indicates that low income students were more likely to attend two-year institutions compared with students from middle and high income families. When looking at student ethnicity, Black American, Hispanic and American Indian students from low income families were more likely to attend two-year institutions. By contrast, White and Asian American students from low income families preferred four-year institutions over two-year institutions. This preference was the same among all minority students from high income families. Notably, interesting trends were found among students from middle income families. While students in this income group generally preferred four-year over two-year institutions, Hispanic students went against this trend.

There are significant social barriers to higher education which are reflected in the propensity for students from high-income families to enrol in four-year institutions rather than two-year institutions. When race is taken together with family income, the unequally distributed enrolments among higher education students become even more significant as represented in Figure 6.8.
As can be seen in the figure above, the differences in undergraduate enrolment rates at four-year institutions are higher among students from high income families. White children have typically dominated four-year institutions together with their peers from high income minority families, especially African American. Low income minority students are more likely to take the two-year college route.

Controlling for income shows that race/ethnicity differences cannot be reduced to gaps between rich and poor in access either to four-year or two-year colleges. However, the chart also clearly shows that income differences play a major differentiating role. Low-income groups, regardless of race/ethnicity, have much less chance of enrolling in four-year institutions, but a much greater chance of enrolling in two-year institutions. Lack of financial resources creates a barrier for low-income students seeking to enrol in four-year institutions. On the other hand, the economic and cultural capital advantages of high income families enable their children to attain a high level of education. These families are able to arrange and encourage a better
pathway to higher education for their children, even if they are not performing as well academically in school.

6.3 Conclusion

The aim of this chapter has been to examine growth in American higher education from the angle of relative access, based on background factors such as race/ethnicity, gender and income level. Attention has also been paid to the institutional divide between four-year and two-year colleges and between public and private institutions. The analysis shows that the expansion of higher education in the United States has extended the benefits to a broad cross-section of American society. Institutional differentiation has been a vehicle of massification, enabling groups with weaker life chances to participate in post-secondary education and to gain from this in terms of jobs and income. But massification is not the same as democratisation. Large differences persist in access to the hierarchy of American institutions of higher education. Thus, as a model for countries seeking to expand participation, American higher education sends a warning that overall growth does not necessarily mean equal access and is not necessarily a way of reducing the gaps in life chances associated with race/ethnicity, gender and income level.
CHAPTER SEVEN

UNDERSTANDING UNEQUAL PARTICIPATION IN MASS HIGHER EDUCATION

Creating different types of institutions has been a major tool of higher education expansion in the United States. We have seen in the previous chapter that going down the path of differentiation, while supporting increasing participation in higher education, has been accompanied by persistent differences in which groups of the American population attend which types of college. But if this sends a cautionary note to developing countries, policy learning needs more than a knowledge of such patterns. Understanding the processes or factors which lead to persistent gaps is vital. This chapter examines the factors which affect how choices are made by people entering (or not entering) American colleges. The aim is to highlight the kinds of constraints on equitable participation which will potentially check equity in developing countries.

7.1 To go or not to go to college

The decision to go to college or university after finishing high school requires consideration of many choices as there are thousands of higher institutions from which to choose. Cabrera and La Nasa (2000) claim that the college-choice process starts with a primary stage they call ‘predisposition’. This stage involves the formation of occupational and educational aspirations and the development of intentions at a young age to attend post-secondary education. Next, the ‘search’ stage is to collect information about higher institutions along with listings of
potential colleges or universities. The final step is to identify choices, make the final decision and apply to the preferred institutions. The details of stages, factors and outcomes of college-choice process are presented in Table 7.1.

Table 7.1 Process of college-choice

<table>
<thead>
<tr>
<th>Stages</th>
<th>Factors</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predispositions: Gr. 7–9</td>
<td>Parental encouragement and support Parental saving for college Socioeconomic status Parental collegiate experiences High school academic resources Student ability Information about college</td>
<td>Reading, writing, math, and critical thinking skills Career and occupational aspirations Educational aspirations Enrollment in college-bound curriculum</td>
</tr>
<tr>
<td>Search: Gr. 10–12</td>
<td>Parental encouragement and support Educational aspirations Occupational aspirations Socioeconomic status Salience of potential institutions Student ability High school academic resources</td>
<td>Listing of tentative institutions Narrowing list of tentative institutions Securing information on institutions</td>
</tr>
<tr>
<td>Choice: Gr. 11–12</td>
<td>Educational aspirations Occupational aspirations Socioeconomic status Student ability Parental encouragement Perceived institutional attributes (quality, campus life, majors, availability, distance) Perceived ability to pay (perceived resources, perceived costs)</td>
<td>Awareness of college expenses and financial aid Awareness of institutional attributes and admission standards Attaining scholastic aptitudes and attitudes Perceived support from family and friends Institutional commitment Submission of applications Preregistration Attendance Application for financial aid</td>
</tr>
</tbody>
</table>

Source: Cabrera & La Nasa (2000)

The main focus of the above process is on the final stage, ‘choice’. At this stage, students have to consider numerous factors relating to the most suitable higher institutions for them. Economic and social factors influence their decision-making process. This includes the weight they give to economic and social benefits of attending college, the material constraints they experience (e.g., fees, travel) in view
of their socio-economic backgrounds, and their assessment of their academic ability and academic record. One or more of these factors may hinder their aspirations for higher education.

The following section will discuss several aspects that may influence the decision-making process: poverty, debt aversion, aspirations, high school academic achievement, and home location.

7.2 Poverty

Financial constraint is the main obstacle to higher education for middle and low income families (Gorard et al, 2006; O’Mahony, & Sillitoe, 2001; Brezovsky & Silvernail, 2000). Expensive tuition fees are a major concern. ‘Measuring Up 2008: The National Report Card on Higher Education,’ by the National Center for Public Policy and Higher Education (2008), reported that between 1982-84 and 2006 college tuition and fees grew by 439 percent. This was well above increases in medical care, median family income and the price of other supplies such as food, housing and transportation. This is shown in Figure 7.1.
Rising tuition fees discourage students from lower-income families from pursuing higher education due to their limited financial resources. They not only have to consider college fees, but also living expenses. For them, the opportunity cost of attendance at and investment in higher studies outweighs all other important priorities in their lives. Contrastively, students from high income families have more opportunities to take up places and gain better access to higher institutions. They are more likely to go on to higher education because the burden of paying college fees is smaller than for low and middle income students. The lowest income families are the most affected by the rising costs, as shown in Figure 7.2.
Net college costs as a per cent of median family income rose from 39 percent in 1999-2000 to 55 percent in 2007-08 for the lowest income group. This made higher education least affordable for them. Consequently, higher education is becoming increasingly out of reach, particularly for lowest and middle income families. These two groups are more and more under-represented in college attendance due to rising costs.

Lack of access to information about financial aid opportunities is generally seen as a barrier for low income students and their families. This is because the parents from low income families usually have low education levels, and they do not have the experience of real college costs. They do not know where to seek information on available financial aid and the application process. Teran (2007, http://www.tgslc.org/pdf/StudiesonBarriers.pdf), in his study on financial barriers, found that students with financial aid knowledge are 95 percent more likely to attend college. He also pointed out that “understanding financial aid programs is essential.
Without knowledge and access to financial aid programs, students face an enormous challenge.” The situation is worse if the students are the first in their generation to go to college.

Though intended to improve access, financial grant aid provided by institutions has become another source of inequality in higher education opportunities. The report ‘Measuring Up 2008: The National Report Card on Higher Education’ noted that students from middle and upper income families receive larger amount of grants from colleges and universities than students from low-income families. This is illustrated in Figure 7.3.
Figure 7.3 Full-time dependent undergraduates receiving financial grant aid, by income, selected year: 2003-04

The figure on the left shows middle and upper income families received higher grants from colleges and universities even though they were capable of paying college costs from their higher incomes and other resources. The lowest income families (income below $20,000) received $1500 less than the highest income families (income more than $100,000). Students from the lowest income families may therefore struggle to manage their financial resources and will have to find ways to cover the remaining costs, such as taking part-time jobs or incurring debt from private student loans.

7.3 Debt aversion

Taking a student loan is the fastest way to pay for higher education. There are many loan programs available to the student, including federal, state and also private schemes. Those who take loans are required to pay them off through various repayment plans such as immediate payments, no payments until after graduation or payment of interest while still in college. Federal Stafford is one of the federal loans available to undergraduate and graduate students attending college. This loan is the most common and one of the lowest-cost ways to pay for school. It has been reported that “the percentage of all undergraduates, both full-time and part-time, taking out Stafford Loans increased from 33 percent in 1997-98 to 42 percent in 2007-08” (The College Board, 2008, p. 8). According to the same source, the percentage of students borrowing in 2003-2004 was relatively high among full-time undergraduates, at 47 percent, compared to 24 percent of part-time students. This may be due to the high increases in tuition fees since 2000, rising at a faster rate than inflation. Students across all socio-economic backgrounds have faced increasing financial difficulties and require loan support to cover education costs. Some higher income families may consider taking loans for their children’s college education rather than using money in their savings (King & Bannon, 2002).
A decision to take financial aid will mean debt for students at graduation. Therefore, students from poorer families are faced with the dilemma of taking on a debt burden, while at the same time possibly foregoing earnings through a part-time job. Their goal of having a better education for their own futures and their families is tempered by the reality of being in debt. A large loan will mean extra debt repayment after graduation. The Quick Facts about Student Debt by the US Department of Education (2010c, http://projectonstudentdebt.org/files/File/Debt_Facts_and_Sources.pdf) reported that “in 2008, 67 percent of students graduating from four-year colleges and universities had student loan debt. That represents 1.4 million students graduating with debt, up 27 percent from 1.1 million students in 2004”. The highest percentage - at 96 percent - was among students attending private for-profit universities, followed by those enrolled in private non-profit institutions (72 percent) and those in public universities (62 percent). To make matters worse, an estimated 39 percent of student borrowers ended up with unmanageable levels of debt after finishing their studies because the monthly repayments were more than 8 percent of their monthly incomes (King & Bannon, 2002).

It is in this context that many students from low income families opt for two-year colleges as a means to save time and money, while preparing them for work upon graduation. Stokes and Somers (2009) found that students who are price-conscious and have less financial resources available for college are more likely to choose a two-year college.

7.4 Aspirations

Students who grow up in educated homes are more likely to have high aspirations. If their parents are wealthy, they will be able to spend very large amounts of money to send their children to private schools and universities with better academic programs. Class sizes are smaller and students get one-to-one attention from the academic staff.
Since the private institutions have larger budgets, they have up-to-date facilities for the students, including large libraries and sports facilities. Their students mix and mingle with peers from similar backgrounds and share the same culture. The good school learning environment, therefore, leads to a positive attitude of high aspirations.

Students from poor families, on the other hand, often have low educational aspirations. Their parents may also have low expectations and aspirations for them. Since many of these parents have low education levels and live in poor circumstances, their children are more likely to prioritise work over higher education. For them, higher education is often accompanied by heavy financial burden and a loss of income for the family. A study by Wolf (2007) found that students with college-educated parents were twice as likely to participate in higher education. Those who declined to participate were more likely to come from families who did not value education and had never talked to their children about college. One reason for this is that low-income parents often do not have sufficient information and understanding about higher education (Bueshel, 2004) and they are not able to provide educational experience to their children. Poor living conditions and limited educational support from the parents may combine to lower student aspirations and limit their access to higher education. In addition to lack of parental support, some of these students are less likely to receive encouragement to go to college from their teachers and school counsellors (Teran, 2007; Brezovsky & Silvernail, 2000). Brezovsky and Silvernail (2000) have also identified that teachers and school counsellors typically have lower expectations of these students.

7.5 **High school academic achievement**

Getting into higher institutions is becoming harder and more competitive. Students with high achievement are more likely to proceed to selective colleges or
Their outstanding academic performance in high school indicates higher levels of academic skill and self-esteem which enable these, rather than other students to attend top-ranked universities or colleges. According to Stokes and Somers (2009), students who demonstrate higher educational achievement chose more selective, academically prestigious institutions over two-year colleges. The researchers also found that students without a high school diploma preferred to attend a two-year college as compared to students who earned either a GED certificate or a high school diploma. Students with a regular high school diploma (not simply a GED) favoured four-year colleges.

Some researchers argue that there have been long-term improvements in achievement gaps between the 1970s and 1990 (Kornhaber & Orfield, 2001). Other researchers have argued that differences have tended to widen since the 1990s (e.g., Gamoran & Long, 2007) Gaps in achievement by race/ethnic background remain large, whether or not they have tended to diminish or tended to widen in recent decades. For example, Natriello and Pallas (2001), report that pass rates in algebra for Hispanic and African Americans are only about the rate for Whites. SES differences can be demonstrated at different stages of primary and secondary schooling, and not only in more demanding areas of the curriculum, such as algebra. In her analysis of NAEP scores, Zwick (2012) shows very large differences based on SES. For example, in Grade 4 reading, the average test score for higher SES children was 28 points above the average score for lower SES children or 0.8 of a standard deviation. Similarly the gap in reading scores in Grade 8 represented 0.7 of a standard deviation. Zwick’s analysis points to a persistent pattern of disadvantage that is already very clear in primary school. This flows through into secondary school and affects both the capacity to undertake higher education and the interest or aspiration to go on from school to this higher level of study.
Families from low socio-economic backgrounds residing in rural areas may not encourage their children to attend higher institutions that are far away from home. This is a global issue, but it is interesting to see that it is also an issue in the United States, given the size of higher education and the variety of opportunities.

Living in a different region, particularly a city area, requires additional expenses for accommodation and transportation. Consequently, economics and location issues merge, making for a more difficult and complicated situation. A study by the University of Plymouth found that institutional location was a key factor in influencing the decision by new students to study at a particular institution. Some students rejected the university offers made to them due to distance and travel costs (Anderson, 1999). This is consistent with the latest study by Stokes and Somers (2009) which found that distance from home is an important consideration in college choice decision. “Students who travel more than 100 miles from home are 7.1 percent less likely to be attending a two-year college, while students travelling less than thirty miles from home to attend college are 3.9 percent more likely to attend a two-year college” (Stokes & Somers, 2009, p. 7).

Grimard and Maddaus (2004) also discovered that young people living in rural communities face a dilemma in deciding whether to stay in the community in which they grew up or move out from that community to pursue a college education. Rural males are less likely to aspire to and pursue college education than rural females. Research by Rodriguez et al. (2000) on Latino participation in higher education in the USA indicated that children from lower socio-economic backgrounds often come to school with ‘cultural capital’ that contrasts with the institutional environment. The term ‘cultural capital’ in that study refers to implicit and internalised beliefs and values, including attitudes and perceptions towards education. The question is who has access to this “capital”, and the answer is partly location.
Introduction to the Impact of Economic and Cultural Factors on Educational Participation

Educational participation at higher levels – and eventually university – is influenced by a range of economic and cultural factors. Under-represented groups are impeded from participating in higher education by the barriers mentioned above. Their children feel discouraged and less competent at school and finally decide to leave due to the difficult pathway. They form their own belief that higher education is not their top priority in life. These barriers do not prevent overall growth in higher education, but they shape demand for higher education which then leads to social inequalities. Effective policies are therefore essential to remove the barriers, lift aspiration, and provide all students with a clear path to success after high school, regardless of social class.
The rapid growth of US higher education can be measured by an increasing trend in the number of students enrolling in various higher educational institutions. This trend shows an increasing appreciation of the importance of a higher qualification in determining career options. The establishment of two-year institutions creates new opportunities for those young people who do not get into four-year institutions. These institutions offer associate degree, diploma, and certificate programs in technical and vocational fields. The goals are to produce skilled supervisory and technical staff to fulfil the growing demand of the industrial sector and also to transfer students to four-year institutions. Instead of focusing on academic programs, students are being trained in a more practical way. The hands-on approach allows students to experience and enhance their capacities to become highly skilled workers. This pathway also provides opportunities for many low-achieving students to pursue post-secondary education. Figure 8.1 shows a comparison of demand for higher education at two- and four-year institutions.
Figure 8.1 Total fall enrolment in degree-granting two- and four-year institutions, selected year: 1963 to 2006

Source: Provasnik & Planty (2008), Table SA-4 (pg.33)

Note:
/a/ Data for two-year branch campuses of four-year institutions are included with the four-year institutions.
/b/ Data were imputed using alternative procedures.

Data through 1995 are for institutions of higher education, while later data are for degree-granting institutions. Institutions of higher education were institutions, accredited by an agency or association recognized by the U.S. Department of Education or recognized directly by the Secretary of Education, that had courses leading to an associate’s degree or higher or that had courses accepted for credit toward those degrees. Degree-granting institutions grant associate’s degrees or higher and participate in Title IV federal financial aid programs. The degree-granting classification is similar to the earlier higher education classification, but it includes more two-year colleges and excludes a few higher education institutions that did not grant degrees. Data for private institutions combine both not-for-profit and for-profit institutions; data for these two categories were not collected separately until 1976. Enrolment data for all years do not include students who were only enrolled in non-credit courses.

The above chart shows the trend in fall enrolment in degree-granting by type of institution over the period 1963 to 2006. In the early 1960s, two-year colleges enrolled about 1 million students. The sixties and early seventies were a period of rapid growth. But from 1975, the two-year institutions show a mixed pattern of modest increases alternating with stagnant phases, e.g., through much of the 1980s and also during the mid-1990s. Contrastive is the pattern for four-year colleges. They grew enrolments more consistently over that long period, and they also steeped
upwards in the first few years of the new century, while the two-year colleges did not show any growth in numbers.

8.1 Enrolment trends at two-year institutions

Figure 8.2 shows the fluctuation in the number of high school completers who were enrolled in two-year institutions over the period 1973 to 2008.

Figure 8.2 Percentage of high school completers by sex who were enrolled in two-year colleges the October immediately following high school completion, selected years: 1973 to 2008

The above figure shows that both sexes demonstrated a similar enrolment pattern over the 17 years from 1973 to 1990. Female rates started trending up after 1986, fell down dramatically from the early-to-mid 1990s, but increased steeply in 1996. They
trended upwards again after 2003. In contrast, male enrolments increased steadily in the early 1990s, oscillated downwards after the mid-1990s, grew steadily after 2001 and finally it oscillated again after 2006. The highest percentage of male high school completers enrolled in two-year institutions was in 1995 at 25.3 percent, while female enrolment rates rose to 30.6 percent in 2008. Overall, the percentage for females and males rose by 15.4 and 10.3 points respectively, over the 35-year period.

At present, two-year colleges are one of the postsecondary providers that have been continuing to open up their college doors to meet the growing demand for higher education among the under-represented groups. For many years, these institutions have offered admission, not only to lower-income groups but also to the ethnic minorities who may not have access to four-year institutions due to their lower achievement and financial difficulties. Figure 8.3 shows the change in distribution of enrolments by race at two-year institution between 1976 and 2008.
Figure 8.3  Percentage of total fall enrolment in two-year institutions, by selected race/ethnicity, selected years: 1976 to 2008

Source: US Department of Education (2010b), Table A-20-4

The above figure shows that the minority share at two-year institutions increased from 17.5 percent in 1973 to 32.8 percent in 2008. The racial breakdown for all minorities in 2008 was as follows: 14.6 percent Black, 16.9 percent Hispanic and 1.2 percent American Indian/Alaska Native. It is notable that Hispanic enrolment rates grew much faster than any other ethnic group. From 2000 onwards, they exceeded Black enrolments experienced slow and steady growth from 2000 to 2008. On the other hand, while Whites represented the vast majority of enrolments at two-year institutions, their rates fell from 79.3 percent in 1976 to 58.8 percent by 2008. The racial gap in two-year institution narrowed, but it was large enough to demonstrate significant disparity in enrolments between minority groups and the White-dominant culture. Nevertheless, the opportunity for minorities to participate in post-secondary education among the minorities was greater by 2008 than it was in 1973.
The open-access policy in selection procedures at two-year institutions offers admission to a diverse group of students. The two-year program attracts high school completers from middle- and low-income families and those from disadvantaged groups seeking to increase their knowledge and develop job skills. From these institutions, they can earn a more affordable associate degree than from most four-year schools. Figure 8.4 provides evidence of a clear distinction between socio-economic background and choice of educational institutions.

Figure 8.4  Percentage of 2004 seniors who enrolled after high school in a postsecondary institution immediately and percentage distribution of these immediate enrollees by type of institution and socio-economic status, selected year: 2004

The left-hand column of the above chart reveals that more than 80 percent of the senior students from high-income families enrolled immediately in postsecondary institutions after completing high school, almost double the number of students from low-income families. Of the 42 percent of students from low-income families, 44 percent enrolled in community colleges, 35 percent in public four-year institutions
and 12 percent in private not-for-profit-four-year institutions. And for senior students from higher income families, they were more likely to attend public four-year institutions (51 percent) as their first preference, followed by private not-for-profit-four-year institutions (29 percent), and lastly community colleges (17 percent). The not-for-profit four-year senior students from median income families also had preferences for postsecondary which were different from the other two groups. 43 percent of them enrolled in public four-year institutions, 35 percent in community colleges and 17 percent in private not-for-profit-four-year institutions. The percentage differences between students from low and high-income families were 27 percent at community colleges, 16 percent at public four-year institution and 17 percent at private not-for-profit-four-year institutions. This data is consistent with earlier studies showing that socio-economic background positively influenced students' choice of schools. Ultimately, the low-income students are taking advantage of the low-cost tuition in order to pursue their college dream. This may be because they are reluctant to place financial pressures on their families and increase their burden of debt after graduation.

The relationship between socio-economic background and students' choice of schools is explained in the previous paragraph. Not surprisingly, it shows that socio-economic background has a strong influence on schooling choice. However, what is the picture when socio-economic background and race are taken together? Figure 8.5 reveals the relationship between socio-economic background and race, as the senior high school students make their decision to enrol at community colleges.
Figure 8.5  Percentage of 2004 seniors who enrolled immediately in a community college after high school, by race/ethnicity and socio-economic status: 2004

As the chart above shows, community colleges are much in demand among senior high school students from low-income families. This is shown by the high percentage of students, from low-income families across all races choosing community colleges compared with high-income families. The exception is for American Indians where no significant difference was found between the preferences of high and low socio-economic groups. Except for this group, the data reveals that family income plays a major role in the college decision and tends to split the same ethnic group.

Among all races, Hispanics at 53 percent had the highest percentage of enrolled students from low-income families. They also had the highest proportion of students from high-income families compared to Whites, Blacks and Asian/Pacific Islanders. This data shows that this racial group, and particularly its lower income families, tend to prefer community colleges over four-year institutions.

Part of the explanation of these differences lies not only in economic factors, but in how well the average student performs on the Scholastic Aptitude Test (SAT). There
is a large gap between the performance of white Americans and the performance of minority students, as Table 8.1 shows. With the exception of Asian/Pacific Islander students, minority students do not come near the SAT performances of white American students.

Table 8.1  SAT mean score of-college-bound seniors, by racial/ethnic groups in 2004

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Critical Reading</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>532</td>
<td>536</td>
</tr>
<tr>
<td>Black</td>
<td>433</td>
<td>431</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mexican American</td>
<td>453</td>
<td>463</td>
</tr>
<tr>
<td>- Puerto Rican</td>
<td>460</td>
<td>457</td>
</tr>
<tr>
<td>- Other</td>
<td>463</td>
<td>469</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>511</td>
<td>580</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>489</td>
<td>493</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2010a), Table 143

Amongst minority students in 2004, Hispanic students scored higher than black students in the critical areas of reading and mathematics. Low SAT scores contribute to channelling minority students into two-year colleges. But these students are also often from low income families, and the lower tuition costs of two-year colleges represent a more attractive and accessible option. If they study part-time at community colleges, they can work more and add to their family’s income. College costs will also be significantly lower if students stay at home with their family (Fry, 2002).

Cultural factors also have a significant impact on their choice of higher institution. For example, most Latino families regardless of their income are known for having close family ties. Latino children are expected to live at home with their parents until
they get married. A community college is a perfect choice because it is usually located near to home (Fry, 2002; Pérez & McDonough, 2008).

8.2 Two-year colleges as a bridge to four-year institutions

The growth of the community college sector has led to a secondary outcome in addition to the primary outcome of producing skilled workers for service sector jobs. Some students now consider community college as a stepping stone to a four-year institution. Instead of just aiming for an associate degree, these students intend to transfer to a four-year school to pursue a bachelor degree or higher. In some cases, a number of them plan to transfer to four-year institutions even before earning an associate degree. Their primary reason for choosing two-year institutions as a first step may be due to lack of sufficient financial resources. Since two-year institutions offer various associate degree programs at very affordable prices, they are good places to start off in the transition from high school to a four-year college. Besides that, the flexible access to two-year institutions gives a second chance to those students with poor academic results to find a pathway to a college degree.

A report by Hoachlander et al. (2003) on college community students may provide proof of college transfer. The beginning students in this research were asked a question about what they expected to achieve in community college. A quarter of them said that they were looking forward to transfer to a bachelor degree program at a four-year institution. In addition, more than half of them (58 percent) also stated that the reason for enrolling in the college was to get a credential or to transfer to a four-year institution. In this study, the term ‘completion’ is defined as finishing a program and obtaining a formal credential, as well as transferring from community college to a four-year institution.
There are many different paths for students seeking a degree. Some students might enrol at traditional college or university, but the tuition costs are becoming prohibitive. The other alternative in order to cut costs and time is to transfer from a two-year to a four-year institution. So, what types of students transferred from two-year to four-year institutions? Did these students obtain their bachelor degrees? Statistical data by the US Department of Education (2003) as illustrated in Table 8.2 shows the trend in student transfers from two-year to four-year institutions for the class beginning higher education in 1995-96. This information became available in 2003.
Table 8.2  Percent of students beginning at public two-year institutions in 1995-96 and transferred to a four-year institution

<table>
<thead>
<tr>
<th>Degree expectations</th>
<th>Percentage distribution of beginning students</th>
<th>Transferred to a four-year institution</th>
<th>Transferred to a four-year institution and completed associate's degree first</th>
<th>Persistence status</th>
<th>Total persisted in four-year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Attained bachelor's degree</td>
<td>Still enrolled in four-year</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>28.9</td>
<td>33.3</td>
<td>34.7</td>
<td>44.3</td>
</tr>
<tr>
<td>Degree expected at first institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>24.8</td>
<td>50.8</td>
<td>18.8</td>
<td>44.0</td>
<td>38.3</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>48.9</td>
<td>26.5</td>
<td>50.6</td>
<td>29.1</td>
<td>49.5</td>
</tr>
<tr>
<td>Certificate</td>
<td>10.8</td>
<td>1.0</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>No degree</td>
<td>15.6</td>
<td>21.1</td>
<td>19.4</td>
<td>27.6</td>
<td>45.2</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49.3</td>
<td>41.2</td>
<td>32.3</td>
<td>30.1</td>
<td>47.9</td>
</tr>
<tr>
<td>Female</td>
<td>50.7</td>
<td>28.3</td>
<td>38.5</td>
<td>45.3</td>
<td>38.5</td>
</tr>
<tr>
<td>Family income of dependent students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low quartile</td>
<td>28.7</td>
<td>35.3</td>
<td>46.1</td>
<td>25.9</td>
<td>52.0</td>
</tr>
<tr>
<td>Middle quartile</td>
<td>50.1</td>
<td>41.3</td>
<td>36.7</td>
<td>37.7</td>
<td>41.6</td>
</tr>
<tr>
<td>High quartile</td>
<td>21.1</td>
<td>49.7</td>
<td>28.0</td>
<td>49.2</td>
<td>33.9</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2003), Table 19-1 (pg. 130)
According to the data in the above table, the students with the intention to have a bachelor degree at the beginning of their enrolment were the main group to transfer to four-year institutions. However, less than half of them (44 percent) completed their degree in four-years, while the other 38.8 percent were still in those institutions. While male students were more likely to transfer (41.2 percent compared to 28.3 percent of female students), women proved to be more academically successful at four-year institutions in completing a degree in four-years (45.3 percent compared with 30.1 percent of males). As might be expected, students from high-income families were more likely to choose the transfer program as compared to students from low and middle-income families. These students might be those who had a low level of educational achievement in high school and were not qualified to apply for four-year institutions.

8.3 Several issues surrounding two-year institutions

From one point of view, the availability of two-year institutions has been a success for American higher education and as such represents a policy that other countries may well be attracted to, particularly in the developing world. The courses are much less expensive and also more academically accessible. They have a focus on vocational training. But at the same time, they operate as a bridge to four-year institutions, at least for some students, so they keep options open, especially for students who have struggled academically or needed more time to mature as independent learners. For all these reasons, community colleges have a policy appeal. Social access to post-secondary education has been expanded through them and their graduates flow onto a labour market that needs skilled technical and supervisory workers. However, there are three issues facing community colleges which require further discussion: high attrition at two-year colleges, limited entrance to four-year institutions, and lower rate of return on educational investment.
8.3.1 High attrition

The open admission policy that has been implemented by the two-year institutions has created a problem of student attrition. A publication by National Center for Public Policy and Higher Education reported that “about half of first year students at community college do not continue on for a second year” (Kirst & Venezia, 2003, https://web.stanford.edu/group/bridgeproject/underminingstudentasp.pdf). An independent, not-for-profit organization in the USA, the American College Testing Program Inc. (also known as ACT) produced a report on the national trend in US freshman-to-sophomore-year dropout rates. Attrition in four-year institutions is defined as “percentage of enrolled freshmen who did not return for their sophomore”, while attrition in two-year institutions is “percentage of first-year students who did not return for a second year” (ACT Institutional Data File, 1998, http://www.act.org/news/releases/1998/04-01-98.html). Figure 49 shows the pattern of attrition by comparing two- and four-year institutions.
Figure 8.6 Attrition rates at two- and four-year institutions by sector, selected years: 1985 to 1997

As shown in Figure 8.6, two-year institutions had significantly higher rates of attrition compared to four-year institutions in the period 1985 to 1997. The total attrition rates at two-year institutions ranged between 43 percent and 45 percent, far exceeding four-year institutions by 18-19 percent. The above chart also reveals that attrition at public institutions was significantly higher than at private institutions. The situation was even more severe at two-year public institutions as the rates were above the national figure, as high as 48 percent in 1992 and 1993. Generally, all institutions experienced attrition, but unexpectedly the figures remained fairly constant over the 12-year period. This suggests that policy actions taken during this period to reduce the problem were unsuccessful. While high attrition rates point to a loss of potential benefits for the individual concerned, there might also be a negative impact on higher education itself – since in the public perception too many students fail to graduate – and on the economy – which fails to get the benefit of fully qualified people.
Several factors have been identified as contributing to student attrition. First, low test scores and grades in high school tend to persist at post-secondary level. According to Daugherty and Lane (1999) students with lower SAT scores and secondary school GPAs are potentially at higher risk of attrition. With a low level of competency, they also have low self-esteem and negative thoughts about higher education which later leads to attrition. Some students are not able to keep up with the course requirements (Bowler, 2009). The US Department of Education (Bradburn, 2002) also reported that students with college GPAs less than 2.75 were more likely to leave as compared the students with GPAs above 2.75. While this problem occurred more commonly in two-year institutions, it was also the main reason for student departures from four-year institutions. Secondly, students from low income families often have difficulty in meeting the increasing burden of college expenses. Their limited family resources are usually not enough to cover the entire cost of college expenses. These students have to work while going to college or university in order to supplement their family income (Fisher, 2007). The US Department of Education (Bradburn, 2002) reported that students at public two-year institutions were more likely to give up on their education because they had to work, as compared with students at four-year institutions, and those students who go into full time employment had a higher attrition rate than those who worked part-time or who did not work at all. Finally, the learning environment has some effect on student motivation. Students at two-year institutions generally have lower educational goals and are less persistent than their peers at four-year institutions (Bradburn, 2002; Anderson, 1981). They are also less motivated and less challenged in the classroom (Kim, 2010). Even though the off-campus living option in college communities may save the student money, it also has disadvantages (Anderson, 1981) since students may not have a conducive learning environment, may lack communication with peers, and have less access to facilities provided in the campus.

The key to ensuring the outcome of successful completion at post-secondary educational institutions is to reduce student attrition and increase student retention. A small increase in the retention rate would also lead to significant progress in
increasing student graduation rates. Since 2004, ACT has attempted to look at this issue from different perspectives. Instead of collecting data on dropout and graduation rates, they investigated retention rates. Their data on the retention trend over the past five years is shown in Figure 8.7.

Figure 8.7 Retention rates in two- and four-year institutions by sector: 2004 to 2010

From the figure above, it can be seen that four-year institutions have higher retention rates than two-year institutions. Private four-year institutions have the highest retention rates of all institutions although rates have trended downwards over the 6-year period. Retention rates at public four-year institutions slipped in 2005, but have stabilized at about 67 percent since 2007. Two-year institutions by contrast have struggled to keep their students in college until graduation. Retention in private two-year institutions was on a downward trend from 2004 to 2009 before recovering slightly in 2010. Public two-year institutions showed an overall upward trend after 2007, although their rates remained the lowest among all institutions.
Limited entrance to four-year institutions

Community college students may find it difficult to transfer from two-year to four-year programs. Some of the barriers cited include a complicated transfer process and limited places at four-year institutions. Several four-year institutions make the transition difficult by having high entry requirements for transfer students. This is to ensure that they have the highest quality of students enrolling in their degree programs. Therefore, even if the students have met the minimum requirements, there is no guarantee that they will be offered a place in their institutions. In addition, the differences in entry requirements create many problems for students as the four-year institutions might change or raise their entry requirements. For instance, Wash (2003) in Community College Week magazine reported that,

"With 66 per cent of Washington’s college students attending two-year schools, some university officials say they’re forced to be more selective in their admissions process. At the University of Washington, transfer students are guaranteed admission only if they carry a minimum 2.75 grade-point average and have completed an associate’s degree. They also must demonstrate proficiency in core academic areas such as English, social studies, mathematics and science. In past years, students with a 3.5 grade-point average and one year of community college also would be admitted. At Western Washington University, the minimum GPA requirement for transfer students is a 2.0 grade-point average, but incoming transfers average a 3.2.” (para. 8)

In addition to entry requirements, the credit transfer system at four-year institutions is not consistent and standardized. Each university has its own credit transfer system in order to identify equivalent courses and interpret grades. Not all subjects can be accepted by the universities because the content, quality and standard of some
courses at two-year institutions are not considered equivalent to the university level. Difficulties arise for students when some courses are not eligible for transfer credit due to a different course name and numbering system. Fisher (2006) reports that course alignment was found to be a barrier in transferring from community college to university. In this instance, the similar general education courses or pre-major requirements were often rejected for transfer credit at four-year institutions. Consequently, students were granted fewer credit transfer points and were required to repeat the same course at university. Repeated enrolment in the same course results in higher college costs and more financial burden to students, particularly those from low-income families.

There are cases in which transfer students get little support and advice from the academic advisors at community colleges. As these students have limited knowledge about the transfer process and face uncertainty about the procedures, they need accurate advice and guidance. This is not always available. Problems with the advisory and transfer process may negatively influence students’ decisions to transfer from two-year to four-year institutions (Geleskie, 2008).

A further problem is that four-year institutions have only limited capacity to meet the demand from transfer students as they already accept a large number of students through the more traditional route, namely direct entry. The higher up in prestige, the more difficulties transfer students appear to face or the less likely they will achieve their objective. The number of students who are successfully admitted to prestige four-year institutions is very small. Yale University received 780 transfer applications for the fall of 2006 and accepted only 3.7 percent of them, while Harvard University accepted 85 transfers for the 2006-07 academic year. In contrast, Princeton University adopted a policy of not accepting transfer students (Chow, 2007).
8.3.3 Low return of investment

College costs are continuing to climb, making post-secondary education too expensive for many American families, particularly the low-income group. Measuring Up 2008 (The National Center for Public Policy and Higher Education, 2008) reported that “students who do enrol in college are taking on more debt to maintain their college access. More students are borrowing and they are borrowing more.” With a massive educational debt after graduation, these students have to get higher paying jobs to bear the financial burden. For that reason, decisions about investing in higher education can be expected to be influenced by considerations of rate of return on investment (ROI). The underlying goal is to get the most out of their investment. As minimum salaries for college graduates vary depending on the degree obtained and type of higher institution, students have to choose the institution that brings economic benefits to them. How far is it true that that the higher the degree, the more money you can earn? An analysis of wages based on gender and degree is summarized in Figure 8.8. In order to look at the pattern from past performance to recent years, comparisons was made using constant 2008 US dollars in order to provide a more realistic picture of the difference in real wages from 1994 to 2008.
Figure 8.8  Median annual earnings of year-round, full-time workers 25 years old and over, by selected level of educational attainment and sex: 1994 through 2008 (constant 2008 US dollars)

Source: US Department of Education (2010a), Table 384
Note: 1\ Includes 1 to 3 years of college and associate's degrees for 1990. 2\ Includes 4 years of college for 1990.
As shown in the figure above, males earned more than their female counterparts at three levels of education. Males with an associate degree earned $50,150 in 2008, compared with $36,760 for females, while males with a college degree earned $65,800 compared with $47,030 for females. The differences in earnings in 2008 between bachelor and associate degrees holders were $15,650 for males and $10,270 for females. Earnings for males with associate degrees decreased by $1,850 from $52,000 to $50,150 between 1994 and 2008, while those with bachelor degrees rose by $2,370 from $63,430 to $65,800. During the same period, females with associate degrees experienced a decline in annual earnings by $930, while the degree holders earned $920 more. In terms of wages growth, those with associate degrees experienced negative growth over the 14-year period, -4 percent for males and -3 percent for females, while bachelor degree holders benefited from wages growth that were 3 percent for males and 2 percent for females.

It was interesting to note that between 1994 and 2008, females with bachelor degrees earned less than males with no degree. In 2008, the earnings difference of $1210 ($47,030 versus $45,820) between females with bachelor degrees and males with no degrees was quite substantial. This indicates that wage rates are not determined by the supply and demand curves, but have been structured by gender. Women in the labour market get paid less than men even though they acquire the same level of education and do the same job.

The chart also shows that the wage difference between graduates from a two-year college and non-graduates was comparatively small, both for men and for women. In other words, there was only a relatively small advantage in graduating from a two-year college compared to dropping out of college. This difference, if it was widely recognized, would presumably lower the aspiration for going to community college or at least lower the aspiration to complete.
8.4 Conclusion

The growing demand at community colleges is likely to remain strong because the cost of attending two-year institutions is often less than four-year institutions and requires less time to graduate. However, these institutions are not the best option when economic returns are taken into account. When the evidence shows that salary disparities are based on gender and education level, the problem becomes far more complicated. Community colleges – or other forms of post-secondary education involving fewer years of study – may be attractive to developing countries as a policy, but how this policy operates in practice needs to be given careful consideration. Two-year colleges do not necessarily furnish the labour market with well-qualified workers for jobs of an intermediate or sub-professional standard, for there are many drop-outs. They are also not the main bridge to four-year universities, for relatively few students cross this bridge. Return on investment is low compared to the four-year option, and there is only a fairly small earnings advantage in completing an associate degree as compared with dropping out.
CHAPTER NINE

FOUR-YEAR INSTITUTIONS: PROVIDING OPPORTUNITIES FOR ALL STUDENTS?

Creating a hierarchy of institutions in higher education could be viewed as a policy with distinct advantages for developing countries. Elite recruitment takes place through elite institutions. These are comparatively well-resourced and enjoy high prestige. Recruitment to intermediate positions in the workforce, such as supervisory, technical and sub-professional roles, takes place through institutions which have lower prestige, but are cheaper to run and easier to access. These are not funded to conduct research, and if the staff do research it is with industry partners and funded by them, so it is not a call on government funds. But how well this hierarchy works may depend on other policies or other elements of the provision framework, including whether institutions are public or private. The United States is in this regard an important case-study.

American four-year colleges are for those students who qualify for direct entry to a degree program. These institutions are operated either as public (state-run) or private institutions. In 2006-07, the USA had a total of 6,536 universities, of which 2,009 were public universities and the rest were private (U.S. Department of Education, 2009b). Due to the quality and high standard of program delivered, four-year institutions are more in demand than two-year institutions. Even during periods of recession, enrolments at four-year institutions have not dropped, but stayed stable over time.

A large and diverse private sector means that public institutions offering four-year programs have to be competitive. They must offer programs of the highest quality possible and produce excellent results. As competition intensifies, this puts pressure
on access. Being able to gain a place in public four-year institutions is becoming more limited every year as admission requirements become more stringent. Some students are seeing their paths to four-year institutions being blocked by the financial and academic entry criteria.

9.1 College costs

Education costs at four-year institutions are high and keep on rising every year. This impact is most severely felt by the low income earners for whom sending their children to four-year institutions for a degree becomes more elusive and may not be worth the price of investment. Table 9.1 provides evidence of the rising higher education costs between two and four-year institutions for the years, 1980-81 to 2007-08.
Table 9.1  Average undergraduate tuition and fees and room and board rates charged for full-time students in degree-granting institutions, by control of institution: Selected years, 1980-81 to 2007-08

<table>
<thead>
<tr>
<th>Year</th>
<th>Four-year institutions</th>
<th>Two-year institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>1980–81</td>
<td>$2,550</td>
<td>$5,594</td>
</tr>
<tr>
<td>1990–91</td>
<td>5,243</td>
<td>13,237</td>
</tr>
<tr>
<td>2000–01</td>
<td>8,653</td>
<td>21,856</td>
</tr>
<tr>
<td>2001–02</td>
<td>9,196</td>
<td>22,896</td>
</tr>
<tr>
<td>2002–03</td>
<td>9,787</td>
<td>23,787</td>
</tr>
<tr>
<td>2003–04</td>
<td>10,674</td>
<td>25,069</td>
</tr>
<tr>
<td>2004–05</td>
<td>11,426</td>
<td>26,257</td>
</tr>
<tr>
<td>2005–06</td>
<td>12,108</td>
<td>27,317</td>
</tr>
<tr>
<td>2006–07</td>
<td>12,797</td>
<td>28,919</td>
</tr>
<tr>
<td>2007–08(^1)</td>
<td>13,424</td>
<td>30,393</td>
</tr>
</tbody>
</table>

Source: US Department of Education (2009b), Table 331

Note:
\(^1\)Preliminary data based on fall 2006 enrolment weights.
\(^2\)Because of their low response rate, data for private two-year colleges must be interpreted with caution

Data are for the entire academic year and are average total charges for full-time attendance.

As shown in the above table, private institutions cost more than public institutions. The private four-year institutions charged up to $30,393 in 2007-08 which was $24,799 more than the fee in 1980-81, while public institutions cost $10,874 more in the same time period. The rate at public four-year institutions signifies that it was almost four times as much as in 1980-81. By comparison, the price at private two-year institutions in 2007-08 increased by almost five times between 1980-81 and 2007-08, while private institutions rose by about three times in the same period. Moreover, a four-year degree at public four-year institutions was nearly double the cost of a qualification at a public two-year institution in 2007-08. The most notable
observation from the table above is that the average tuition rate at public four-year institutions increased much faster than at private four-year institutions. From 2000-01 to 2007-08, the rate of increase at a public four-year institution was almost 55 percent higher than at a private four-year institution where it rose by about 39 percent. The costs at two-year institutions increased at about the same rates, 43 percent higher for public institutions and 46 percent higher for private institutions.

It can be concluded from the above tables that public institutions that are supposed to provide access for everyone are not helping poor families when their prices go up. The four-year degree has become too costly and will not be the best option for students from low and poor income families. The rising costs have significantly increased their financial burden and forced them to take on more and more debt. The cheaper option may be an associate degree from a public two-year institution followed by a transfer to a four-year institution, provided they have enough money to cover the bill and provide that the institution is accessible to transferring students.

9.2 Academic entry requirements

All four-year institutions have their own admission requirements and level of selectivity. They are competing against each other to have the strongest candidates so that they may not fall in ranking. They generally look for candidates who have excellent academic records with top scores, good CGPAs, high class rankings, above-average SAT scores and who will make outstanding extra-curricular contributions. Students are expected to fulfil the minimum requirements when applying for a place in a tertiary institution. However, meeting the minimum requirements will not guarantee an automatic entry. Four-year institutions are normally looking for highly qualified applicants who will boost graduation rates and help to rank the institution among the top universities.
The most selective four-year institutions have higher academic entry requirements than the less selective institutions. They have the relative advantage of superior economic and social resources which allow them to raise the bar in order to protect their prestige and maintain an elite class status. For instance, Figure 9.1 illustrates the changes to SAT/ACT requirements set down across all higher education institutions between 1962 and 2007.

Figure 9.1 Mean SAT or ACT percentile score of colleges, by colleges’ selectivity, selected years: 1962 to 2007

As the graph indicates, there has been a continuing increase in the student’s SAT or ACT score requirement at the most selective four-year institutions (the top line graph). In 1962, these institutions only accepted students who scored at about the 90th percentile, but by 2007, the entrance test score increased to the 95th percentile. In contrast, the least selective institutions (at the bottom of the graph) continuously scaled down their SAT or ACT requirements so as to increase student access to higher education opportunities. Between 1962 and 2007, the SAT or ACT entrance score gap between the most and least selective institution generally widened from about the 40th percentile to about the 70th percentile. The main point to highlight from this figure is that the most selective institutions have the power to set the rules.
for others. They are more likely to upgrade their entrance requirements to preserve their elite status. The less selective institutions, on the other hand, are required to amend their entrance policies in order to give equal opportunities to the middle and lower classes.

9.3 Addressing the issue of low completion rates

Four-year institutions are not the main pathway in the transition from high school to post-secondary education. Students may choose other educational providers that meet their needs and interests. Not all students who enter four-year institutions as a highly select and well-qualified group will demonstrate strong commitment and achieve outstanding academic performance in their studies. Consequently, a number of four-year institutions have felt under a lot of pressure to improve and increase their student performance and graduation rates.

The time required to earn a degree at four-year institutions varies from discipline to discipline. Program duration for a full-time Bachelor degree is generally about four-years. However, students are given up to a maximum of six years to complete their studies. Figure 9.2 shows the completion rates over four, five and six years for new students starting in 2001 at four-year institutions. The bar graph on the left represents all students and the two bar graphs on the right provide gender specific data.
Figure 9.2  Percentage of students seeking a bachelors degree at four-year institutions who completed a bachelors degree, by type of institution, and by time to degree attainment: Cohort year 2001

As the graph above shows, most of the students took six years to complete their degrees. Among all four-year institutions, private not-for-profit institutions had the highest completion rates while private for-profit institutions had the lowest. The difference in completion rate between these two institutions varied between 32.3 percent for four-year completion, 39.2 percent for five-year completion and 39.9 percent for six-year completion. In addition, the difference in completion rate between public and private not-for-profit institutions was greatest over four-year completion (21.5 percent) and smallest over six-year completion (9.4 percent). Looking at the gender differences, females were more likely than males to complete over four, five and six years except at private for-profit institutions. Private not-for-profit institutions achieved higher completion rates than other institutions for both sexes over all completion years. This is not surprising because most of the competitive private institutions are among the world’s top universities, namely

Source: US Department of Education (2010b), Table A-21-1

Harvard University, Yale University, Princeton University, Cornell University and University of Pennsylvania.

Figure 9.3 represents completion rates in four-year institutions the over four- and five-year timeframes for the 2001. It demonstrates that more of the students across all types of institutions graduated within five years of first enrolment in their degree programs and the completion rates were highest at private not-for profit institutions.

Figure 9.3 Completion rates of first-time postsecondary students who started as full-time degree-seeking students, by race/ethnicity, by time to degree attainment and by control of institution: Cohort year 2001

Source: US Department of Education (2010a), Table 331

From the figure, the Asian/Pacific Islander students had the highest degree completion rates within four and five-year periods, followed by White, Hispanic, Black and American Indian/Alaska Native students. Across all racial groups, the completion rate differences between four and five-year timeframes were larger in public institutions as compared to the private institutions. These differences were: 20.2 percentage points for Whites, 16.4 percentage points for Blacks, 18.8 percentage points for Hispanics, 22.4 percentage points for Asians/Pacific Islanders.
and 15.3 percentage points for American Indian/Alaska Natives. These data also demonstrate a substantial difference in completion rates between White and minority students across all types of institutions, the exception being Asian/Pacific Islander students. For example, for four-year completion, the widest gap was between White and Black students at private not-for-profit institutions where the difference was 23.7 percentage points. The same pattern existed for five-year completion where the difference was 22.8 percentage points.

Figure 9.4 illustrates the disparities, by racial group, within five-year completion rates for selected cohort years of 1999 2000 and 2001.

Figure 9.4  Completion rates of first-time postsecondary students who completed a bachelors degree at four-year institutions within five years, by race/ethnicity: Selected cohort year, 1999, 2000 and 2001

![Bar chart illustrating completion rates by race/ethnicity for three cohort years.](image)

Source: US Department of Education (2010a), Table 331

The bar chart on the left indicates essentially no improvement in five-year completion rate across all racial groups. The rates were stable at around 52 percent. Asians/Pacific Islander students had the highest completion rates in all three cohort
years, followed by Whites, Hispanics, Blacks and American Indian/Alaska Natives. The differences between White and Asian students and other minority students still remained wide.

9.4 Conclusion

The knowledge economy has created more opportunities for children from low SES backgrounds to further their education and complete post-secondary studies. Under pressure in their desire to meet the needs of the current labour market, many students from poorer homes choose less selective institutions which are more affordable and better-matched to their circumstances. However, there are also students from low-income backgrounds who do enter four-year institutions (against the odds). They have to face two sets of challenges to make the best of this opportunity. Firstly, they have to be able to manage the costs. Secondly, they have to be able to manage the academic performance pressures. These two challenges underlie the pattern in which completion of a four-year degree takes five or six years or even longer. The students most likely to drop-out are minority and poor students. So as well as segregation occurring between two-year and four-year institutions (and also within this along public and private liens), further disadvantage is experienced in degree completion. This issue has existed for many years, but there is greater pressure on poorer students today to improve their situation and to achieve greater equity, not only in access to the pyramid of opportunity, but to perform well. This raises questions about the relevance of the American model of higher education provision for middle-income countries, like Malaysia, trying to modernise their economies through expansion of higher education. Creating a hierarchy does seem to have advantages in selecting and training the elite, but who belongs to this elite? If the economic and academic barriers to access and persistence are not lowered, the college elite will be a social elite.
CHAPTER TEN

LEARNING FROM THE AMERICAN HIGHER EDUCATION EXPERIENCE

According to Cambridge News (2011, http://www.cambridge-news.co.uk/Home/University-is-best-says-research.htm), the United States “dominated The Times Higher Education world reputation rankings, with seven institutions in the top 10”. As the world leader in the production and diffusion of knowledge, the United States presents itself as a successful model for other nations. The USA was the first nation to transform its higher education sector from an elite to a mass system, beginning as early as 1940s. The huge progression in developing and expanding its higher education system has been influenced by internal economic and social priorities since that period of time.

Expansion is continuing as the new global economy focuses on knowledge-driven industries. The key factor to succeeding in this new economy is investing in human capital to produce a large number of highly skilled knowledge workers. Educating young people to a high standard is a major goal, and this implies not only a ‘massification’ of higher education, but also qualitative changes to ensure high standards, e.g., in graduation rates. In addition to economic and social forces dating from earlier periods, the USA has struggled to strengthen its higher education system over the years due to external factors such as globalization and international competition.

At the same time, the transition to mass higher education sector has also become a phenomenon in the developing world. Due to its success, the American higher education system has been used as a model by third world countries to transform their higher education sectors. By adopting key elements of the US model, such as hierarchical differentiation and privatisation, developing countries can be expected to face similar challenges and problems. This chapter describes what the USA has
accomplished, the problems it has faced in transitioning from an elite to a mass system, and the policies it has implemented to improve access to higher education. It concludes with a discussion on what less developed countries might learn from the US experience.

10.1 Accomplishments in ‘massification’ of US higher education

Massification of higher education is based on the principle that higher education should be widely accessible and should cater for a more diverse range of students. This new system has led to positive impacts on the US higher education industry in terms of the vastly increased numbers of students enrolled in higher education and the range of higher institutions available to them.

Higher education in the USA has grown rapidly since the 1940s. By 2007 there were 18.2 million students in degree-granting institutions in the USA. Many colleges and universities have decided to open their doors widely to all qualified students, particularly women and minority students. As a consequence, women’s participation in higher education has increased dramatically and the number of female students has outnumbered males since the early 1980s. The proportion of minority students going to colleges and universities is also growing. In 1976, 15% of students enrolled in degree-granting institutions were minority students. This increased to 32% by 2007. The National Center for Public Policy and Higher Education reported in ‘Measuring Up 2008: The National Report Card on Higher Education’ that out of the top 28 countries, the USA was ranked 7th for the percentage of young adults between 25 and 34 who enrolled in college and 10th for the percentage of adults between 18 and 24 who had an associate degree or higher. A remarkable finding was that amongst older citizens aged 35 to 64 years, the percentage who had an associate degree or higher ranked the USA in 2nd place globally. This statistic indicates that higher education is changing as non-traditional students (older people) are given the opportunity to improve their skills and further their education. Later age learning is more common in the USA among working adults as they face pressures of employability and
workplace competitiveness. If the US government ignores this age-group, there is the risk that their limited job skills may affect the growth of the US economy. The US government has therefore responded favourably to the concern about the lack of educational opportunity for all Americans by giving emphasis not only on basic and higher education, but also lifelong learning.

The greater numbers of students attending US higher education institutions in recent years indicate that the population in the USA is becoming increasingly more educated. The advantage of having a higher degree is an improved quality of life with higher earnings, better status and more job satisfaction. The rapid expansion of mass higher education is reflected in the USA’s international ranking. The OECD reported that in 2007 the USA was in 12th place among the 36 OECD countries in respect of the population with at least tertiary education, as shown in Figure 10.1.

Figure 10.1 OECD countries with populations with at least tertiary education, 2007

![Graph showing OECD countries with populations with at least tertiary education, 2007](image)

Countries are ranked in descending order of the percentage of the 25-34 year-olds who have attained at least tertiary education.


In addition, the data on accessibility of higher education as reported by the Educational Policy Institute (Usher & Cervenan, 2005) indicates that the USA has the highest attainment rate among 14 countries namely Australia, Austria, Belgium, Canada, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New
Zealand, Sweden, and the United Kingdom. The overall score of accessibility rankings placed the USA in fourth place after the Netherlands, Finland and United Kingdom. The USA can therefore be considered as one of the top five models for increased accessibility of higher education.

The expansion of the higher education sector has led to greater diversification. In addition to the traditional colleges and universities, polytechnics and community colleges have been established to accommodate the growing demand for higher education and also to give students the option of choosing the programs that fulfil their personal and intellectual interests. Private colleges and universities have also grown in number, therefore widening academic choice. In 2007, the USA had 4,527 private institutions, 2,518 more than public universities. The growth in the private sector has reduced the financial burden on government. The USA’s public expenditure per tertiary student was less than 30% of GDP per capita in 2007, and yet tertiary gross enrolment ratios were above 80%, as shown in Figure 10.2. This chart shows that the US has access to significant economies of scale through mass participation. As participation increases, the cost to government per student comes down. In contrast, countries with very low levels of participation incur very high costs as relatively few students benefit from government outlays.
Figure 10.2 Public expenditure per tertiary student as a percentage of GDP per capita compared to tertiary gross enrolment ratio, 2007

Source: UNESCO (2009), Figure 19, pg 51.

10.2 Problems faced by the USA

The implementation of mass higher education has greatly increased educational opportunity in the USA. But not all barriers have been broken down, and in the face of persistent obstacles, federal and state governments have made a number of significant changes to the higher educational system to ensure that all groups in American society have greater access to higher education.
We have shown in Chapter 4 to 9 that, despite these measures, equity remains a major continuing challenge, and that the structures which have enabled expansion have also tended to work against equity. There are several issues that warrant further attention and action from government to address community concerns about the gap between groups. These can be divided into two types: long term and current issues. The long term issues have existed for many years and still persist to the present day, while current issues make the persistent underlying problems even worse.

10.2.1 Long-term issues

The long-term issues which work against equity in mass higher education in the United States are:

a) Low achievement during school
b) High drop-out rates
c) Lack of relative access to high-prestige institutions and courses
d) Opportunity costs of further study
e) Direct costs

Social barriers have been one of the most widely discussed subjects in the USA over the years. Disparities between racial groups and across the socio-economic divide have existed in such areas as employment, educational opportunity, medical services, and public infrastructure. Successive government interventions at different levels have proven successful in narrowing the gap between the social groups, but large differences still exist, particularly in education. Minority students for instance continue to be at a disadvantage and lag behind White and Asian/Pacific Islander students. Students from poor families trail behind their peers from wealthy families, and females are currently getting ahead of males in several areas. These realities tend to perpetuate social injustice since disadvantaged populations are locked tightly into the same band on the social hierarchy and lack realistic opportunities to move upwards.
Lower academic performance in high school is one such barrier, linked to family backgrounds and to life experiences which block educational opportunities and weaken or end higher academic aspirations. People living in disadvantaged communities have fewer options for quality schooling. Most of them attend low-performing schools which struggle to offer a high-quality of education due to poor resources, infrastructure and school facilities, quality of teachers and school attendance. Poor quality schooling may mean poor academic outcomes (not in every individual case) and lead to lower motivation as students do not have the confidence that effort will pay off. Furthermore, low SES students living in more remote areas are also significantly influenced by their local communities which place little value on education because of their low levels of educational attainment. The attitudes and educational experiences of the communities may indirectly affect student learning through lack of emphasis and encouragement. On the other hand, students from high socio-economic families and communities tend to have greater attention and support in their families, and this enhances their academic achievement and aspirations.

Secondly, disadvantaged students are more likely to drop out of high school as compared to their peers. They have trouble in finishing high school and the situation gets worse when many of them fail to obtain a high school diploma. Family and peer factors are associated with high dropout rates across the USA. It is mainly among students from low SES families in both rural and urban areas who have the greatest likelihood of dropping out. Many are forced to drop out of school because of the financial strain on their families. In order to relieve the parents’ burden, the students have to find a job to help support the whole family. However, working while attending school can negatively affect their school attendance and academic performance. Dropping out of high school is often the consequence.

Negative peer pressure may also cause students to drop out before finishing high school. They may be encouraged to develop the attitudes and practices of others in the group such as involvement in truancy, alcohol and drug use, crime and teen pregnancy. These cases most often arise in schools with high numbers of minority and low SES students. Thus, it is not surprising to find the continuous low rate of participation in higher education among school leavers from economically and
academically disadvantaged groups. It is clear that in the USA there is an unequal distribution in educational attainment and also wealth.

Thirdly, those disadvantaged students who are high academic achievers may not have the opportunity to attend the most prestigious institutions. They may end up choosing less competitive institutions that are more affordable and accessible. Even though they are qualified for admission to high ranking institutions, the costs are too high for them to consider. Many of them turn to public two-year institutions rather than public four-year and private institutions. The largest number of students enrolled in four-year institutions is from the highest SES families, and of these, the students from White families predominate. These students have the advantage of enrolling in the most selective institutions, while middle and low SES students must choose less selective two- or four-year public institutions. This indicates that the elites will ensure they have the control and power to maintain their dominance and lifestyle, leaving behind the low SES or low income groups.

Fourthly, the opportunity costs of attending higher education are perceived by low SES families as not worth the benefit. They prefer their children to choose to work after finishing high school so as to increase the family income. Even though some of these students may be eligible for financial aid from the government, it will not be enough to cover the costs for the duration of their education. In order to ease the heavy burden on their parents, some students take part-time jobs which may slow down their progress at college or university. For that reason, most are not able to complete their studies in the minimum study period. They require a longer time to earn a degree and their parents may have difficulty in bearing the additional costs.

Finally, the direct costs of attending higher institutions are increasing markedly. Private institution fees are generally more expensive than those at public institutions, and four-year institutions charge more than two-year institutions. In 2008, tuition fees at public four-year institutions were almost double those at public two-year institutions, and private two-year institution fees are far higher than fees at public four-year institutions. While tuition fees in all higher educational institutions are high, public two-year institutions are the preferred option for students from low income families. The affordable tuition fee is the key factor behind this decision. They are able to acquire an associate degree at a more reasonable cost as compared
to other higher institutions, study at a college closer to home, and stay with their parents. This option reduces their living expenses and leaves them with less debt after graduation. Students from high income families, on the other hand, tend towards public four-year institutions in preference to private four-year institutions. However, this is a sign that public four-year institutions are becoming more like private institutions due to expensive tuition fees and lower acceptance rates among students from low income families. These institutions may no longer be seen as places which offer educational opportunities to all social backgrounds as they used to do.

Disparity in education may slow down the US economy. Correcting such an imbalance will increase national wealth since more revenue will be received from the tax payers due to low unemployment rates, more jobs in the market, better salaries and higher educational attainment. Therefore, the main priority should be to assist the lowest socio-economic groups, regardless of sex and ethnicity, to shift up the income and occupational prestige ladder through greater access to higher education.

Of the five main factors identified in the discussion above, low achievement is of particular importance. If a student performs poorly in academic work, he or she is more likely to drop out of high school, or if the student does graduate, will have many fewer options in higher education (if they do apply for a place in the first place). Certainly the low achiever has little chance of accessing high-prestige institutions and courses. But low achievement is also a context in which economic factors should be viewed. For the families of students who are struggling with high school work may be less likely to provide financial support than if the student was performing at a high level. This financial support refers to living costs as well as help with tuition costs.

Viewed in this way, tackling low achievement in school could be argued to be a policy priority, as without success here the difficulties of getting into college are multiplied. The United States has tackled low achievement through a national testing program. It is useful to devote some space to reviewing the research literature on how effective this program has been. The US experience of the No Child left Behind (NCLB) program offers valuable insights into achieving the policy objective in developing countries of creating mass systems of higher education which are at the
same time socially equitable. This is not because “high stakes testing” is seen as relevant to developing countries in their quest to establish mass secondary (and higher) education, but because the limitations in the impact of NCLB point to broader underlying issues which are relevant. In the next few paragraphs, only a limited review of the research literature can be offered, but a much fuller review is offered in Appendix A.

NCLB was the idea of the administration of former President George W. Bush. He signed it into law on January 8, 2002 as a reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965. NCLB aims to improve educational outcomes for all students by changing the culture of America's schools (Norwood, 2007). Its major goal is to minimise achievement gaps between disadvantaged students and their peers and the high failure rate among poor and minority students. The target is to have 100 per cent of all students achieving at state defined proficiency levels in reading and mathematics by the 2013-2014 school year. According to the US Department of Education (2004, http://www2.ed.gov/nclb/overview/intro/4pillars.html), NCLB is based on four pillars: “(a) stronger accountability for results, (b) more freedom for states and communities, (c) proven education methods, and (d) more choices for parents”.

Since the ratification of NCLB in 2002, the Act has become a topic of controversy for educators who have debated its objectives and implementation. There have been many published studies which either support or criticize the policy, claiming either positive or negative impacts on the American public school system. Some studies have specifically explored student achievement trends both before and after the implementation of NCLB and presented conflicting results and conclusions on the effectiveness of NCLB. Six of these studies are reviewed in Appendix A.

Overall, findings from NCLB studies have demonstrated diverse results when examining the impact of the program on reading and mathematics achievement. Most studies have shown improved scores in both reading and mathematics, with the results for mathematics being slightly better than for reading. This is probably due to the repetitive exercises and activities undertaken in the classroom to help students to become better at mathematics. According to Cronin et al. (2005, p. 58), “students develop most of their skill in mathematics through a curriculum pursued in the
classroom. This curriculum is fairly well defined and sequenced and while parents may occasionally help their kids through difficult algebra problem.” Cronin et al. also stated that improvement in reading requires time outside of the classroom. Those students who do not have easy access to a variety of reading materials and are from non-English speaking backgrounds are less likely to develop rapid reading skills. While there are positive results, the gains appear to be relatively small (and also inconsistent). It is not clear that NCLB has proven able to lift the achievement levels of all students, especially the disadvantaged.

Furthermore, there has been a decline in the academic standards of some American public schools and a number of them have been unsuccessful in making an adequate improvement and meeting the standards set by NCLB. Doyle (2010) reported that the proportion of schools and districts failing to make AYP fluctuated each year within the same state and differed greatly between states. According to the data submitted by the 50 states and the District of Columbia, 36% of school districts and 33% of schools did not make AYP in 2009, an increase over the 2006 data of 4%. This shows that NCLB has not delivered on its promise to raise student performance, close the race-based gap in education and promote equity for all students. Many studies have looked into the shortcomings of this policy and various conclusions have been drawn by the authors. In reviewing these (Appendix A), we have condensed findings into four commonly attributed reasons for the variable success of NCLB – an over-emphasis on test scores, ignoring issues of social context, lack of uniformity in the assessment system, and lack of funding.

From the perspective of developing countries, the experience of NCLB suggests that a strategy of making schools, students and teachers more accountable through high-stakes testing would be irrelevant and distracting, even if it could be financed. Greater accountability assumes that schools have the resources to get good results for all children. But this assumption does not even apply in the United States. Poor schools are where improvement must come, but in the United States these have the lowest access to trained teachers and also educational materials and facilities. Testing assumes that the schools have the capacity, which only needs to be applied through the pressure of testing. NCLB brings out an important lesson that conditions in schools have to be improved and made more equal before policy levers like testing
can be applied. Even then it is not clear that the best incentive to improvement is testing. The second important conclusion that comes from NCLB is that greater equity in access to higher education cannot be expected until substantial improvements have been made in achievement at school. National testing and the funding support that has been provided with this has not made a big difference in achievement levels for minority and other disadvantaged groups. So achievement inequalities remain a major obstacle to converting expansion into equity.

10.2.2 Current issues linked with the changing economic context

The US government has been working hard to remove social barriers that separate the rich and poor in American society. Unfortunately, the attempts that have been made to support the neediest groups have failed to eliminate the disparities. Current economic issues have added to already existing barriers and may be perceived to further aggravate the situation. Recently, there are indications that social barriers are hardening in the USA, as unemployment rates and higher education fees both rise.

Rising unemployment rates

Mass higher education has given Americans more educational opportunities to attend higher education institutions. It has opened the door to under-represented groups to obtain a better qualification of at least a degree or equivalent from a college or university. Those with higher qualifications will have a better chance of getting a well paid job since employers are increasingly looking for highly skilled candidates. In 2007, the OECD reported that tertiary graduates in OECD countries achieved higher employment rates than upper secondary graduates by an average of 9 percentage points (OECD, 2007a).
However, slower economic growth in the USA since the global financial crisis has changed the labour market. It has become more unstable and competitive than in the past, particularly for those fresh out of college or university. These graduates are struggling to get a job since the number of jobs available in the market is very limited and employers are getting more selective when choosing suitable candidates. They are more likely to choose graduates with some work experience to fill available positions. As this trend continues, it will lead to a surplus of higher education graduates chasing limited job vacancies. A recent report by the US Department of Education (2009b) showed that the unemployment rates for 20 to 24 year olds grew from 5.1% in 2006 to 5.8% in 2008.

Besides slow economic growth, globalization is seen as a long-term cause of unemployment among young graduates in the USA. This is due to the increasing competition from international challengers, particular developing countries, to produce the same products at a lower cost. Many jobs in the manufacturing sector have been outsourced to low cost countries in an attempt to reduce the cost of domestic production. The global market is structured to countries’ comparative advantages to ensure efficient use of resources and benefits. As a result of globalisation, many businesses have closed down and unemployment rates have increased as the USA loses jobs to Asian countries. This outsourcing has impacted on young graduates who aspired to higher paying jobs that matched their qualifications. Instead, some of them have been forced to take lower-paying service sector jobs in areas such as retail, the food industry and public transportation.

Since the beginning of 2007, the US economy has collapsed due to the global financial crisis. This crisis has caused an increase in unemployment rates as the economy has shrunk and many major companies have shut down. Most of the US automobile companies, for instance, suffered financial losses in 2008. General Motors, Chrysler and Ford decided to lay off a large number of their employees in that period in an effort to cut costs, and many of those workers could not find a new job in the industry. Poor Americans have become even poorer and struggle to pay home mortgages and food bills. In addition, young college graduates have had to face the difficult task of finding jobs during this downturn, with limited jobs available and a freeze on recruitment. A report by Bivens and Edwards entitled, ‘The class of
2010: economic prospects for young adults in the recession,’ stated that “over the past 12 months (April 2009–March 2010), the unemployment rate for college graduates under 25 has averaged 9.0%, while in 2007 this number averaged 5.4%” (2010, p. 3). It also reported that young college graduates were being offered full-time jobs, but at a skill level which did not require a college degree.

To summarize, investment in higher education to develop human capital now risks being viewed as wasting taxpayers' money. Higher levels of human capital cannot be exploited under current economic conditions. There is no doubt that investment in higher education has expanded educational opportunities for all Americans, but it has also delivered poor results in terms of improving social mobility. The rapid transition towards a knowledge-based society may be achieved, but like rapid economic growth in China may leave many families and individuals as disadvantaged as in the past or possibly worse off.

*Rising higher education fees*

Reliance on the private sector to accommodate the rising demand for tertiary education has created a major vulnerability for students in the form of escalating costs. Private institutions which are owned by big organisations are self-funded and depend on student tuition fees as their main source of income. In the highly competitive education sector, they are competing against public institutions to deliver the highest quality education and training to all students in the USA. At present, private institutions dominate the higher education sector due to the rapid expansion in the number and share of student enrolments. As a higher quality may indicate a higher price, it is not surprising that many of the most prestigious institutions in the USA are private, namely Harvard, Princeton and Yale. These top institutions have low acceptance rates and expensive tuition costs. They also have high admission requirements for applicants.
The reduction in US government funding for higher education has forced many public institutions to increase their tuition fees. They have to raise their own revenue to cover expenses, and increasing fees is the only way to generate extra funds. The Californian state government, for example, is proposing to cut state funding for public higher education for the year 2011-12. Chea (2011) reported that:

“Under Brown's proposal for the coming fiscal year, the 10-campus UC (University of California) system and 23-campus CSU (California State University) system would each lose $500 million in state funding. The state would cut funding to the state's 112 community colleges by $400 million and raise student fees from $26 to $36 per unit to generate an additional $110 million” (para. 3)

The funding cut has put an additional financial burden on students during their study time on top of the costs that they already have to bear. This is particularly so for students from poor families. Public universities today are increasingly closing their doors to poor students and leaving them open for the wealthy.

10.3 Overcoming barriers to higher education

Equitable access to higher education is one of the main concerns of US government policymakers. Federal and state governments have the power to initiate their own strategies and the responsibility to overcome the existing barriers to higher education. Many policies and programs have been implemented to address low participation in higher education among under-represented groups and to close the gap between racial groups and different socio-economic levels. These policies and programs, however, have not made a strong impact on improving access to higher education among disadvantaged groups. Statistical reports by the Education Department have proven that inequality in US higher education has narrowed over the past thirty years, but still remains a big concern among community leaders and policy makers due to the wide participation gap between rich and poor people in
higher education when compared with other industrialized countries. In 2005, the USA was at 7th place on the Educational Equality Index (EEI), lagging far behind countries such as Netherlands, the United Kingdom, Canada, Ireland, Finland and Australia. This low EEI score denotes that “the student body is much more ‘elite’ than the population overall” (Usher & Cervenan, 2005, p. 40).

10.3.1 Financial aid packages to students

The rising cost of university tuition is another barrier to be overcome as it places a heavy burden on families from poorer backgrounds wanting to send their children to higher institutions. The path to higher education leads to debt and financial hardship as they seek alternative loan sources from private lenders, friends and families. It can take higher education out of the reach of most poor students. However, measures have been taken by the US government to make higher education more affordable and available to everyone. There is the expectation that increasing financial aid to college students will ensure higher graduation rates.

The US government offers financial aid in the form of grants, scholarships and federal loans to increase access to higher education. Stafford loans are the most common federal student loan available to undergraduate and graduate students with fixed interest rates as low as 4.5%. They are offered as government subsidized or unsubsidized loans based on students’ financial needs. In addition, The Federal Pell Grant Program is mainly for low-income undergraduate students to help them with tuition, books, and living expenses. In 2008, the Obama administration announced that the Pell Grant program was to be expanded from a minimum of $4,050 to a new maximum of $5,100 per student. In addition, new tax credits have been implemented to help all American families:

“Obama will make college affordable for all Americans by creating a new American Opportunity Tax Credit. This universal and fully refundable credit will ensure that the first $4,000 of a college
education is completely free for most Americans, and will cover two-thirds the cost of tuition at the average public college or university and make community college tuition completely free for most students” (Obama & Biden, 2008, p. 23)

Other federal student aid programs include Direct Plus loan for parents, graduate and professional students, and the Federal Supplemental Educational Opportunity Grant (FSEOG).

Many state governments and higher education institutions are also offering financial assistance programs to eligible students. These financial incentives are limited and divided into merit and need based systems. However, the amount of the financial aid received by eligible students is not enough to cover the full college costs. It has not been keeping up with the rising costs of higher education. Students from low income families are most affected by this situation since they have to find other credit sources to make up the shortfall. They may also need to find part-time employment which can negatively affect their academic performance and lengthen the time to graduation.

Need-based financial aid is more appropriate than a merit-based system in removing financial barriers for less advantaged students. Increasing need-based aid will reduce the gap between rich and poor families, and provide opportunities to gifted poor students to attend more selective colleges and universities. However, the aid provided should be sufficient for them to enrol in higher institutions and stay until graduation.

10.3.2 Open access policy

A number of higher education institutions in the USA admit students through an ‘open access’ system. Open access allows entry to these higher institutions even if the students do not meet the normal entry requirements. This system generally
operates at two-year institutions or community colleges and at some four-year institutions. The National Center for Public Policy and Higher Education defines open access as “public four-year colleges and universities that admit at least 80% of applicants” (Doyle, 2010, http://highereducation.org/pa_0210/index.shtml). The transformation to open access has removed an elitist private system that was accepting the best and brightest students from upper class families. It has eliminated several barriers to participation in higher education and enabled a more equitable higher education system. These more flexible requirements by higher institutions demonstrate that the lower achievers are valued as capable learners and have the right to further their education regardless of their academic performance in high school. They are given access to less selective colleges and universities to enhance themselves before joining the competitive labor force.

However, the policy may fail to bridge the participation gap between the poorest and richest students. Social segregation has been on the rise with students from the highest SES backgrounds having more advantages than lowest SES students to gain entry to higher education. The system may allow rich low achieving students to attend a community college or less selective university while this may only be the case for a few high achieving poor students. The ‘massification’ of high SES students to higher institutions is also an indication of rapidly increasing income inequality in the USA.

10.4 Conclusion

The USA is still the largest economy in the world with the fastest-growing educational system. However, such a rich and powerful country is also the most unequal any other industrialised country in terms of educational opportunities of and has yet to solve this major issue which has persisted throughout its education history. Although the American education system has undergone a number of reforms to rectify the problem, only little progress has been made towards creating a fairer system, which meets the needs of all students.
Inequalities at both the primary and secondary levels of education have affected higher education learning. There is evidence that many high school graduates have aspirations and dreams to go to college, but they are kept back because of poor academic achievement in high school or cost factors relating to college education. This combination of academic and non-academic factors has prevented true equity from being achieved. In addition, the schooling system in the USA is a state-funded system that has created unequal funding between richer and poorer states. Some state schools are not providing their students with a good learning environment because they require additional resources to support the education of their students, particularly those from lower socio-economic backgrounds. These groups of students are missing out on opportunities to have the benefits of formal education which are available to their wealthy peers. In other words, the US education system still continues to create a social hierarchical structure in the USA because the least advantaged students are consistently lagging behind other groups and are likely to remain in the same social position as their parents.

The experience of the USA should be taken as a warning to less developed countries with regard to the priorities they set and the strategies they develop to ensure educational growth is accompanied by equity. Growth with equity is essential for ensuring quality education and equal educational opportunities for all students. There are three important lessons that can be learned from this US experience. The first lesson is that equity and quality education at primary and secondary schooling affect the higher education level. All students must have access to quality school education in order to build their basic knowledge and obtain the skills needed to succeed in higher level studies. By acquiring basic concepts and skills learned during elementary level, students will develop a greater understanding of higher level courses in middle and high school in preparation for higher order thinking at college and university. However, it will be possible only when all public schools in the USA offer high-quality teaching, curriculum and physical learning environments. By having the same high standards, all students are more likely to have the same range of learning opportunities and achieve equal educational outcomes. This will help poor and underrepresented students to attain the same levels of learning as all other students which will eventually contribute to raising equity in the whole school system. A school system which improves achievement and closes gaps between
groups will increase minority student participation and success in higher education. Therefore, transformation of the American public school system is required to remove barriers facing underrepresented students, as these obstacles will affect their educational needs and access to higher education.

The second lesson to be learned from the US experience is that greater equity will not be achieved simply by intensifying the accountability system. This system places excessive pressure on all schools and students to achieve the highest results and meet required performance standards. It produces very disappointing outcomes such as narrowing of the curriculum to the basic skills and limiting benefits to only certain demographic groups, White and advantaged students, who are more likely than others to score above the given proficiency levels. For that reason, many low-achieving students feel unmotivated as they will normally score below average. Some of them will achieve a ‘pass’ score but at a lower standard so that the state government can achieve it AYP. As a result, many of them might choose or are persuaded to leave high school early. It is noted that intensifying the existing system will not increase overall achievement levels or bringing low achieving students up to the required proficiency because school quality is not fully determined by test scores. It is the function of government to solve social disparities and the problems of poverty, before making progress towards equity in education.

The third lesson is that improving academic performance of minority students may not entirely solve the barriers to higher education and lead to greater equity. The strategy of raising test scores, particularly in the case of the minority students, may not be enough to open up opportunities for them to participate in higher education. It may narrow the achievement gap between White and minority students but the goal of closing the gap may remain out of reach. It may only assist in making minority students more eligible for college and preparing them for further education. However, there is so much that needs to be done since the costs of higher education have been rising sharply. Financial constraints are the main barrier for students from poor and low income families to participate in higher education. Low income, high achievers may have been systematically neglected by some higher institutions because they cannot afford to pay their tuition fees. Therefore, the US government should review the existing policy related to financial support packages and design a
nationally consistent and fair funding strategy that provides financial aid to all eligible students, especially gifted, low SES students who face financial difficulties in attending university.

One of the most important conclusions to emerge from the US case study is that expansion does not necessarily lead to greater equity, though in the US it has involved rising levels of participation in higher education as a whole, including for minority groups. Barriers to higher education continue to exist for students from underrepresented groups. The current issues due to changes in the economy further add to the problems. These barriers can be summarized in the table below.

Figure 10.3 Barriers to accessing higher education in the USA

The most obvious question arising from this case study is – Can the path taken by a large and rich country in seeking to create an equitable mass system of higher education act as a guide to developing countries in reaching the same objective? The analysis of the US experience leads to three other conclusions which are of great relevance in helping guide policy directions in developing countries, including Malaysia:

1) Attempting to create a mass higher education system, when equitable participation and achievement in secondary school remain unrealized, ends up reinforcing wider inequalities rather than removing inequity in higher education. This means that the flow of young people into a growing higher
education system is restricted and that secondary school continues to operate as a selective filter.

2) As higher education opportunities open up, the uneven quality at the primary and secondary school level is mirrored at the tertiary level, with students from poorer quality schools entering tertiary institutions at the lower end of the academic spectrum (if they do complete school), both in the public sector and in the private sector and students from the better performing schools aiming for the more prestigious institutions. It might be different if schools were of a more consistent quality, but this is not the case. Instead, inequality is created at the school level and perpetuated at the higher education level where there is hierarchy of institutions.

3) This emerging hierarchy has a social character because the prestigious institutions are not only highly academically selective, but they also tend to be socially selective due to a strong relationship between achievement, educational aspiration and social background. In addition, the costs increase with the level of prestige. These factors also make government policy direction from public to private sector provision increasingly more challenging.

To sum up, there is a definite need to address inequity by developing a coherent strategy in which improving the quality of schooling for all students is the first step. This should be, followed by increasing diversity and choice in higher education system and backed up by enhancing suitable measures of financial support, particularly to needy students. Much emphasis should be given to poor and disadvantaged students in term of sufficient support and resources as the absence of these factors might constrain them from making their way into higher education and a better career path. Higher educational opportunities are necessary to promote economic and social mobility.
CHAPTER ELEVEN

AN HISTORICAL OVERVIEW

The origin of Malaya (now Malaysia) began when Malacca (referred to as ‘Melaka’ in this paper), a town on the west coast of Peninsular Malaysia, became famous as a global crossroad of south-east Asia. Situated on the Straits of Melaka, it was an ideal location for the traders and merchants from the Arab world, India and China who were in need of food and shelter during the shift in monsoon winds. It had grown to become a central meeting place for spices trading activities and for the spread of Islam. As pointed out by Stone (1966),

“The importance of Malacca lay in the fact that it had become the chief centre for the exchange of goods between countries to the west – India, Persian and the Middle East – and China, and also the collecting centre for all the produce of south-east Asia.”

Apart from important commodities in the spice trade, a wide range of commodities were also traded in Melaka such as porcelain and glass, silks, cotton cloth, aromatic woods, gold, tin and various drugs (Stone, 1966 & Hussin, 2007). Many merchants continued to trade in Melaka because food products and goods for trade coming from the east were exempted from tax duties, which was an attractive trading feature for the foreign traders. In exchange, they gave ‘presents’ to the Sultan or the highest officials in the administration of Melaka such as Shahbandar, Temenggong and Bendahara (Stone, 1966).

The Portuguese were the first Europeans to establish a colony in Malaya, capturing Melaka in 1511 with the aim of establishing a monopoly over the spice trade and ruling the straits of Melaka. However, Melaka’s trade had already begun to decline since many traders had moved to other ports due to the high taxes imposed by the Portuguese colonial government. In 1641, the Portuguese dominance over Melaka ended when the city fell into the hands of the Dutch who then gained monopoly
control over the spices and tin. While Melaka became a main focus for the Dutch and Portuguese due to its trade and wealth, the British East India Company, on the other hand, was attracted to Penang (on the north-west coast of Peninsular Malaysia) as a strategic location as a trading port. In 1786, the company led by Captain Francis Light took possession of the island from the Sultan of Kedah in exchange for protection against the Siamese. In 1800, the Company acquired Province Wellesley (now called Seberang Prai) and established a British port in Singapore in 1819. In the meantime, the Dutch had failed to maintain the prominence of Melaka and in 1619 they established Batavia as their central trading. When the Dutch handed over Melaka to the British to avoid it falling to the French in 1785, the British shifted their trading hub from Melaka to Penang. They rapidly developed Penang as a free-trading port, overtaking Melaka. Hussin has remarked that,

“As part and parcel of their programme to promote Penang as a vital port in the East, the English also made attempts to encourage Melaka’s inhabitants to migrate to Penang by reducing taxes and transforming Penang into an entrepot.” (2007, p. 108)

The Anglo-Dutch Treaty of London, signed in 1824 between the Dutch and British, resolved the conflict over the boundary line between British Borneo and Dutch Borneo. According to this treaty, the British obtained possession of Singapore and Malaya, while the Dutch had control over Sumatra. Two years later, the British established the Straits Settlements which consisted of three areas: Singapore, Melaka and Penang. 1896 was the year that marked the beginning of British intervention in Malaya as four Malay states of Selangor, Perak, Negeri Sembilan and Pahang were grouped to form the Federated Malay States (Negeri-negeri Melayu Bersekutu). These four protected states agreed to accept British officials, named the Resident, as advisers to the respective Sultans in all matters of administration except those relating to Malay customary law and religious matters. The British increasingly took over control of the Peninsula by forming the Unfederated Malay States (Negeri-negeri Melayu Tidak Bersekutu) in 1909. This consisted of Kelantan, Terengganu, Kedah and Perlis. Unlike the Residency system in the Federated Malay States, an advisory was introduced because these states “(preferred) to keep their independence, and for their people to be ruled by their Sultan and their own chiefs and to be able to
have advice from a British Officer” (Stone, 1966). Five years later Johor became part of the Unfederated Malay States. In 1914, the states in Malaya were divided into three different administration units under the British. They were the Straits Settlements, the Federated Malay States and the Unfederated Malay States.

The British intervention in the Malay states was due to rubber plantations and tin mines, the natural resources of Malaya. All states under the Residency system and the Federation experienced rapid economic growth as the British invested heavily in these two industries in order to feed the home country’s industrial development. For instance, the British had developed drainage system, roads, railways and bridges to stimulate stronger growth in the mining and agricultural sectors. After the implementation of land concessions and special land regulations from 1900, the Federated Malay States had made remarkable growth in the two sectors (Raja, 2009). Instead of relying upon the existing local labour, the British imported Chinese and Indian workers to fulfil the demand for workers. As described by Roslan,

“the Chinese were brought by the British to work in the tin mines, while the Indians to work in the rubber plantations. The Malays remained in the traditional subsistence agriculture and thus were left out of the modern sector of the economy.” (2001, p. 3)

This evidence shows that Malaya’s economy during the colonial rule can be divided into two categories, namely modern and traditional economic activities. The modern activities such rubber plantations and tin mines, mostly owned by the foreigners (colonisers, Chinese and Indians), were the primary driver of the economy. Located along the west coast, these activities required intensive labour and more modernized and advanced facilities. The traditional sector, on the other hand, was found in east coast rural areas and was dominated by ethnic Malays engaging in agricultural activities, namely fishing and farming of rice, coconut and other food crops (Ngah, 2010).

Malaya was a world leader in the production of tin in the late 19th century and the industry was the main source of income between 1895 and 1914 (Yacob, 2008). Tin was mined in the states of Perak, Selangor and Sungai Ujong which was conquered by the Malays in the early history. In 1900, the industry was then dominated by local
Chinese firms which outnumbered European-owned companies. Tin production in Malaya increased from 43.7 thousand metric tons in 1900 to 82 thousand metric tons in 1940, as shown in Figure 11.1. By 1935, Chinese dominance of the tin industry had given way to European ownership. The decline in production under the Chinese was due to the modern technique of mining known as the dredge method which required less labour but expensive capital (Stone, 1966).

Figure 11.1 Malaysia: Production of tin in Malaya, selected years: 1900-1940 (thousand metric tons of tin-in concentrates)

Source: Hennart (1986), Table 1

Malaya’s second main commodity, rubber, had been introduced in 1877 and the rapid planting of rubber trees began in the 1890s after plantation crops of that period (such as pepper, sugar and coffee) had failed due to disease. Perak was the first Malay state to establish the rubber tree plantations, followed by Selangor, Negeri Sembilan and Johor (Stone, 1966). As shown in Figure 11.2, rubber tree plantations grew rapidly across Malaya and from the late 1890s the industry was increasingly dominated by the Europeans. From 1907, the Asians established rubber plantations. However, Europeans maintained the major share throughout the period to 1922.
With the increase in plantation area, the prospects for rubber were good even though the price had started to go down during the decades preceding World War 1. According to Stillson (1971), the price of Malayan rubber started to fall from 1910. This led the British to stop investing in Malayan rubber. By 1929, however, rubber still surpassed tin as the leading export commodity in Malaya.

Source: Drabble (1972), pg 261, Appendix A
As shown in Figure 11.3, the export of rubber was main source of income in the Federated Malay States between 1929 and 1933, but between 1929 and 1931, the Malayan rubber industry was on a downward trend. This was probably due to the Great Depression which began in 1929. From 1932, the industry started to recover as earnings from the export of rubber increased from 37 million straits dollars in 1932 to 58 million straits dollars in 1933. Rubber maintained it place as Malaya’s main export product, a position it held until 1933.

During the Japanese occupation from 1941 to 1945, Malaya suffered a serious decline in economic growth and development. The rubber and tin industries collapsed since “as the British and Malaya soldiers retreated they blew up the tin dredges, while on plantations the people just did not tap their rubber-trees” (Stone, 1966). Thus, people in Malaya experienced much hardship due to problems such as food shortages, unemployed and lack of medical care. Furthermore, the sultans were not given the power to rule their states and Japanese education was imposed in all schools. After three and a half years of the occupation, the Japanese surrendered unconditionally to the British.
After the Japanese occupation, the British set about restoring the wealth of Malaya. Rubber and tin continued to dominate Malaya’s economy, although the price of rubber had been unstable since the pre-war period. In 1947, these two commodities accounted for 84 percent of gross export earnings as shown in Table 11.1. The percentage had increased slightly to 86.3 percent by 1950 and remained stable at around 85 percent between 1955 and 1960. While the gross export earnings continued to improve from 1960, rubber and tin declined in importance, accounting for just 61.7 percent of export earnings by 1965.

Table 11.1 Malaysia: Gross export earnings and rubber and tin earning (RM million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross export earnings (RM million)</th>
<th>Rubber and tin earnings (RM million)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>835</td>
<td>701</td>
<td>84.0</td>
</tr>
<tr>
<td>1950</td>
<td>2608</td>
<td>2252</td>
<td>86.3</td>
</tr>
<tr>
<td>1955</td>
<td>2373</td>
<td>2018</td>
<td>85.0</td>
</tr>
<tr>
<td>1960</td>
<td>2924</td>
<td>2508.7</td>
<td>85.8</td>
</tr>
<tr>
<td>1965</td>
<td>3782.5</td>
<td>2333.6</td>
<td>61.7</td>
</tr>
</tbody>
</table>

Source: Nambiar (2010), Table 1.

The British granted independence to Malaya on 31 August, 1957. Tunku Abdul Rahman was the first Prime Minister of the Federation of Malaya which consisted of 11 states in Peninsular Malaya. On 16 September, 1963, Sabah, Sarawak and Singapore merged with the Federation of Malaya to establish a new Federation, with the name of Malaysia. In 1965, however, Singapore left the Federation of Malaysia and gained its own independence.

11.1 Emerging issues in Malaya post colonisation

Colonial rule under Britain had contributed significantly to the economic development of Malaysia. Under British administration, the colony of Malaya had become the world's largest producer of tin and rubber. The British had introduced new technologies to increase the production of tin, and had implemented policies to
promote the planting of rubber trees and commercial crops to drive the export industries. The transport system was significantly expended and modernised through the construction of roads and railways to connect one city to another.

However, the British were only keen to expedite the development of the western states, namely Perak, Selangor, Penang, Negeri Sembilan, Melaka, Johor and Singapore, since these states were important contributors to the economy, principally involved in the export of tin and rubber, plus trading activities. The unbalanced economic and infrastructure development divided Malaya into two zones—the more developed and urbanised west coast and a poorly developed east coast. While the west coast states became the major contributors to export earnings, the east coast states of Kelantan, Terengganu, Perlis and Kedah were engaged in subsistence agriculture and fisheries. This wide gap in economic activities and the resulting uneven growth caused income disparity between the people of the west and east. The British colonial presence had also given rise to a multi-ethnic or plural society in Malaya comprising Malays, Chinese, Indians and other ethnic minorities. The increasing flow of Chinese and Indian labourers to work in tin mining and rubber planting had brought economic benefits to Malaya, but also caused major disturbances in economic and social conditions.

After independence in 1957, access to education and participation in the formal economy became unbalanced between the Malays (Bumiputera) and non-Malays (non-Bumiputera). The Malays, who formed the majority of the population, were involved in agriculture and farming such as fishing and rice growing, while the major trade industries were in the hands of the Chinese and Indians. This division of labour along racial lines was created by the British who separated each ethnic group into specific geographical and work areas. According to the book of ‘The World and Its People: Malaysia, Singapore, Brunei, and the Philippines’ (Driver, 2008), the British ensured land ownership rested with the Malays and encouraged them to be involved in agriculture in order to supply cheap food for the Chinese and Indian workers. Kim (1974), writing about Malay Society from 1874 to the 1920’s, observed that,

“The larger proportion of the Malay population continued to live as they had lived before - they planted the basic necessities, collected jungle produce for export to the nearest towns, but participated little
in the major activities of the urban areas. The whole pattern of urban living was new to the Malays and in the new urban centres, the Chinese and Indian immigrant population so dominated all forms of economic activities that the Malays could hardly hope to fit into a situation where social relations were, from the first, communal in nature and cultural differences extremely marked.” (p. 183)

The non-Malays’ economic dominance in commerce, as described above, marked the beginning of the economic imbalance between Malays and non-Malays. The separation of races by occupation was identified as early as 1921, and is shown in Figure 11.4.

Figure 11.4 Malaysia: Percentages of total workers in selected occupations in British Malaya by race/ethnic, selected year: 1921

Source: Kratoska (1982), pg 291

Chinese workers were disproportionately represented in the tin mining industry, while the Malay workers dominated rice production. It is notable that Malays took no part in tin mining, the most important export industry, and only a limited number of non-Malays participated in the rice sector.
The unbalanced participation in economic activities during the colonial years caused an issue of unequal distribution of wealth with the non-Malay groups, particularly the Chinese, becoming wealthier than other races. While most Chinese immigrants earned their living working in tin mines and the Indians in rubber estates, the Malays were involved in traditional agriculture, engaging in small scale rice growing and rubber tapping in addition to home food production. Thus, Malay peasants were trapped in poverty as Yusof reported,

“*Their participation in the market system which used money as the medium of exchange, was limited to only selling the rubber produce to village or small town traders who would in turn sell these peasants needy supplies such as salt, sugar, clothing and others.*” (1984, p. 37)

He also highlights that due to their lack or participation in the formal economy, the Malay peasants were forced to sell their farm products at a lower cost to the middleman who charged higher interest rates for loans during non-productive periods. This situation underlay the large race differences in poverty as measured at the time of independence. Figure 11.5 shows poverty rates across all races in Malaya in both rural and urban areas by 1957/58.

**Figure 11.5  Malaysia: Incidence of poverty in rural and urban in 1957/58**

Source: Ikemoto (1985)
The chart reveals that about half of the population in Malaysia in 1957/58 were living in poverty and the overall poverty rate in rural areas was almost 30 percent higher than the urban rate – 59.6 percent versus 29.7. In fact, three-quarters of Malay households (70.5 percent) were recorded as being in poverty that year, the highest of all the racial groups. A poverty incidence as high as 74.9 percent was found among rural Malay populations, while the Indians had the highest rate of poverty in urban areas. Figure 63 above indicates that ethnic disparities in poverty were considerable, particularly in rural areas.

During the early colonial era, the British government was not concerned with social differences among ethnic groups living in Malaya since the colonial government’s main priority was to advance British economic interests. Growth in smaller towns and villages lagged behind that in the cities where most of the Chinese lived. Consequently, the Chinese tended to fare better than the Malays and Indians, both in economic and educational attainment. According to Hirschman (1979), since Malays were predominantly residing in rural areas where educational facilities were limited, they had less formal schooling than their Chinese and Indian counterparts. His findings follow earlier research by Parkinson who remarked that,

“*The Malay attitude towards education in the nineteenth century was an attitude which does not exist today. It is said that the Malays were very unwilling to send their children to secular school even when one existed nearby. This lack of education put them at a disadvantage in competition with the Indians and Chinese, who were both able and willing to take advantage of the urban educational facilities. Moreover, the Indians and Chinese also established schools of their own and showed a very marked interest in education. The Malays did not, and suffered accordingly. *(1967, p. 35)*

Since there was no standardised educational system for all children at that time, each ethnic group had developed its own form of informal education to acquire the knowledge and skills it needed for everyday survival rather than as a tool for development and social change. The real-life informal educational setting shaped most ethnic groups to accept their social status and engagement in particular
economic activities. The Malay community lagged behind other ethnic groups because,

“The rural Malays are reluctant to give up the past, and secondly, they fear or dislike the unfamiliar”. (Parkinson, 1967, p. 36)

“The rural Malays have shown themselves to be resistant to a radical change in their production techniques as in their preference for coastal fishing........ Admittedly, the Malays lack suitable boats and equipment for deep-sea fishing, though they are using more and more outboard motors and nylon nets. But in spite of this the Malays themselves have expressed their great dislike of being away from home, and say that they will not go deep-sea fishing for this reason.” (Parkinson, 1967, p. 37).

In summary, the economic and educational gaps between the ethnic groups remained as a crucial problem even after Malaysia gained its independence from the British in 1957. Although Malays were the ethnic majority and native to the country, they were left behind when the Chinese and Indian labourers were brought to Malaya by the British to provide the labour force for commerce and trade. The environment that had been created by the British excluded the Malays from the economic advantages in their own country.

11.2 Economic and social development under the First Malaysia Plan

The First Malayan Five-Year Plan (1956-1960) was designed before independence in 1957. A second Malayan Five-Year Plan (1961-1965) was formulated after gaining independence, and this outlined the development of Malaya, Singapore, Sabah and Sarawak. The First Malaysia Plan (1MP) represents an early stage of national development after the British decided to withdraw from the country. It was a five-year plan covering the period of 1966 to 1970 for the whole of Malaysia, including
Sabah and Sarawak. This plan was based on two earlier plans undertaken pre-independence to improve levels of economic growth and social welfare. Prepared by the new government of the first Prime Minister, Tunku Abdul Rahman Putra Al-Haj, the 1MP was intended to transform social and economic structures in order to accelerate progress during the five-year period post-independence towards building a stronger foundation for future growth of Malaysia. The main objectives of this plan were to promote traditional and new export possibilities, welfare for all citizens, and to improve the living conditions of communities throughout the country, particularly those living in rural areas and belonging to low-income groups.

The pre-independence economy had been engaged in commercial agriculture and mining which overemphasised earnings from the export of primary commodities, mainly tin and rubber. The trade in this narrow range of primary commodities was recognised as a major constraint that obstructed the economic development efforts. The price of natural rubber was unstable and fluctuated frequently, and there was fierce competition with other supplying countries over natural and synthetic rubber. Local production of tin, on the other hand, was vulnerable to a shortfall in supply. Taking into consideration all these barriers, the government of Malaysia decided to implement economic diversification in order to sustain economic growth. However, the main focus in the 1MP was the primary sector. Some of the strategies included replanting of rubber trees, exploring mineral potential, developing oil palm production, and expanding production of other crops, such as bananas, sago, tapioca, cashew-nuts, pineapple, citrus fruits and abaca. Although these approaches aimed to boost economic growth and create job opportunities, restricting the scope to the primary sector, mainly agriculture, indicated that the Malaysian government was not equipped to make major structural change to the economy. The Government simply attempted to encourage agricultural diversification since there was opportunity to increase the production of other high-value commodities for commercialisation. Due to the high capital investment in technology research and innovation required for agricultural sector, there were many limitations on driving the rest of the economy forward.

Due to the country’s reliance on imported food products, 1MP recommended expanding food production for the domestic market in order to enhance productivity
and reduce costs. Rice, for instance, was considered the most important staple food in Malaysia, but had previously been grown in small quantities for home consumption. It was also suggested that sugar production be expanded, both to meet local consumer demand and for conversion into a modern industry. In addition, since Malaysia continued to depend heavily on imported processed food products, the government was prepared to move away from the agriculture sector towards the processing of raw domestic and imported supplies into finished products. In addition to food products, the manufacturing sector was expected to expand further from assembling imported components to manufacturing spare parts. The process of further economic transformation, however, was incorporated into the next five-year plan.

Structural transformation through manufacturing was a good option for the Malaysian government since the production of finished goods and components was labour intensive. This type of industry would have been a better option for a less developed country like Malaysia to make progress in growing its economy, even with the difficult financial circumstances facing the country. The finished goods, which were intended for domestic buyers under the original Plan, would subsequently be exported to generate additional income and boost the economy. The massive population increase and abundant labour supply were most advantageous for industry. Not only were more jobs created, but unemployment was lower as a result of industrial growth. These results clearly show that the Malaysian administration made the right decision to diversify into the secondary sector of the economy in order to overcome the economic weaknesses of the country and reduce economic pressure. The abundant supply of low cost labour in Malaysia would have given this sector a strong competitive advantage in the Asian economic region. Along with other factors such as an abundance of natural resources, a strategic geographical location and a well-developed transportation infrastructure on the west coast, it was to substantially benefit Malaysia's economic development by attracting an increasing number of overseas investors.

Malaysia’s economic growth was uneven due to the unbalanced regional development between east and west coast Peninsular Malaysia. The eastern region was relatively backward as compared with the west and 1MP did not provide specific
detail on what needed to be done to narrow the gap between these two regions. Instead, the Plan simply stated the economic and social development for Malaysia as a whole.

Government efforts to overcome poverty in Malaysia thorough social development, mainly in the rural areas, were clearly stated as one of the objectives in the 1MP. It was in fact a core objective of government since the First Malayan Five-Year Plan (1956-1960) to achieve rural improvement in Malaysia. Under the First Malayan Plan, a government agency namely the Federal Land Development Authority (FELDA), was established in 1956 to improve the conditions of Malay farmers in the rural areas by opening up new land to grow cash crops. It was then followed by the establishment of MARA (Majlis Amanah Rakyat) or People's Trust Council in 1966 to encourage Bumiputera (transliterated as "son of the soil" who refers to Malays and other indigenous peoples) to participate in business and increase their involvement in the economic sector by offering training and financial assistance. All these programs aimed at reducing the economic gaps between Bumiputera and non-Bumiputera, and eliminating the identification of race with specific economic function.

11.3 Place of education under the First Malaysia Plan

To give a context to the transformation of the educational system under the 1MP, this section will start by describing the history of education in Colonial Malaya and how the education system differed for each ethnic group. This was because a clear policy on national education had never existed. This section will then detail the changes in the education system as set out in the 1MP.

The purpose of schooling in the early colonial period was mainly to preserve cultural integrity and to teach daily living skills. For that reason, each ethnic group in Malaya established its own school with its specific content using its own language as medium of instruction. The two types of schools in existence were, on the one hand, vernacular schools (Malay, Chinese and Tamil) and on the other hand the English
schools. The growth and development of these schools were influenced by two dominant factors, economic and geographic. Wong & Ee (1971) explained that,

“the vernacular schools, particularly the Malay and Tamil vernacular schools, were mainly in rural areas - in the kampongs and the estates - while the English schools were in the urban centres of Penang, Melaka and Singapore, where more of the day-to-day trade and business was carried out.” (p. 29)

As a consequence of the above circumstances, the rural populations remained educationally under-served by the British colonial system since they did not significantly contribute to the economy. The substantial differences between the Malay vernacular and the English schools are clearly described by Hussiin (2011),

“Other than problems with the building, most Malay schools were not properly equipped as they did not have systematic classes, and a limited number of available books, where a book had to be shared between three to four students. The library was also ill-equipped with reading materials. The response from the Malay students was not encouraging, which could be due to the lack of Malay reading materials. What was obvious was that the Malay vernacular schools were not equipped with proper facilities and infrastructure compared to the English medium schools.” (p. 147)

The sub-standard school system caused educational disparities between the ethnic groups. It failed to provide sufficient access to education and bring all students to more equitable achievement. Due to their lack of economic advancement, the Malay population were poorer and also less educated than the Chinese and Indian communities (Collins, 1998). A recent study by Hussiin (2011, p. 148) reports similar findings to those described by Collins. She found that “the Malays were deemed to be lagging behind in education due to the low quality of education they received compared to other races, especially the Chinese.” The highest academic level at Malay vernacular schools was up to Standard Four (Ongkili, 1985) and the students were taught the basic elements of education such as reading, writing and arithmetic with arts, crafts and gardening (Sugimura, 2007). These students did not
have the opportunity to advance to higher levels of education because secondary education was made available only in English-medium and Chinese-medium schools (Hirschman, 1972, 1979). This was confirmed by Jamaluddin (2011) who reported that Malay and Tamil vernacular schools were limited to primary school, while the Chinese vernacular schools offered six years primary level, three years of junior secondary school and another three years at senior level. He also stated that the Malay school graduates were meant to meet the lower level manpower needs. This was more apparent for the Malay youth in the eastern and northern states where they had limited access to primary school (Hirshman, 1979). On the other hand, the Malay royalty and members of the aristocracy had the benefit of British formal education from the English schools (Sugimura, 2007 & Jamaluddin, 2011). As the Malays began to take up roles in the colonial administration, the English schools were considered by the British as training institutes to educate lower level of civil servants such as clerks. It was noticeable that the British intention of introducing an education system in Malaya was more likely to focus on economic and political interests rather than for the benefit of the people.

Beginning in 1946, there were several notable changes to the education system in Malaya. The primary schools were made free for all and the standard period of primary education was extended to six years (Ongkili, 1985). The Barnes Report on Malay Education in 1950 and the Fenn-Wu Report on Chinese Education in 1951 proposed several changes to all primary vernacular schools and suggested the formation of a national education system to unify the three ethnic groups in Malaya. The other important reports that marked improvements in the education system were Education Ordinance (1952) and the Razak Report (1956). After Malaya achieved independence in 1957, the Rahman Talib Report (1961) had denoted a starting point for the Malaysian education framework, emphasising the use of Malay as a medium of instruction. Using recommendations from the Razak and Rahman Talib Reports, the government passed the Education Act in 1961. This marked a new beginning with a well-structured national education system in Malaya.

The efforts to establish a national education system from 1946 to achieve the goal of compulsory primary education for all, as stated in the 1MP, had a positive effect on primary school enrolments as illustrated in Figure 11.6.
Figure 11.6  Malaysia: Primary enrolment trends at public schools by language medium in Peninsular Malaysia, selected years: 1947 to 1974

Source: Rudner (1977), Table 6, pg. 44
Notes: The conversion of English-medium primary schools to Malay-medium schools began in 1969.

Between 1947 and 1974, enrolments at Malay-medium primary schools increased almost five-fold while the Chinese-medium schools experienced a more moderate upward trend, with a slight decrease in 1966. The Tamil-medium schools, on the other hand, demonstrated only a slight increase in enrolments. The English school enrolments maintained a steady upward trend between 1947 and 1966, before dropping back to 1947 levels by 1974 due to the conversion from English to Malay-medium schools (Tray, 1984).

The commitment of the Malaysian government to strengthening the quality of primary education in the 1MP and extending primary education to lower secondary level in 1965 had a positive impact on the number of students enrolling at primary and secondary levels of education in public schools, as shown in Figure 11.7. Enrolments in primary education increased from 933,151 in 1957 to 2.4 million by 1990, while secondary school enrolments rose to 1.3 million by 1990, compared with only 81,042 students in 1957.
The 1MP had stressed the importance of human resource development, recognising the shortage in human resources in many sectors of economic activity such as medicine, education, agriculture, engineering and other technical. The upgrading of the country's human resource capacity could only be achieved through education. The goal of education during that period was to provide appropriate training to meet the massive development needs of the country. In total, $440.8 million had been allocated for education in the 1MP for the whole of Malaysia. It was expected that immediate economic growth would lead to the creation of greater employment opportunities, raising per capita income levels and improving standards of living. In order to ensure every child had access to basic education, namely six years in primary school, the government abolished primary school fees in 1961. It also raised the school-leaving age from twelve to fourteen years of age to ensure that all children completed the compulsory years of primary education. In order to improve the quality of education at primary level, the government implemented two initiatives: an increase in the supply of qualified teachers and provision of better school facilities. They also looked at ways of reducing the risk of school dropouts, particularly in Sabah and Sarawak.
Educational reform in 1965 had resulted in an additional three years education at lower secondary level which raised the minimum school leaving age to fifteen. The so-called ‘comprehensive system’ offered general education with a vocational or technical emphasis available in four different areas, namely agricultural science, commercial studies, home science and also industrial arts. The latter included the following areas: woodwork, metalwork, electricity and power mechanics. At the end of this course, students were required to sit for an examination and an aptitude test to identify career options based on their interests. A first national standard examination known as the Lower Certificate of Education Examination (LCEE) was introduced in 1967 for students completing lower secondary education. Based upon the result of the examination, a further two years of post-comprehensive school education in technical, vocational or academic fields would be offered to the top 45 percent of the students. This additional level of education aimed to produce teachers for primary education, students for higher education and middle-level technicians for the labour force.

The 1MP had also called for the establishment of a number of upper-secondary vocational schools to meet the Malaysia’s human resource needs in the agricultural, industrial and commercial sectors. Effective from 1968, those students who had completed nine years of schooling and, having decided against going into upper-secondary academic schools, could continue on to vocational schools. In brief, the whole reform of the school system was implemented to link primary, secondary and tertiary education, but provided only limited access to higher institutions for a select few. Students who were not able to go on to higher levels of education were trained to become qualified technicians, craftsmen and, artisans.

At the higher education level, the primary focus was on producing middle-level technicians. The College of Agriculture at Serdang and the Technical College in Kuala Lumpur were required to expand their enrolments and offered a wider range of courses. There was also a plan to build a second college of agriculture and a polytechnic. University education, on the other hand, was intended to supply highly skilled professionals. The only university of the early post-independence period, the University of Malaya (UM), had expanded its existing enrolments and decided to open enrolments in the Faculty of Medicine in order to produce enough doctors for
the country. There was also a significant push by the government requiring an increased focus on teacher training program at tertiary level. Paragraph 514 in the 1MP stated that “high priority will be given to the production of graduates to meet acute need for teachers required for upper-secondary academic schools and sixth forms.”

Primary and secondary teacher training programs were considered the highest educational priority in the 1MP so as to accommodate the increase in enrolment. For that reason, the government developed multiple short and long-term strategies which included improving the teacher training facilities, expanding existing colleges, building new colleges, and also providing accommodation for college administration staff. Instead of concentrating on teaching skills, teacher-training courses focused on teachers' knowledge of subject matter to ensure that the teacher training students completely understood the content they were trying to convey in the future. The 1MP (Malaysia, 1966, p. 170) states that “in teacher training, emphasis will be shifted from teaching methods to the study of subject matter which the future teachers will have to teach.”

In support of the framework for education plans mentioned above, the government of Malaysia had realised the urgent need to invest in education which would in turn drive economic growth. The emphasis given to education in the 1MP is reflected in the allocation of public development expenditure, as shown in Figure 11.8.
As the pie chart illustrates, an even higher priority was economic growth and improvement in rural living standards. Since infrastructure has an important role in economic development, the government needed to invest in physical infrastructural improvements, for instance electricity, water and transportation system. A stable political environment was also essential for economic growth. After the basic economic needs were met, education was the next priority. Although the budget allocation was relatively small, about 10 percent, it was nevertheless significant enough to confirm the governments’ commitment to education and training. However, since the direction of 1MP had placed less emphasis on poor remote regions, there was a big difference in the proportions of education funding between Peninsular Malaysia, Sabah and Sarawak. These differences are illustrated in Figure 11.9 which shows the inequitable distribution of public expenditure between the three regions across all sectors.
The above figure clearly shows that the Government prioritised the development of Peninsular Malaysia as the main contributor to the Malaysian economy by improving and upgrading the infrastructure and utilities to stimulate growth. The same principle applied in education and training where 8.1 percent was allocated for Peninsular Malaysia, while Sabah and Sarawak received less than 2 percent.

11.4 Conclusion

The history of Malaysia is one of economic and educational inequality among its ethnic groups. The majority Malay were neglected by the British colonisers in their pursuit of economic growth. Consequently, they lagged behind the Chinese and Indians minorities and this led to a serious social and educational crisis following independence in 1957. Realising the importance of education as a pathway to development and nation building, the government of Malaysia under the 1MP
expanded school opportunities for all, from basic primary education to lower secondary education. The expansion of learning opportunities is an important long-term benefit to strengthen human capital and the only route out of poverty for poorer people.
Since Malaysia declared its independence from the British in 1957, its economy has undergone enormous changes. The government of Malaysia wanted to ensure that the economy was expanding and creating sufficient new jobs in Malaysia. Its aim was that the benefits from economic growth should be equitably distributed across society and not only to small portions of the population. The strategy was focused on creating wider economic opportunities for the rural poor to participate and contribute to the growth process. The government’s intention was that when all members of society effectively contributed, and gained advantage from economic growth, then sustainable long term growth and development in Malaysia would be secured and human resource development enhanced in all sectors of the economy. As stated in Chapter 1 of the 1MP,

“The country enjoys a relatively high standard of living and an atmosphere of social harmony in a multi-racial society. Nevertheless, there are many economic and social problems outstanding and much work to be done. The First Malaysia Plan seeks to attack these problems through a carefully conceived and vigorously executed effort at planned social and economic development. The success of this is an essential prerequisite to the achievement of the over-riding goal of a happier and more prosperous Malaysia.” (Malaysia, 1966, p.1)

An individual’s social status can change from one social class to another as education brings higher wages, better job prospects and quality of life. Ultimately, there could be a reduction and eventually an end to poverty, and also greater social equity in Malaysia’s multi-racial society. Realising the importance of education for upward social mobility and long-term economic growth, the government has made elementary education necessary since the 1MP in order to provide greater
opportunity and promote economic growth. The link between economic growth and education has encouraged the government to pay particular attention to the national education system. In the 1MP, they expanded enrolments from the basic 6-year primary education to three years of lower secondary school. Later, they increased the number of places at two-year upper secondary school and finally at post-secondary or tertiary education. The rapid growth in each level of education has been counterbalanced by equally rapid economic development in Malaysia. Malaysia successfully developed from a commodity-based economy in the 1960s to one focused on manufacturing in the 1980s. As Nyageteran states:

“Malaysia has transformed itself from a poverty-stricken nation, rural-based and dependent on agriculture and mineral extraction during the 1960s, to one with a rapidly changing economy, where manufactures accounted for 80.5 percent of its exports in 1998. Most of the population (mostly Malays) were peasants who lived in the rural areas. They occupied most of the lower rung of Malaysian society, accounting for most of the urban and rural poor.” (2002, p. 3)

In recent years, however, the government has placed greater emphasis on becoming a knowledge-based economy, in line with Malaysia Vision 2020 which was first proposed by the fourth Prime Minister, Tun Dr. Mahathir Mohamad in 1991. The gist of the Vision is to make Malaysia into a country with developed status by the year 2020. The plan states,

“Malaysia can be a united nation, with a confident Malaysian society, infused by strong moral and ethical values, living in a society that is democratic, liberal and tolerant, caring, economically just and equitable, progressive and prosperous, and in full possession of an economy that is competitive, dynamic, robust and resilient” (Economic Planning Unit, 1991, para. 5).

The Malaysian economy has maintained its momentum by growing consistently well over the last decade from the 1960s. Although a number of world economic crises have slowed economic activity, various economic strategies and programs by the Government have pushed the economy back into growth. GDP has shown a
remarkable annual growth rate since 1960s, as illustrated in Figure 12.1. If this rate is sustained, it will lead to Malaysia achieving its objective of becoming a developed nation by 2020.

Figure 12.1  Malaysia: GDP annual growth rate since the 1960's (%)  

Source: World Bank (2011)

From 1960 until 2010, Malaysia’s GDP maintained at an annual rate between of 5 percent and 10 percent - in spite of shocks from several global economic crises. The oil shock of 1973 was the first wave of an economic downturn that slowed the Malaysian economy. However, the economy recovered during the early 1980s and contracted again between 1985 and 1986 before growing steadily until 1997. The worst economic contraction occurred in 1998 when the economy was hit by the Asian financial crisis, followed by the two most recent financial crises in 2001 and 2009.

These global challenges have required a rapid growth in knowledge for competitive advantage aimed at ending dependence on labour-intensive industries and natural resources, and instead switching to high value-added products, Malaysia must therefore ensure that it has the trained and skilled workers that are capable of meeting the requirements of more sophisticated technologies. This chapter will now
discuss in more detail the growth and structural transformation of the Malaysian economy which have resulted in a shift in the occupational structure of the labour market. It will then examine trends in educational attainment and how they have influenced changes in the labour force, requiring more highly educated human capital to meet the demand of the knowledge-based economy also known as k-economy.

12.1 Changes in the Malaysian economy

Being an open economy and trade-oriented since the 13th. century when Malacca grew and expanded into a trading centre, Malaysia's commitment to open markets has remained unchanged, making the Malaysian economy vulnerable to and influenced by global economic conditions. For that reason, the government of Malaysia has formulated and implemented many economic policies and development strategies to respond to the changing world economy and ensure that Malaysia is prepared for the future changes. In this way, it is hoped, the Malaysian economy will continue to expand at a fairly rapid pace. Evidence of this can be seen clearly in its numerous phases of development and changes after gaining its independence from the British in 1957.

12.1.1 Structural transformation of the economy

After gaining its independence from the British in 1957, Malaysia committed itself to production of raw materials through mining and agriculture, including commodities such as tin, rubber and palm oil. These primary commodities continued to be the main contributor to the Malaysian economy and also the most important employment provider up until 1970. However, this primary economy was unable to maintain sufficient revenue for Malaysia and provide enough employment opportunities for its
population due to the unstable price of commodities and shifts in demand for substitute products. Figure 12.2 illustrates the growth of the service sector from 43.6 percent in 1961 to 55 percent in 2010. The data for 1970 and also 1990 are questionable, with the apparent losses in industry share possibly due to definitional changes. However, the long-term view is clear. Manufacturing industry’s share of GDP increased from 8.5 percent to 30 percent between 1960 and 2010, while agriculture fell from 38.5 percent to 7.3 percent in the same period.

Figure 12.2 Malaysia: Percentage distribution of GDP by sector of origin, 1960-2010

Prior to 1960, agriculture activities such as farming and fishing were considered as unaccounted economic activities (“unobserved economy”). The Government under the-then Prime Minister Tun Abdul Razak therefore had introduced the New Economic Policy (NEP) in 1971 in order to eliminate the growing economic and social disparities between the Malays and non-Malays. According to Jomo (2004), the NEP had two major objectives that were “poverty eradication regardless of race” and “restructuring society to eliminate the identification of race with economic function.” Based on this policy, the Bumiputera received preferential treatment to assist them to engage with the modern economy. For example, the Policy aimed to increase the share of Bumiputera corporate ownership from 2 percent in 1970 to 30
percent in 1990 and change of sectoral employment patterns in the urban areas, for the betterment of Malaysian ethnic composition (Menon, 2008).

The transformation of the economy to manufacturing and industry began with the Second Malaysia Plan (2MP) covering the period 1971-1975. As stated in the 2MP, “development will be directed towards increased production for export including new industrial and agricultural items, greater local processing of domestic raw materials, and further substitution of domestic production for import” (Malaysia, 1971, p. 6). However, this early stage of the transformation process was primarily focused on assembling electrical goods and machinery. Malaysia has made full use of its cheap labour to produce components and materials required by developed countries like USA and Japan. According to Yusoff et al. (2000), lack of capital and a low level of technological capability forced Malaysia to focus on agriculture and labour-intensive industries such as textiles and garments, and electrical machinery and electronic components. The new stage of growth beginning in the 1980s saw a lot of strength in the manufacturing sector as Malaysia established a heavy-industry sector by developing business partnerships with overseas companies in areas such as “petrochemicals; iron and steel; cement; paper and paper products; machinery and equipment; general engineering; transport equipment; and building materials” (Menon, 2008, http://www.adbi.org/discussionpaper/2008/04/02/2517.macroeconomic.management.malaysia/). Two successful companies established during this period were the Malaysian national automotive company, MODENAS, which produces the Proton car and PERWAJA Holdings Bhd., a leading manufacturer of primary steel products. It has been said that these two companies were established for “economic diversification to enhance industrial linkages in the economy” (Lee, 2004, http://idpm.man.ac.uk/crc/).

As a result of sector diversification initiatives and social development plan under the 2MP, Malaysia’s economy developed rapidly since 1980s. The Government wanted to ensure that benefits were equally distributed among all Malaysian regardless of race and social background. The main feature of the Third Malaysia Plan (3MP) was the new economic reform from agriculture to the expansion of manufacturing sector. This was done to achieve high economic development and also for socio-economic goals. Next, the economic transformation goals under the Seventh Malaysia Plan
(7MP) period for the period between 1996 and 2000 and Eighth Malaysia Plan (8MP) was for Malaysia to keep up with global economic trend - an economy of knowledge, information, ideas and communications technology. According to Awang,

“In its effort towards shifting to a knowledge-based economy, Malaysia’s main responsibility lies with the development of human and intellectual capital to produce adequate supply of, support and sustain a flexible, agile, and mobile workforce with relevant knowledge and skill.” (2004, p. 239)

With this commitment, the government made necessary investments in physical infrastructure, and education and training systems to produce a sufficient supply of skilled workers to meet existing and future industry demands.

Arguably, Malaysia is still being colonised even after achieving independence in 1957. The ‘economic colonisation’ by the developed countries can be seen from the mushrooming of thousands of large foreign companies in Malaysia since the 1970s. These countries are taking advantage of cheap supplies of raw materials, labour and land to produce products at very low costs. They brought in their own experts to fill the top-level teams and the remaining lower-level labour jobs were allocated to the Malaysians. Identifying the skill and competency gaps, the Malaysian government has decided to place a greater emphasis on the need for education by establishing more schools and higher educational institutions. This is being done to produce skilled human resources to meet the immediate needs of the country. Instead of merely assembling component parts, Malaysian businesses may now have opportunities to carry out industry innovations which can further encourage rapid technological advances and economic growth.
12.1.2 Occupational transformation of the labour force

Since independence, the government of Malaysia has taken steps to change occupational patterns in Malaysia. Between the years 1970 to 2009, there was a huge decrease in employment in the primary sector, while the secondary and tertiary sectors continued to grow steadily. The employment distribution by sector for the years 1970 to 2010 is illustrated in Figure 12.3.

Figure 12.3 Malaysia: Percentage distribution of total employment by sector, 1970-2010

As the graph shows the percentage of persons employed in the agricultural sector declined steadily from 53.5 percent in 1970 to 13.5 percent in 2009. By contrast, employment in the manufacturing sector increased from 8.7 percent in 1970 to 16.6 percent in 2009. A similar upward trend in employment in services was also recorded, increasing from 32.5 percent in 1970 to 60 percent in 2009. The drastic decline in the proportion of employment in agriculture was due to the diversification into non-agricultural activities. The up or down trend in the employment distribution by sector can be seen by a line graph as shown in Figure 12.4.
In summary, the changes in Malaysia’s employment trends are very much in line with industry shifts in GDP since the 1970s. The interaction of industry and occupational structure has led to a three-stage of transformation from traditional primary to the secondary sector, followed by the tertiary sector. These changes have also affected the job composition of employment at different educational attainment levels as the new economy has demanded a more highly educated workforce. This situation has increased pressure on Malaysians to acquire the highest level of education, both to get a better job and to provide for their families.

12.2 Rising education levels

Global restructuring from dependence on labour-intensive industries and natural resources towards higher value-added products has forced Malaysia to keep up with the changing pace. Along with major structural reforms in the economy, education has been identified as a key sector which needs to be competitive in this new
economic environment. Education is a way to boost productivity by having a strong human capital base through enhancing the skills and knowledge of the workforce. The government of Malaysia is committed to raising the level of educational attainment as a means of achieving economic growth and social progress in Malaysia.

12.2.1 Rising entry standard of workforce

Malaysia is shifting from input-driven to productivity-driven growth for sustained development, and the government has put a greater emphasis on the need for skill upgrading, capital investment, and improvements in management and entrepreneurship (Economic Planning Unit, 2001). The shift is being reflected in the demand for higher skills in the manufacturing sector as industry has moved towards higher value-added production. In addition, the growth of the service sector has also affected the supply of labour and the demand for skilled workers. The changes in the labour demand in the years 1982-2000 are presented in Figure 12.5.
Between 1982 and 2000, there has been growth in the professional, administrative, clerical, service and production sectors, whereas sales remained stable from 1990 to 2000. The only occupational group that exhibited declining shares was agriculture. The above chart confirms the expansion of the secondary sector in the economy, particularly manufacturing, and the declining role of agriculture as a major contributor in Malaysia's economy. This first transformation to the industrial economy was followed by the second transformation since 2000, as shown in Figure 12.6.
Figure 12.6 shows that service sector jobs have risen strongly over the decade, while the number of jobs in administrative, professional, technical, clerical, and elementary occupational categories has also grown in contrast to skilled agricultural and fishery, and craft and related trade workers and manufacturing production line (plant and machine-operators and assemblers). This transformation confirms the trend to a more highly skilled workforce in services industry Malaysia. This is aligned with the aim of Vision 2020 is to make Malaysia a fully industrialized country by the year 2020 by shifting to high-technology industries. Several plans have been developed to restructure industry, upgrade technology, link up with foreign and local industries,
and transform human resources. This is to make sure that Malaysia has the trained and skilled workers that are capable of meeting the requirements of more sophisticated technologies. The commitment of the Malaysian Government was noted by the Ministry of Human Resources, Malaysia in the document for OECD:

“The economy evolved from capital-led growth in 1991 to growth based more on capital, labour and total factor productivity in 2005. Economic structure continued to develop from manufacturing to services. Now Malaysia is going towards knowledge-based services, especially with the establishment of Multimedia Super Corridor (MSC) followed by National Biotechnology Policy launched in 2005.” (2006, p. 2)

“As the new sub-sectors in the economy grow, so does the demand for experts and highly skilled professionals. As such, the training and retraining programs have been emphasized for both employers and employees to increase the mobility and adaptability of the nation’s workforce towards knowledge-intensive and higher value-added activities.” (2006, p. 7)

Education plays a role in creating high level knowledge and skilled human capital in various disciplines. Today, more and more workers recognise the importance of gaining higher qualifications since education influences earnings among the workers, not only work experience. It has definitely shown proven results in the educational profile of persons in the labour force between 1982 and 2008, as shown in Figure 12.7.
Pattern of attainments between 1982 and 2008 were mixed. The proportion of persons with no formal education and completing primary school has generally declined, whereas the proportion with secondary or tertiary-educated background has increased. The biggest gain has been found in the number of workers who have attained secondary education, rising from 36.5 percent in 1982 to 56 percent in 2008. In addition, the rising demand for workers with tertiary education and the wage premium attached to higher levels of education has led to a significant increase of college-educated labour supply from 6.1 percent in 1982 to 21.2 percent in 2008. The question here is whether Malaysia is making adequate progress towards becoming a developed nation.

Many service occupations require more than a high school certificate. In general, all secondary school teachers are university graduates and most primary school teachers are educated in the teacher training colleges. In the 1990’s, the government under the Ministry of Education introduced a program called *Program Khas Pengsiswazahan Guru* (PKPG) or Special Programme Toward a Teaching Baccalaureate which offers opportunities for non-graduate teachers of secondary and primary schools to acquire a degree. This offer reflects the rising entry standards in the career paths of as the
minimum requirement to be a teacher is Bachelor of Education course. Those without a degree in education have to attend Post-Degree Teacher Training Course (KPLI) for a year. It is the government’s aim to ensure that 25 percent of primary school teachers have a Bachelor degree and 100 percent graduate teachers of secondary schools by 2010 (Malaysia, 2006).

Due to the concern pertaining to the above matter, the Malaysian government has taken steps to meet the challenge by strengthening education and training system. For instance, the government has acknowledged the importance of education and human capital by adopting an integrated human capital and talent development framework in the Tenth Malaysia Plan (10MP) that runs from 2011-2015. “This approach will nurture and develop Malaysians across their entire lifecycle, from early childhood education, basic education, tertiary education and all the way to their adult working lives” (Malaysia, 2011, p. 194). Clearly, education is a key to total economic growth and ensuring that Malaysia will stay competitive globally.

To sum up, the direction of economy has driven an increasing emphasis on intensive use of education. Further economic growth depends upon achieving high-level educated manpower. Once there are more and more highly educated persons in the labour market, productivity is expected to increase, contributing further to economic growth and transformation to a knowledge-based-economy (k-economy).

12.2.2 Rising attainment level of population

People’s aspirations for education tend to grow as the economy expands. A growing commitment to education is increasing among young people as well as adults. More and more parents realise the importance of obtaining the best education possible for their children and sending them to more academic schools or universities. This is because an individual’s social status can change from one social class to another as higher education brings higher wages, better job prospects and quality of life. Figure
12.8 shows the evidence of growing educational attainment amongst the Malaysian population aged 15 years and over between 1960 and 2000.

Figure 12.8  Malaysia: Educational level attainment of population aged 15 years and above, 1960-2000

Between 1960 and 2000, the percentage of population aged 15 years and above graduating from secondary and tertiary education has increased, while the growth of those without education and who have attempted only primary education has declined significantly. Much of the increase was found among those graduating from high school, about 10 percent in 1960 versus 36 percent in 2000. This significant progress was due to the effort made by the government in shaping and developing primary and secondary education since 1960s. In addition, many people have come to realize the need of education for future greater opportunities. The positive side of the economy indicates that the quality of labour supply has improved to match the skills relevant to the labour market needs.

However, there are two major challenges faced by the government. First, there is a need to extend access of education to an advanced level, that is, tertiary or post-secondary education. Although the proportion of the population having finished tertiary education increased by 3.7 percent between 1960 and 2000, the number was

relatively low, at approximately 5 percent of total population aged 15 years and above. Having realized the link between economic progress and education achievement, the government is required to address the necessity of higher education in Malaysia. Despite significant progress in boosting high school graduation rates, the transition of students from high school to post-secondary education should not be overlooked. The low transition rates to higher education indicate a major waste of potential human resources. Second, the number of people without education was still unacceptably high in 2000. The rate dropped from 49.7 percent in 1960 to 16.2 percent in 2000, but it was three times higher than those with tertiary education in the same year. When combining the two categories – no schooling and with primary education – more than half of the population aged 15 years and above did not have secondary education in 2000. Looking into this situation, the big question is whether Malaysia has the strength to survive in the era of k-economy and become developed nation by 2020.

12.3 Conclusion

The Malaysian government has made very strong commitments in education by responding to a mix of economic and policy signals coming from economic growth and in particular certain industry sectors. While the global economy is driving growth in the higher education sector, Malaysia is keen to keep up with this trend. People are investing more in knowledge and skills as the economy continues to expand because there is competition over emerging job opportunities and also rising entry standards in the workforce. In addition, competition for access to the labour market is accompanied by competition over the highest level of education. Thus, a new era of education is emerging in Malaysia and efforts have been made to expand the tertiary sector including reforms in education system. The issues are whether Malaysia is prepared to experience ‘massification’ of higher education and to cope with the challenges posed by this enrolment explosion.
CHAPTER THIRTEEN

SCHOOL TRANSFORMATION

In earlier chapters, it has been noted that the expansion of higher education in the United States has resulted in a significant increases in student participation over the long term. A report prepared for the UNESCO 2009 World Conference on Higher Education by Altbach et al. (2010, p. vi) noted that the US “was the first country to achieve mass higher education, with 40 percent of the age cohort attending post-secondary education in 1960.” Although the United States has gained a reputation for being the best in the world, the issue of inequitable access to higher education persists to the present day. Its extensive higher education system has failed to create equity since there are significant differences in access and academic achievement when comparing groups of students from different family backgrounds and ethnic groups. This finding is in agreement with James (2007) who concluded that expansion does not necessarily mean greater equity.

The United States has developed a comprehensive public education system to ensure that children across America have the same educational opportunities at every level of education. There has been a parallel approach in both the public P–12 and post-secondary systems as both have undergone a transformation from elite to mass education system. This implies that both sectors are integrated so as to achieve a transition from one level to the next. However, problems arising at US schools have caused inequality in access and participation at US higher institutions. As it has been shown in the previous chapters, students from poorer SES backgrounds are more likely to have lower academic achievement and serious dropout problems in high school. Disadvantaged students are less likely to perform well academically and less likely to graduate, thereby limiting their chances of an education beyond high school.

Unlike the United States, Malaysia is currently rapidly expanding its higher education system, though many changes date back to the early post-independence
years. In the 1960s and 1970s, the priority needs of government were focused on expanding the public education system, and a large portion of the budget was allocated to building more schools and teacher training colleges. Since the early 1990s, considerable progress has been made in extending the school cycle from nine to eleven years of schooling which includes primary, lower secondary and upper secondary education (Abdul Wahid et al., 2011). However, the transformation into a K-economy has increased the interest of the Malaysian government in the development of human resources. As a consequence, expansion of higher education is important to produce highly-skilled labour for the future economic success of the country. One question that needs to be asked, however, is whether Malaysia has done enough, particularly in primary and secondary education in order to respond to the human resource and employment needs of the country. The fact remains that from the year of independence, the Malaysian school system has gone through several phases of growth, but there are certain groups of people who are unlikely to complete even compulsory education. The big issue is whether the Malaysian education system can provide mass schooling and education for all before taking the next step to create mass higher education.

This chapter focuses on identifying the significant developments in the Malaysian public school system by examining the trends in expansion of primary and secondary education and exploring the factors that might affect growth. It then identifies the policies of the Ministry of Education to increase student participation in primary and secondary schools.

13.1 Progress towards building primary and secondary education

The Malaysian education system has grown significantly since independence in 1957, the rapid development in education commencing since the first Malaysian Plan (1MP) (1966-1970). A considerable amount of effort in expanding access to education was in order to unify Malaysia's three main ethnic groups (Malays, Chinese and Indians) and also to develop human resource capacity in accordance
with the economic needs of the country. It was the objective of the government at that time to narrow the economic differences between these groups, and education was indeed a main tool to overcome the existing inequalities. For that reason, the 1MP emphasized the need to have a strong primary education sector. The government also recognized the need to extend secondary education. Direct entry to three-year lower secondary school after completing 6-year primary school was therefore introduced in 1965 and a number of upper secondary vocational schools began operating from 1968 to provide education for those students who were less likely to succeed academically. Since then, the primary and secondary education sectors have undergone rapid changes to provide comprehensive education for all Malaysians. The development of primary and secondary schools has been a stated priority in every five-year development plan since the 1MP and physical resources have been expanded in schools to accommodate enrolment growth. One of the programs by the government, as reported by Wong and Ee (1971, p. 99) was, “a series of ‘crash programs’ to build new classrooms and provide teachers and educational facilities.”

The rapid expansion in primary and secondary education has occurred thanks to large increases in government spending since the 1MP. The strong economy has allowed the Malaysian government to consistently increase expenditure in the primary and secondary school levels of education over the last 44 years, as shown in Figure 13.1a and 13.1b.
Figure 13.1a  Malaysia: Allocation of development expenditure for primary and secondary education, 1966-2010 (in RM millions)

Source: Malaysia (various Plans)

Figure 13.1b  Malaysia: Index of allocation of development expenditure for primary and secondary education, 1966-2010

Note: 1MP=100

Figure 13.1a shows the expenditure on primary and secondary education. Figure 13.1b is the index method of measuring expenditure, using the 1MP as the base year. Technical and vocational education is included in the allocation for secondary schools in 2MP, 3MP and 4MP because it was then categorised as upper secondary.
education. The total investment by the government on primary and secondary education over the last 44 years was RM30.598 billion. Secondary education has received the largest share of development expenditure in every Malaysia Plan, totalling RM18.84 billion over the 44 years. As can also be seen in Figure 13.1b, expenditure for secondary education has grown more quickly than for primary education. The index for the 9MP shows that there has been a cost increase of 6,376 percent for primary education and 2,827 percent for secondary education since the base period. There were two reasons behind the decision to spend more on secondary education. First, it was the government’s aim to produce more teachers for primary schools from the early 1960s. Secondly, the government has changed direction from 1980 to produce more skilled labour so as to keep the economy growing.

The increase in expenditure on primary and secondary education has resulted in the growing number of schools. Figure 13.2a shows the number of public primary and secondary schools between 1958 and 2011 and Figure 13.2b reports percentage growth of both types of school over the same period.
As can be seen from Figure 13.2a, the overall number of primary schools was higher than secondary schools between 1958 and 2011, increasing from 4,430 units in 1958 to 7,709 units in 2011. Secondary schools increased in number from 201 units to 2,271 units during the same period. As Figure 13.2b illustrates, secondary schools
experienced a growth rate of more than 1000 percent between 1958 and 2011, as compared to the growth rate for primary schools which was about 174 percent. These increases have enabled the Government to meet the accelerating demand for primary and secondary education.

The rapid increase in the number of schools, particularly in rural and remote areas, and mainly in Sabah and Sarawak, led to a similarly marked increase in student enrolments. In addition, due to the effectiveness of several programs which have been carried out since the 1MP, school attendance has improved over the past few decades. Figure 13.3a shows the number of students enrolled in primary and secondary schools between 1963 and 2010. The number of enrolments was then adjusted to index numbers from the base year 1963 to compare the growth rate between primary and secondary schools, as shown in Figure 13.3b.
As shown in Figure 13.3a, enrolment rates in primary and secondary schools have increased significantly over the last 48 years. Enrolments in primary schools recorded an increase from approximately 1.1 million in 1963 to about 2.8 million in 2011, while the secondary school enrolments rose from 155,143 to 2.2 million during 2011.
the same period. It can be seen from Figure 13.3b that secondary enrolments have expanded at a rapid pace compared to primary enrolments. In 2011, the enrolment growth rate in secondary education was 1,480 percent and the primary education rate was 249 percent. This indicates that secondary enrolments in 2011 were 1380 percent more than it was in 1963, while primary enrolments were only 149 percent more in the same period.

The government’s efforts in increasing the school participation by children aged six to seventeen have seen good progress. Figure 13.4 shows the number of children enrolled in primary, lower secondary and secondary education as a percentage of the total population in that age group between 1967 and 2010.

Figure 13.4 Malaysia: Enrolments in primary and secondary education as a percentage of age group, 1967-2010 (%)

Source: Ministry of Education (1967) and Ministry of Education (2001) and Ministry of Education (2010a)

Note: Enrolment is the percentage of school age children between the ages of 6+ to 11+ years at primary level, 12+ to 14+ years at lower secondary level, and 15+ to 16+ years at upper secondary level, in government assisted schools

From the graph above, the most significant rise has been in secondary education where lower secondary enrolment rates rose from 51.73 percent in 1967 to 86.76 percent by 2010, while upper secondary enrolment rates grew from 16.37 percent to 77.19 percent over the same period. Primary school enrolment rates, on the other
hand, remained fairly stable and generally high, ranging between 88.2 percent and 99.8 percent and surpassing enrolment rates in lower and upper secondary school over the last 43 years. This still gives cause for concern because primary school enrolments show a downward trend, between 1990 and 2010.

What are the forces behind the strong enrolment growth in secondary schools and unstable growth in primary schools? The following paragraphs will discuss the development of Malaysia’s national education system since the 1MP and highlight the factors which have affected the enrolment trends in school education.

In the years immediately following independence there was no uniform standard education system in Malaysia. Each ethnic group established its own separate schools with different mediums of instruction and syllabus. The 1MP (1966-1970), which attempted to strengthen and expand the development of human resources in the country, mapped out a national system of public education. The abolition of primary school fees was an initiative to encourage families to enrol their children in primary school. All students were also offered three years of lower secondary education after completing six years of primary education, and the school-leaving age was raised from 12 to 15 years old. The Plan also called for the establishment of upper secondary vocational schools starting from 1968, for those students completing the primary and lower secondary schools.

Under the 2MP (1971-1975) enrolments in primary schools increased, most significantly in Sabah and Sarawak. The substantial increase in enrolment rates at the secondary level was due to the improved transition rate from primary to lower secondary school. The higher enrolment rates in Sarawak, however, were due to two factors: firstly, the elimination of the entrance examination for lower secondary school (Common Entrance Selection Examination), and secondly, the transfer of control of primary schools from the local authorities to the central government. Thirteen new vocational and technical schools were constructed and ten fully residential science schools were built during this period to provide opportunities for students from rural areas to further their upper secondary schooling.

The government’s strong commitment to strengthen the educational system continued into the 3MP (1976-1980) and some of the recommendations from the
Dropout Study conducted by the Ministry of Education in 1972 were taken into consideration. Major efforts were made to offer secondary school scholarships to poor students and to establish a Text Book Loan Scheme for low-income groups. In addition, the government introduced the Supplementary Feeding Programme in 1976 to ensure better health for rural primary students. More residential science schools were established to give rural students access to secondary science education. By 1980, there were five Majlis Amanah Rakyat (Malay for Indigenous People's Trust Council, MARA) junior science colleges in Malaysia, known as Maktab Rendah Sains Mara (MRSM), providing additional learning opportunities in the science field for high performing Bumiputera students. As a result, the enrolment rates at both primary and secondary levels increased significantly in the period.

The 4MP (1981-1985) signalled a continuing commitment to expand educational opportunities for all children. An additional focus was placed on improving the quality of the existing system. The implementation of Kurikulum Bersepadu Sekolah Rendah (Integrated Curriculum for Primary Schools, KBSR) in 1983, replacing the existing curriculum, was a major step forward in strengthening the educational system. Under this new curriculum, the six years of primary education is divided into two phases: Phase I covers Standard 1 to 3, and Phase II comprises Standard 4 to 6. The new curriculum emphasizes the acquisition of basic concept skills in reading, writing, and arithmetic (3R). The existing programs, such as expanding the number of classrooms for primary schools, fully residential secondary schools and MARA Junior Science Colleges, continued running throughout the period of 4MP. In addition, hostels for students were constructed, mainly in the rural areas of Peninsular Malaysia and the interiors of Sabah and Sarawak. There was growth in the technical and vocational education sectors during this period with the establishment of nine technical and 37 vocational schools across the country.

The programs to increase student participation in schools and assist poor students continued with the 5MP (1986-1990). The most important feature of the Plan with regard to education was the restructuring of secondary education to improve the system of national education. An early reform in 1987 focused on vocational education. Such a reform was required to give emphasis to academic subjects for high performing students so that they would be able to pursue tertiary education.
These students could then sit for the *Sijil Pelajaran Malaysia Vokasional* (Malaysian Certificate of Vocational Education, SPMV) in their final year of secondary school, Form 5 (Year 11). SPMV was equivalent to the existing national examination for students in the final year of secondary education, namely the *Sijil Pelajaran Malaysia* (Malaysian Certificate of Education, SPM). Lower performing students, on the other hand, were channelled to ‘skill streams’ after finishing the first year of upper secondary level so that they could acquire the skills necessary for employment in the industrial sector. The second phase of education reform was the implementation of the *Kurikulum Bersepadu Sekolah Menengah* (Integrated Curriculum for Secondary Schools, KBSM) in 1989 which was a continuation of KBSR.

There were no major equity initiatives at primary level in the 6MP (1991-1995) and 7MP (1996-2000). Existing programs continued, namely improving education facilities in remote areas, providing access to primary schools for poor students and those in the rural areas through hostels, and residential facilities, financial assistance, and text-book loans and nutrition programs for the disadvantaged students. An additional policy initiative was the implementation of special education programs at 26 primary schools for those with learning difficulties. A key reform in the 7MP was improvement to the quality of secondary education which went through a series of changes. From 1996, 20 vocational schools were converted into technical schools. New subjects were introduced in selected secondary schools, namely engineering technology and engineering drawing. The existing national assessment, *Sijil Rendah Pelajaran* (Malaysia Lower Certificate of Education, SRP) was replaced by *Penilaian Menengah Rendah* (Lower Secondary Assessment, PMR) in 1993. With this new assessment, all Form 3 (Year 9) students gained direct entry to upper secondary level, Form 4 (Year 10) since the overall aggregate score method under the SRP was substituted by subject based certification under the PMR. Accordingly, all students in Malaysia were able to receive at least 11 years of education at a government school. Another major reform towards the end of the 7MP period was the implementation of the SPM open certification system in 2000, replacing the earlier versions of SPM and SPVM. This new system, which exists to the current day, gives students flexibility to make subject choices. The SPM open certification is a subject-based certification, similarly to PMR.

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By the 8MP (2001-2005), various educational support programs were provided mainly for the rural poor students and the Orang Asli (the Aboriginal people or non-Malays indigenous to Peninsular Malaysia) to encourage their greater participation and enhance their academic performance at primary and secondary levels. These programs included the textbook loan scheme, boarding facilities, the tuition aid scheme, and the poor students’ trust fund. In addition, a rural development educational program was implemented to expand primary school facilities throughout rural Sabah and Sarawak. Under the 8MP, there was a further substantial increase in primary and secondary school enrolments, including among the Orang Asli. However, the primary school enrolments according to appropriate age group in the population declined slightly (as shown in Figure 13.4). Enrolment rates in vocational and technical schools generally increased and there was also significant progress in increasing the number of students in the science stream. To improve the quality of education in the country, the government decided to review the KBSR and KBSM national curricula and to introduce the teaching of science and mathematics in English for primary and secondary students from 2003.

13.2 Long-term efforts in building educational opportunities for the poor

The determination of the government to provide education to all children has been documented in every five-year action plan. The government has offered a variety of educational assistance programs, primarily to disadvantaged communities, because significant numbers of children were either not attending school or failing to complete the 11 years of basic education. In a report by the Ministry of Education. (2008b), it was stated that,

“The aim of educational assistance and support programmes is to prepare students mentally and physically, to excel in the field of curricular, co-curricular activities and to decrease the dropout rate among students from low income families.” (p. 53)
It has long been a national policy to ensure that access to educational benefits and opportunities are available to all children, including those from low income families. Several programs have been implemented by the government in order to increase educational opportunities for the poor and ultimately to raise the enrolment and completion rates in primary and secondary schools. The programs can be divided into three categories: health care assistance, financial aid assistance, and academic assistance.

The earliest health care program named School Health Plan was launched in 1967 for primary and lower secondary school students (Economic Planning Unit, 2005). Under this programme, dental treatment, prevention and control of contagious diseases, and first-aid facilities in schools were provided to ensure that students were healthy and productive. In 1970, the government started the School Milk Program where it provided free milk in primary school for students from regional and remote areas. By 2006, a total of 556,979 students benefited from this programme (Ministry of Education, 2008b). The National Applied Food and Nutrition Program was launched in 1976 for the benefit of schools in the rural areas. This program was for primary school students from families on low incomes (RM400 or less per month) and provided supplementary food for 120 school days a year at a rate of 80 cents per child in Peninsular Malaysia and 90 cents in Sabah and Sarawak (Human Rights Commission of Malaysia, 2006). From March 2007, the rate was raised to RM1.80 cent in Peninsular and 2.05 cent in Sabah and Sarawak (Ministry of Education, 2008b). The School Milk Program and The National Applied Food and Nutrition Program are currently ongoing.

Financial assistance programs have been available since the 3MP to all children in primary and secondary government and government aided schools, regardless of gender, race or religion. These programs offer financial help to ease the burden of education costs. The first program was launched as a result of one of the recommendations of the Dropout Study in 1972. At present, there are several types of scholarship offer to the students such as the Poor Students’ Trust Fund (PSTF), the Federal Minor Scholarship, the University Preparatory Class Scholarships and the Excellent Student Scholarship (Ministry of Education, 2008b). The Poor Students’ Trust Fund (PSTF), for example, offers help to poor students whose family income is
below the poverty line. Under this fund, students are given such assistance as school uniforms and stationery, and 10 months’ school allowance (Ministry of Education, 2008b). The other type of program to help lessen the financial burden on low income families is the Textbook-on-loan scheme (Human Rights Commission of Malaysia, 2006; Ministry of Education, 2008b). This program started in 1975 following the finding of the Dropout Study 1972.

Several academic support programs has been implemented by the Government as a means to improve the academic performance of low achieving students and to improve the quality of teaching and learning in primary schools. The Tuition Aid Scheme (TAS), which began in 2004, is for poorly performing students from low-income families and provides tutoring services in English, science and mathematics subjects for students in Standard 4, 5 and 6 (Years 4, 5 and 6) (Ministry of Education, 2008b). The Supplementary Reading Program (SRP), a joint program between the Ministry of Education and the United Nations Children's Fund (UNICEF) was implemented in Sabah and Sarawak in order “to increase the quality of teaching and learning in primary schools located on islands and remote areas” (Ministry of Education, 2008b). Thirteen thousand students from 90 schools in Sabah and Sarawak benefited from this program in 2007 and 2008. Finally, the largest program still in existence today is a student housing program. Hostels have been established since the 3MP to accommodate poor students from rural areas so that they can have an environment more conducive to good study. There are three types of hostels: daily school hostels, centralised school hostels (for students from a cluster of neighbouring schools) and fully residential school hostels (for high performing students from rural areas and from low income families). In 2008, there were 56 fully residential school hostels operating in Malaysia (Ministry of Education, 2008b).

By the year 2009, the Ministry of Education had introduced nineteen programs offering scholarships and other types of supports for students. The expenditure on these programs rose annually in line with the increasing enrolments in primary and secondary schools. Table 13.1 shows the allocation of funds to assist students in need for the period 2006 to 2009.
Table 13.1 Malaysia: Education support and assistance by programme, 2006 and 2009

<table>
<thead>
<tr>
<th>Program</th>
<th>2006</th>
<th>2009</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Poor Student’s Trust Fund</td>
<td>200</td>
<td>400</td>
<td>650,000</td>
</tr>
<tr>
<td>Supplementary Food Scheme</td>
<td>183.2</td>
<td>270.4</td>
<td>771,506</td>
</tr>
<tr>
<td>School Milk Programme</td>
<td>21.8</td>
<td>27.4</td>
<td>621,776</td>
</tr>
<tr>
<td>Textbook-on-loan Scheme</td>
<td>160.4</td>
<td>180</td>
<td>6,382,020</td>
</tr>
<tr>
<td>Tuition Aid Scheme</td>
<td>181.9</td>
<td>245.7</td>
<td>478,778</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>747.3</strong></td>
<td><strong>1123.5</strong></td>
<td><strong>8,904,080</strong></td>
</tr>
</tbody>
</table>


As can be seen from the table, all programs showed an increase in investment which lifted the overall total from RM747.3 million in 2006 to RM1.1 billion by 2009. For both years, the highest allocation was for the Poor Student’s Trust Fund. The second highest expenditure was the Supplementary Food Scheme (RM270.4 million), followed by the Tuition Aid scheme (RM245.7 million). A total number of 8.9 million students benefited from the 2009 programs and the largest number of beneficiaries (about 6.3 million) was for the Textbook-on-loan Scheme. This was due to a policy change in 2008 regarding eligibility for this scheme.

13.3 Conclusion

All in all, the education system has experienced several transformations to create a strong, high quality structure to the national school system and to ensure that it meets the diverse learning needs of all students. The changes are important to ensure that students are gaining essential knowledge, learning core skills, reaching their highest potential and achieving the highest level of education possible. The government has achieved remarkable success in expanding primary education. The number of students enrolled in primary schools has been rising over many decades and the proportion of this age group attending primary schools has stayed above 90 percent
since 1980. The increase was due to several programs initiated by the government in its effort to expand opportunities for learning by giving young people access to school education. The programs have been extended in many ways since the 1MP to assist large numbers of students from economically disadvantaged backgrounds. Many students have greatly benefited from the programs and the impact can be seen in the increasing number of enrolments among students from poor rural communities.

However, the government has struggled to ensure that all students go on to secondary level. Although secondary education is also free and the attendance rates keep increasing every year, some groups of students still have limited access. Many disadvantaged students either leave the education system after completing compulsory primary education or before finishing Form 5 (Year 11). The strategies designed to encourage them to attend and to stay in school have brought some improvement in the number of enrolments, but still not enough to achieve equity in education.
Primary level is the first level of education at which the child acquires basic literacy and numeracy. The next stage, secondary education, trains students more deeply in developing skills, identifying potential and building their strengths in an area which interests them most as they study a range of subjects in science and humanities. At this stage, they are able to choose a variety of routes with teachers providing essential support to boost their strength and confidence in their own abilities. As a bridge between primary and tertiary education, secondary education is a stage of preparation for students to learn a basic academic specialisation and to demonstrate academic achievement which will determine entry to higher institutions. For that reason, expanding and improving the quality of secondary education is necessary to provide all children with a good quality education. As noted in the previous section, both primary and secondary school enrolments have risen since the 1960s and primary school enrolments are now close to universal primary education.

Although the demand for secondary education is growing, the enrolment rates (among the age group of 13 to 17 years old) are significantly lower than primary school enrolments. This indicates that access to primary education does not automatically translate into similar access to secondary education. In fact, keeping students at school to complete the final year of secondary education, Form 5 (Year 11), remains a major challenge for the government. The following sections will discuss two major issues in secondary education, school dropout and academic achievement. Each section begins by exploring the past trends and identifying those students who are at risk of having these problems. It then discusses the factors contributing to these trends.
14.1 School dropout

The dropout statistic is an important measure to monitor educational outcomes. It assists education policy makers in identifying those groups of students who are in need of support. High dropout rates are likely to indicate the failures in education policy and have major implications for the Malaysian economy. As the Alliance for Excellent Education (2007, http://www.legis.nd.gov/assembly/60-2007/docs/pdf/ed061008appendixh.pdf) points out, “dropouts represent a tremendous waste of human potential and productivity, and reduce the nation’s ability to compete in an increasingly global economy.”

In past studies, there have been inconsistencies in the way school dropout has been defined. This is because every country has its own method for calculating the dropout rate using school intervals and ages for starting and finishing school which differ from country to country. In addition, ‘dropout’ is variously defined as: absence from school, left school permanently or transferred to other institutions. For the purpose of this study, the annual dropout rate is calculated based on the cohort of students. Thus, the term ‘dropout’ in this research refers to public school students who:

a) Failed to complete the compulsory six years of primary education
b) Failed to complete the five years of secondary education
c) Completed primary education and failed to proceed to secondary school

Although this term may include those students who transfer from a public to a private school, the number of these students is quite small and does not significantly influence the dropout rate. The first part of this section focuses on the evidence available in the UNESCO Institute of Statistics online data set, while the second part is based on published reports by the Ministry of Education. This enables comparison of the patterns of data from two different sources and allows a more in-depth look at school dropouts in Malaysia.
The UNESCO Institute of Statistics uses the term “out-of-school rate” which it defines either as “never attended school or likely to attend the following year or will never attend school, or “has attended school but dropped out.” Figure 14.1a illustrates primary school children who were out of school between 1999 and 2003 and Figure 14.1b shows lower secondary school children who were out of school during the same period.

Figure 14.1a  Malaysia: Out-of-school rate for children of primary school age, 1999-2003

![Graph showing out-of-school rate for primary school children, 1999-2003.](source: UNESCO (2011))

Figure 14.1b  Malaysia: Out-of-school rate for children of lower secondary school age, 1999-2003

As shown in Figure 14.1a, there was a marked increase in the number of primary school-age children who were out of school during this period. The number more than doubled from 2 percent in 1999 to 5 percent in 2003. Figure 14.1b by comparison, indicates that the lower secondary out-of-school rate increased from 7 percent in 1999 to 10 percent in 2002 before dropping to 3 percent in 2003. An important finding from these graphs is that out-of-school is much more common in lower secondary school-age children than primary school-age children. The growing out-of-school trend raises concerns about the state of primary and lower secondary schooling. The high rates of out-of-school children in primary schools may hinder progress towards Malaysia's commitment to the goal of providing Education for All (EFA) by 2015 and early school leavers can cause a large negative impact on communities, the economy and the labour force.

Due to difficulties in finding sufficient and accurate published educational data on dropout rates in Malaysia, school enrolment rates are used as a proxy indicator to measure dropout rates in primary and secondary schools. A similar technique was used in The Educational Development Plan for Malaysia (2001-2010) to generate data on primary dropouts. The dropout rate in primary education is determined by tracking students from Standard 1 (Year 1) to Standard 6 (Year 6). The difference in enrolment rates at the starting and finishing year is used to calculate the number of students who have stopped attending class and dropped out of school. Figure 14.2 shows primary dropout rates by cohort.
The student cohorts for 1999, 2001 and 2003 showed an upward trend in dropout rates in primary schools, from 2.3 to 4.3 percent. The dropout rate for the 2005 cohort, however, dropped significantly to 1.9 percent which was the lowest rate for all five cohorts. The rate then climbed to 2.6 percent for the 2007 cohort.

The same method was applied for the secondary level by tracking students from Form 1 (Year 7) to Form 5 (Year 11). Figure 14.3 shows the dropout rate at secondary level among students aged between 13 and 17 years old.
As can be seen from this figure, the dropout rates at secondary level fell from 28.3 percent for the 1991-1995 cohort to 10.3 percent for the 2001-2005 cohort. Despite the fact that one out of ten students still dropped out of school in the 2001-2005 cohort, it is a vast improvement on the 1991-1995 rate. However, the number of students who drop out is still too high. This finding is in agreement with the UNESCO data set which also showed a serious dropout rate among students at secondary schools.

Another important finding is that the transition to secondary school is a critical stage for students who are at higher risk of dropping out during this transition stage. The evidence, as shown in Figure 14.4, indicates dropout rates remained high throughout the transition to secondary school between 2001 and 2009.
It shows that while there was an overall decline in dropout rate from 11.5 percent in 2001 to 9 percent in 2009, the rate oscillated between a high of 10.4 percent in 2007 and a low of 8.5 percent in 2008. It is apparent from this table that the percentage of students who did not move on to secondary school is quite significant. In 2009, every ninth student dropped out during the transition from Standard 6 (Year 6) to Form 1 (Year 7). Although there have been some notable accomplishments in reducing unsuccessful transition to secondary school between 2001 and 2009, the progress has been slow.

A key question to emerge from the findings above is, “Who is dropping out of school?” Data from several sources have identified three groups of school drop outs: students from poor family backgrounds, students living in rural areas, and native or Indigenous students (Orang Asli).

The first Malaysian school dropout study was conducted in 1972 and found that students who dropped out of primary school were those from low socio-economic status families. The study found strong evidence that “among the rich, only one percent drop out of schools while among the poor 29 percent drop out of schools at
the primary level.” The situation can be explained by the fact that about half (49.3 percent) of Malaysian households were living below the poverty line in 1970 and the majority of them (44 percent) lived in rural areas (Economic Planning Unit, 2005). Malaysia’s economy grew steadily from 1970 and by 2009 the incidence of overall poverty had decreased to 3.8 percent. However, it is important to note that the majority of the poor are Bumiputera (including the Orang Asli), as shown in Figure 14.5.

Figure 14.5 Malaysia: Incidence of poverty by ethnicity, 1970 and 2009 (%)

The graph indicates that poverty rates were higher among Bumiputera than other population groups in 1970. The rates were 64.8 percent for Bumiputera, 26.3 percent for Chinese, 39.2 percent for Indians and 44.8 percent for other ethnic groups. The growth of the economy had contributed to a massive reduction in the incidence of poverty for all ethnic groups by 2009. The poverty rates among Bumiputera fell 59.5 percent, a bigger percentage fall than any other ethnic group. Nonetheless, the poverty rate among Bumiputera households in 2009 remained higher than among Indian and Chinese households.

Source: Economic Planning Unit (n.d.)
Poverty rates are also higher in rural areas. The evidence for this can be demonstrated by comparing the poverty rates between urban and rural areas, as shown in Figure 14.6.

Figure 14.6 Malaysia: Incidence of poverty by location, 1970 and 2009

The above graph shows that in 1970 rural communities were more than twice as likely to be living in poverty as those in urban areas (58.7 percent vs. 21.3 percent). Although there was a sharp reduction in the number of poor households by 2009, the poverty level in rural areas was almost five times that of urban areas. These findings, therefore, provide an explanation for the higher dropout rates in rural areas, particularly in secondary schools, as illustrated in Figure 14.7.
As evidenced by the graph, secondary school dropout rates were 7.4 percentage points higher in rural areas during the period 2000-2004, a clear indication that the dropout rate of secondary school students was a serious problem in rural areas. As mentioned earlier, the high poverty rates in rural areas could be a major contributor as a significant number of rural children still struggle to balance school and home life. The unexpected finding from the data was that the dropout rate at rural primary schools was slightly lower than at urban schools. There are two reasons which could explain this: the high population concentrations in town areas, and the enforcement of compulsory primary education for all children by the government which raised awareness among rural people about the importance of primary education.

The government have been particularly concerned about quality of education in rural communities, including the remote areas of Sabah and Sarawak. Children living in these areas still lag far behind in education outcomes. Due to the higher poverty levels and lack of opportunities in rural areas, children are more likely to drop out of school than those who live in urban areas. Figure 14.8 reveals the four areas with the highest primary dropout rates in 1996 and 2009.
Primary student dropout rates were typically high in Sabah and Sarawak for the year 1996, decreasing by 2009, but the rates still remained above the national rate of one percent. One feature of this graph was the Federal Territory of Labuan (F.T. Labuan) which had the highest primary dropout rate in the country in 2009. It is important to note that F.T. Labuan was part of Sabah until 2001. Thus, the 2009 dropout rate in Sabah would have been even higher if F.T. Labuan was included in the figure. It is surprising to see that the Federal Territory of Kuala Lumpur (F.T. Kuala Lumpur) was among the states with highest dropout rates. Again, a possible explanation for this is that F.T. Kuala Lumpur has undergone rapid population growth and urbanization with a large influx of people from other states as well as immigrants from neighbouring countries.

High dropout rates in secondary education were also found in the state of Sabah and Sarawak. The circle graph in Figure 14.9 shows secondary school enrolments in each state, including the two federal territories, between 2005 and 2009.
The centre of the circle in the yellow part of the graph indicates negative enrolments or high dropout, while the outer ring or blue part of the circle indicates over-enrolments. The state of Perak had the highest average secondary dropout rate between 2005 and 2009 at 20.6 percent, followed by Sabah at 17.2 percent and Sarawak. It is difficult to explain the finding in Perak, but the high dropout rates in Sabah and Sarawak correlate with poverty rates as shown in Figure 14.10.
In 2009, poverty incidence in Sabah was the highest (19.2 percent), while in Sarawak, the poverty incidence was 5.3 percent. Located on the west coast of Peninsular Malaysia, Perak, on the other hand, was ranked fifth-highest among the states and federal territories.

The direct correlation between poverty and school dropout rates is most evident among Orang Asli children. The 10MP reported that the incidence of poverty among Orang Asli communities was 50 percent in 2009. A report entitled Orang Asli: Rights, problems and solutions (2010) by the Human Rights Commission of Malaysia stated that “the single-most important factor that is keeping many Orang Asli children from school is simply poverty.” Figure 14.11 shows the trend in primary school dropouts among Orang Asli children for several cohorts.

Source: Economic Planning Unit (n.d.)
While the actual number of dropouts among Orang Asli children was larger for the 2000 cohort, in line with overall population growth, dropout was substantially lower than for the 1985 cohort. The decreasing trend was predominantly due to government support programs such as the Money Incentive Program to ease the burden on parents (Department of Orang Asli Affairs, 2010). However, the rate was still high and significant since 42.9 percent of students were lost from the primary school enrolment for the 2000 cohort. It is also reported that 49.55 percent of secondary school Orang Asli children failed to complete Form 5 (Year 11) in 2009. There was an improvement by 2010 when 45.75 percent did not complete (Department of Orang Asli Affairs, 2010).

The findings discussed in the previous paragraphs lead to the next question: Why do students drop out? Several studies have been carried out in Malaysia to identify contributing factors. All studies have reported no single factor as the primary reason for school dropout. The 1972 Dropout Study pointed to a positive relationship between socio-economic status and parental academic status in terms of student retention at primary and lower secondary level. There was also a concern that children do not all receive similar education due to the varying quality of schools.
Schools serving a large majority of poor students were found to be disadvantaged due to several issues such as a shortage of qualified and experienced teachers, low school performance and a poor school environment. In addition, the culture of the school also has had a strong influence on school attendance. As stated in the report,

“Only a small fraction of the variation in enrolment rate is accounted for by socio-economic status. This shows that poverty is not by itself the main cause of dropping out. To the extent that the poor are more likely to drop out of school than their better off counterparts, the reasons for dropping out are not solely financial. Sub-cultural values, such as attitude towards science and education and characteristics of the school they attend may contribute to this relationship.” (Ministry of Education, 1973, p. 17)

Similar findings were reported in the second dropout study conducted by the government in 1991, called The Malaysian Dropout Study Revisited 1991. The study reported that low SES status was positively related to poor family income which forced a number of students to give up school and support the family. Financial constraints were ranked as the first reason for leaving school, followed by lack of motivation for studying, low self-esteem, peer group conflict, family responsibilities, medical reasons, and conflict with teachers. The Educational Development Plan 2006-2010, on the other hand, reported that lack of educational inputs was the main cause of school dropout among rural students. For that reason, a higher education fund was allocated for rural education to improve teacher quality and basic facilities at government schools such as buildings, classrooms, and learning materials.

Another important finding was by Nicholas in 2010 on Orang Asli education. The increasing number of enrolments in primary schools has proven that Orang Asli have positive attitudes toward education. However, education assistance programs by the government are important to keep these children at school. Financial aid was required to ease some of the financial burden on the parents. In addition, supported accommodation was another service to be considered as “such facilities are especially important for Orang Asli students who have to move to the bigger towns in order to attend secondary school. Without assistance in board and lodging, it is inevitable that these students will be forced to drop out of school” (Nicholas, 2010).
Other causes for students dropping out which were raised in this study were the irrelevance of the national school curriculum to the Orang Asli students and lack of parental involvement in their children’s education.

However, Tan (2012) has recently found a different factor that influences a student’s decision to drop out. The use of Bahasa Malaysia as the medium of instruction in public secondary schools is a major leading cause of school dropout among students attending ‘Remove Classes’ (a Remove Class acts as a transition class to improve proficiency in Bahasa Malaysia for Chinese and Tamil school students before they enter public secondary schools). This is because “the ‘Remove Class’ is hampered by poor quality teaching and attitudes of the Malay language teachers and insufficient Malay language teaching periods as well as inappropriate pedagogy” (Tan, 2012). Thus, these students are unable to start or complete secondary education due to lack of proficiency in Bahasa Malaysia.

In summary, school dropouts have long been viewed as a serious educational phenomenon. Although the Malaysian Government has established several programs since the 1MP intended to reduce dropout rates, the dropout crisis still exists, particularly at secondary level and during the transition from primary to secondary school. The findings of this study show that school dropouts are significantly higher among students from poor economic backgrounds, rural areas and also among Orang Asli communities. A strong relationship between poverty and dropout risk indicates that economic reasons are a key factor in causing students to drop out of schools.

14.2 Academic achievement

Academic achievement at school is viewed as a key determinant of students’ future educational and occupational opportunities. In Malaysia’s exam-oriented education system, students in public schools are required to sit for a standardised national examination as early as primary level. The examinations and the grades obtained will capture the achievement levels of the students. There are three major examinations
throughout the whole education system in Malaysia, one at primary level and two at secondary level. For the purposes of this discussion, academic progress is measured based on total number of students who passed each examination as listed below:

a) Primary School Achievement Test (Ujian Penilaian Sekolah Rendah, UPSR) – at the end of primary level, Standard 6 (Year 6)

b) Lower Secondary Assessment (Penilaian Menengah Rendah, PMR) – at the end of lower secondary level, Form 3 (Year 9)

c) Malaysian Certificate of Education (Sijil Pelajaran Malaysia, SPM) – at the end of upper secondary level, Form 5 (Year 11)

This section will discuss students’ performance at every examination level and how it has changed over time. The achievement gap between demographic groups will also be discussed in more detail along with possible reasons behind it.

The UPSR or primary level test was implemented in 1988, replacing the-then examination for primary students, Penilaian Darjah 5 (Year 5 Assessment). Students at national schools are examined in five subjects, namely Malay comprehension, Malay writing, English, mathematics and science. In addition, students at national-type primary schools are examined in two additional language subjects, Chinese comprehension and Chinese writing for Chinese school students and Tamil comprehension and Tamil writing for Tamil school students. Figure 14.12 shows the UPSR results between 1999 and 2008.
The bar graph shows that there was improvement in UPSR results over this nine-year period as the percentage of students who achieved the minimum competency levels (grade A, B and C) rose from 47.8 percent in 1999 to 62.3 percent in 2008. However, only 10 percent of students obtained high marks (all As) in 2008 and every third child was still below the national minimum standard in 2008. This level of academic performance is not sufficient for successful secondary education.

Another telling statistic is the difference in exam scores between the various types of primary school. From the data in Figure 14.13, it is apparent that national-type Chinese schools achieved better results in the UPSR than other schools in 2000.
As the graph above shows, national-type Chinese schools performed better in all three subjects. The minimum competency level (A, B or C) at national-type Chinese schools was 63.2 percent for English, 91.2 percent for mathematics and 83.8 percent for science. By comparison, the minimum competency level at national schools was 56.7 percent (English), 75.2 percent (mathematics) and 77.5 percent (science). The national-type Tamil schools obtained the lowest percentage of all schools – 45.6 percent (English), 73.9 percent (mathematics) and 73.8 percent (science). This finding seems to point to the fact that there are achievement gaps between groups of students at primary level. Students who are ‘being left behind’ in primary school are more likely to stay behind and get further behind as they move to higher levels of education.

The low academic performance in primary education affects achievement in lower secondary education. Figure 14.14 shows that the increase in the number of students sitting for the PMR (Lower Secondary Assessment) correlates with the improvement in results between 1999 and 2008.
As illustrated in Figure 14.14, the performance of students changed little between 2002 and 2008, staying in a range between 61.5 and 64.9 percent. A less diverse student cohort enrolled in lower secondary education (taking into account the high dropout rates in the transition from primary to secondary education) should predict improved academic results, but this has not occurred. Only 64.9 percent of students achieved the minimum competency levels (Grade A, B, C and D) in 2008.

Analysis of SPM (Malaysian Certificate of Education) results in Figure 14.15 shows that the pass rates in Form 5 (Year 11) were unchanged over the nine years between 2000 and 2008, following a sharp improvement in student performance from 1999 to 2000.
This jump, from 70 percent in 1999 to 86.8 percent in 2000, was attributed to the introduction of the SPM Open Certification system. Under this new system, “certificates awarded will specify achievement in subjects passes. Unlike the earlier system, there will be no overall aggregate and classification of candidates into grade one to three” (MOE, 2004). However, the percentage of students passing the SPM increased slightly from 2000 and remained stable from 2002, at about 90 percent, which indicates that there was no change in academic performance. Although there was a higher pass rate for the SPM, as compared to the UPSR and PMR, this may reflect a low transition rate from lower to upper secondary level with the result that more students might pass the exam. Furthermore, a minimum requirement to obtain the SPM certificate is a pass in *Bahasa Malaysia*. Accordingly, the data does not indicate the actual performance of students in the SPM.

The next step is to determine gender differences in academic achievement. As can be observed in Figure 14.16, female students significantly outperformed male students in *Bahasa Malaysia* and critical subjects, namely mathematics and English.
The graph shows that the percentage of female students passing with Grade A, B or C in all three subjects was much higher than the males in the three examinations. Although both groups of students obtained comparable scores in mathematics and Bahasa Malaysia, female students performed significantly better in English. It can thus be suggested that the differences in academic performance at each level of education may be a predictor of the differences in performance and completion rate at higher education levels.

The greatest challenge in education is the persistent gap in achievement between urban and rural students. Although the achievement gaps at all levels of education have generally narrowed, the differences are unlikely to be eliminated. In addition, narrowing of the gap does not indicate that rural students are progressing well academically. Figure 14.17 shows the gap between rural and urban primary students’ performance in 2010 and 2011.
The 2010 and 2011 UPSR results show that the urban-rural achievement gap has became smaller. In 2011, the percentage of rural candidates with minimum competency level increased 1.7 percent, those below the minimum competency level decreased by 0.68 percent and those with straight A's in all subjects fell by 0.7 percent. However, urban candidates did not show adequate progress in 2011. This finding reveals that there is a difference among the two groups pertaining to academic performance as early as primary level, but the gap is quite small.

As indicated in Figure 14.18, the achievement gap becomes more pronounced at the lower secondary level.
As can be seen from the figure above, students from urban areas obtained better academic outcomes in PMR than students in rural areas. In 2008, the percentage of urban candidates with minimum competency level was 67 percent, while that of rural candidates was 56 percent. In addition, more urban candidates (7.9 percent) achieved straight A’s in all subjects than rural candidates (2.8 percent) in the same year. This academic disparity between the two groups persisted into 2009. It is clear that students from urban areas have improved their academic performance at this level, while the rural students continue to lag behind their urban peers. It may be the case, therefore, that the disparities in academic performance at primary level have an effect on student achievement and contribute to an even greater gap at early secondary education level.

A review of 2008 and 2009 SPM results shows that the greatest disparity in academic achievement also occurred at upper school level, as illustrated in Figure 14.19.
As the chart shows, students in 2009 attained much better results than those in 2008 with both urban and rural students achieving a higher percentage of excellent, distinction and pass rates in 2009. The score gaps between rural and urban SPM candidates, however, were higher than either UPSR or PMR results, as discussed in the previous paragraphs. In 2008, the urban-rural gaps for SPM results were 2.2 points for excellence, 13.9 points for a distinction, and 13.9 points for a pass. The gap increased slightly in 2009 to 2.6 points for excellence and 14 points for distinction, while the gap for passed shrank to 13.4 points. In addition, the performance gap between students from rural and urban areas was also observed in several subjects such as English, science and mathematics, as demonstrated in Figure 14.20.
Figure 14.20 Malaysia: SPM student achievement results by selected subjects and location, 2008 and 2009 (%)

![Bar chart showing pass percentage of rural and urban students in English, Science, and Mathematics in 2008 and 2009.](chart.png)

Source: Ministry of Education (2010b)

Figure 14.20 illustrates marked differences in literacy and numeracy performances between rural and urban students in the senior year of their education. In 2008 and 2009, the urban students’ English and mathematics scores surpassed those of rural students, but they fell slightly behind in science. The large urban-rural score gaps in English do not come as a surprise. There are several reasons to explain this situation including: students from rural areas being less exposed to English, the fact that English is not their first or home language, and it is not compulsory to pass English for the national examinations. The language limitations among these students may lead to a lower performance at higher education levels as they have more limited access to reading and course materials.

There are many reasons that rural students underperform at school. Sulaiman (1995) has attempted to explain the factors determining the academic achievement of students by comparing performing and non-performing secondary schools in rural areas of Kedah. In her case study, she identified that the performing schools have considerable advantages over their counterparts, such as experienced leaders and
teachers, adequate school facilities, motivated students and higher parental education and support. However, all schools reported problems in getting parental involvement in school activities and experienced teachers for English, mathematics and history subjects.

In a study of 234 students from rural secondary schools in Pendang (located in the state of Kedah, north of Peninsular Malaysia), Hussin (1997) found that student demographic, home environment and personality variables were predictors of the academic performance of these students. The majority of them came from low SES families and had a poor command of English. The findings of the study also revealed that the students' past academic performance has the most positive influence in academic success, followed by the physical facilities and learning environment at home, and the locus of control.

Another study by Ismail and Ang (2005) identified that the impact of student and school background on mathematics and science achievement among the secondary students showed that the most obvious contributor to the success of mathematics and science in urban schools was experienced educators. It was reported that teachers in urban schools had more than five years of teaching experience. In addition, the advantage of having educated parents enabled the urban students to have a learning environment at home and receive the additional support of tuition classes.

Recent evidence by Rani and Rasiah (2011) revealed that poverty was highly correlated with lower educational achievement. Parents from low SES communities were unable to afford their children’s education, while the higher SES parents gave their children the best opportunities in education by spending more on extra tuition and books. This finding supports previous research by Tamuri et al. (2005) on the challenges faced by students from poor families. Although these students had high aspirations and positive values, they performed poorly in mathematics and English language. They received textbooks provided by the government, but they did not have access to additional reference and exercise books. In addition, they have limited time to spend for revision at home due to the burden of household chores.

In summary, several factors have been found to be related to student achievement at school level. Student background, however, is a major factor leading to the
achievement gaps between advantaged and disadvantaged students in schools. Although the impact of government policies and programs to assist disadvantaged communities has increased enrolment in schools, the findings in this section shows that disadvantaged children did not have the same academic opportunities and benefits as their peers. While the programs are successful in increasing educational attainment for disadvantaged children, because of other factors they continue to lag behind in educational performance. Most rural schools are experiencing difficulties in offering quality and equity in education. These schools require additional support from the Government to achieve the same standard as urban schools.

14.3 Schools not ready for massification of higher education

The ‘massification' of Malaysia’s higher education system has meant a rapid growth in student enrolments in higher education institutions over the years. The need to respond to the demand created by this expansion has implications for all three levels of school education—primary, lower secondary and upper secondary. Mass participation has brought with it many challenges and created pressure on all school institutions to produce graduates with good academic results that enable them to gain a place in a higher institution. A range of factors at school level are seen as inhibiting wider access to higher education in Malaysia. These can be divided into two main categories – structure of education factors and supply-side of education factors.

14.3.1 Structure of education factors

Over the years, many changes have occurred in Malaysia’s education system, often driven by the need for Malaysia to adapt to the emerging economic environment. There has been pressure to increase participation and also to improve quality. Reforms have been made in many areas such as legislation, curriculum, and also
school structure. The current school system encompasses a four-tier model: one or two years of kindergarten, six years of primary school, three years of lower secondary, and another two years of upper secondary. Since 1992, the system has allowed all students to gain direct entry from primary to lower secondary and finally to upper secondary level. This was done to ensure that all children are given the same opportunity to receive 11 years of basic education including the special needs students who require 13 years (extra 2 years) (UNESCO, 2011). Thus, learning in schools occurs without grade repetition, although students are required to sit for centralised national examinations at primary, lower and upper secondary education levels. The details of Malaysia’s education system are presented in Table 14.1.

Table 14.1 Malaysia: Current structure of Malaysian school system

<table>
<thead>
<tr>
<th>Year</th>
<th>Level</th>
<th>Public Examination</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Form 5</td>
<td>Upper secondary</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Malaysian Certificate of Education, SPM</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Form 4</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>9</td>
<td>Form 3</td>
<td>Lower secondary</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower Secondary Examination, PMR</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Form 2</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>Form 1</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>Standard 6</td>
<td>Primary Achievement Test, UPSR</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Standard 5</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Standard 4</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Standard 3</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Standard 2</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>Standard 1</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Pre-school</td>
<td>Kindergarten</td>
<td>Pre-school</td>
<td>5,6</td>
</tr>
</tbody>
</table>

Formal education begins in kindergarten, when children are five or six years old. While kindergarten is part of the school system children are not required to attend, although it is strongly recommended by the government. Since the Educational Act was promulgated in 2003, primary education has been compulsory for every child between seven and twelve years of age. Secondary education is divided into two levels, lower and upper secondary levels. From 2012, both primary and secondary
education at government schools is to be provided free to all Malaysian students (BERNAMA Online, 2011).

As shown in the table, the schooling system in Malaysia is very examination oriented. There are three big examinations throughout the whole system. In addition to the three national examinations, each student has to sit for mid-year and end-year examinations at each year-level. At some primary and secondary schools, students are streamed into classes according to their end of year exam results. Every grade will have two or three ranked classes and even more in some larger schools. The upper class (A class) is for the high achiever students, the middle class (B class) for the average achievers, and the lower class (C class) for the low achievers. These academic rankings influence student performance. Upper class students may work harder to compete with their peers and consequently receive better grades. On the other hand, the B and C class students may possibly feel upset and embarrassed, and ultimately lose confidence in themselves.

The Malaysian government has considered extending compulsory education from six to eleven years of schooling, but little attention has so far been paid to make secondary education compulsory. Thus, there are children who leave the system at each level of education. This is shown by looking at the transition rates as the students move from one level of education to the next. The transition rates from primary education to lower secondary education in the period 1995 to 2010 are reported in Figure 14.21 (transition rate is calculated by dividing the total enrolments of that year by the total enrolments in the previous year).
Figure 14.21  Malaysia: Transition rates of enrolment from primary to lower secondary level in government and government-assisted schools, 1995-2010


As shown in this figure, the immediate secondary enrolment rates after finishing primary school in the period 1995 to 2005 increased from 71 to 86 percent and maintained this rate up to 2010. The loss of approximately more than one out of every ten students reveals a worrying trend. Although more than 80 percent of students have proceeded directly to lower secondary level since 2000, the poor performing students face a greater risk of leaving after lower secondary education. Figure 14.22 illustrates that there are students opting out of the education system after completing lower secondary education.
The immediate upper secondary enrolment rates increased from 85 percent in 1995 to 96 percent in 2005 and maintained this level in 2010. Although only 4 percent of students left the education system in 2010 after finishing Form 3 (Year 9) in 2010, the absolute figure (16,928 students) was high enough to represent a significant loss.

The worst case scenario is that there are students leaving the school system halfway through their senior school. This is evident from the transition rates from Form 4 (first year of upper secondary) to Form 5 (final year of secondary), as shown in Table 14.2.
Table 14.2  Malaysia: Transition rates from Form 4 to Form 5 in government and government-assisted schools by selected cohorts, 1994-2009

<table>
<thead>
<tr>
<th>Cohorts</th>
<th>Enrolment in Form 4</th>
<th>Enrolment in Form 5</th>
<th>Transition rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-1995</td>
<td>215736</td>
<td>214679</td>
<td>99.51</td>
</tr>
<tr>
<td>1999-2000</td>
<td>362804</td>
<td>348196</td>
<td>95.97</td>
</tr>
<tr>
<td>2004-2005</td>
<td>391205</td>
<td>379166</td>
<td>96.92</td>
</tr>
<tr>
<td>2009-2010</td>
<td>422317</td>
<td>408391</td>
<td>96.70</td>
</tr>
</tbody>
</table>


The immediate enrolment rates for Form 5 demonstrated a downward trend from 1995 to 2000 (99 percent to 96 percent), rose to 97 percent in 2005, and stabilised at 97 percent in 2010. Although only about 3 percent of student left the system after finishing Form 4 (Year 10) in 2010, the absolute number of 13,926 of students was an important consideration for the Education Ministry.

Another issue of concern for Malaysia’s education system is that the length of compulsory schooling is far less than in most other countries. For example, school attendance is compulsory for 12 years in the USA (6-17 years old), 12 years in the UK (5-16 years old), 11 years in Australia (5-15 years old), 9 years in Singapore (6-14 years old) and 9 years in Indonesia (7-15 years old). Compulsory education in Malaysia by comparison, ceases at the end of 6 years of primary school when the student is 12 years old. Free secondary schooling is regarded as optional. Consequently, a number of students prefer to take up employment after finishing primary education. The compulsory years of schooling are not enough however, to prepare them for the requirements of the modern workforce and they are most likely to end up in low wage manufacturing and service sectors jobs or to experience unemployment.

In summary, the Malaysian schooling system has advanced a long way since independence, but the issue of young students leaving school without completing their basic education remains a concern. Although the government has achieved a major outcome in reducing the ‘bottlenecks’ in the system, low transition rates at
each level of schooling reduce the number of students pursuing higher educational levels. In this way, the transition rate – which also reflects academic streaming in schools – acts as a ‘filtering process’ by removing certain groups of students and creating pathways for the other groups. Thus, there is a need to implement a new approach in curriculum to cater to the wide variation in student needs. It benefits all students when the curriculum and method of instruction respond to their needs and abilities. In addition, a policy which gives emphasis to the transition process at each level is required before progressing to the development of mass higher education. Mandatory schooling should begin at age seven and continue for eleven school years. This would guarantee equal opportunity for all children to continue their education to secondary level and prepare them for the tertiary level in an academic or vocational field.

14.3.2 Supply-side of education factors

The growth in mass schooling has put pressure on public schools. Most are not properly equipped to cope with the rising number of students, particularly in the provision of key educational resources – classrooms, teachers and facilities. Due to a shortage of classrooms, some schools have been forced to operate a two-session system – a morning session (between 7:30am and 1:00pm), followed by an afternoon session (between 1:00pm and 6:30pm). In many schools, the morning session is for Form 3 to Form 5 (Years 9 to 12) while the afternoon session is for Form 1 and Form 2 (Years 7 and 8). In fact, there are cases where two schools may be located at the same site and share the same building facility but be administered by two different principals and have separate teaching staff. The Educational Development Plan 2006-2010 reported that 11.3 percent (858) of primary schools and 36.9 percent (748) of secondary schools were conducted in 2 sessions in 2005. In addition, 42 primary schools (0.6 percent) and 26 secondary schools (1.3 percent) did not have permanent buildings. These schools were fully operated at other schools (Ministry of Education, 2006).
The two-session system at the higher levels has direct impact on student learning as teachers and students have limited access to classrooms. The 40 minutes for each period is likely to be reduced if the class has to be moved to different rooms (‘floating classroom’). In addition, the school does not allow for a conducive learning environment due to the noise coming from students outside the classroom.

While the two-session system is regarded as a temporary solution, it is important that all schools operate a single session in order to strengthen public schools across Malaysia. The change to the single session will mean that additional time is available in the afternoons for extra learning and support classes.

A large number of public school buildings are ageing. The Educational Development Plan 2006-2010 states that 78.3 percent (5,951) of primary schools and 42.9 percent (870) of secondary schools are more than 30 years old. These schools require costly maintenance and repairs as the buildings are not safe for students and staff. According to Akasah and Alias (2009), “from 2000 to 2008 approximately RM 800 million was spent in Malaysia on public school renovation.”

Malaysian primary and secondary school students are more likely to be placed in large classes, even though the government has taken measures to reduce the figure. Figure 14.23 shows the average class size difference between primary and secondary schools between 1990 and 2009.
According to the above graph, the average class size in primary schools fell by 3.2 percent over the past 20 years, while in secondary schools it decreased by 3.6 percent. In 2009, the average class size was 30 students per class at both primary and secondary schools. Some states have experienced a much higher rate. It has been reported in the Malaysian Education For All Mid-Decade Assessment Report 2000-2007 (Ministry of Education, 2008a) that among the states that had overcrowded primary school classrooms (more than 30 students) in 2005 were Selangor, Kuala Lumpur, Penang, Kedah and Kelantan.

A comparison with the OECD rate is made by using the 2004 data on Malaysian classrooms in primary and lower secondary education. Table 14.3 shows that Malaysia is still far from the OECD average class size. Note that data from this table is from both public and private institutions. The country has larger class sizes in primary and secondary levels compared to most of the OECD countries.
In 2009, the average class size for primary schools in OECD countries was 21 students per class, while at the lower secondary level (in general programs) it was 24 students. A large difference of 8.8 points at primary level and 9.6 points at lower secondary can have a big impact on student learning.

In addition to the shortage of classrooms, public schools in Malaysia are also in need of better qualified teachers at primary and secondary schools. In the 9MP, the government was committed to reach a target of 25 percent of degree-qualified teachers in primary schools and 100 percent in secondary schools by 2010. In 2010, there were 230,001 primary school teachers and 173,981 secondary school teachers at government and government-assisted schools in Malaysia. Their qualifications and gender are illustrated in Figure 14.24.

Table 14.3 Malaysia: Comparing Malaysian average class size with OECD

<table>
<thead>
<tr>
<th>Levels of education</th>
<th>OECD Mean in 2009</th>
<th>OECD Mean in 2004</th>
<th>Malaysia Mean in 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>21.4</td>
<td>21.4</td>
<td>30.2</td>
</tr>
<tr>
<td>Lower secondary</td>
<td>24</td>
<td>24.1</td>
<td>33.6</td>
</tr>
</tbody>
</table>

Source: Ministry of Education (2010a) & OECD (2011) - Chart D2.2 and OECD (2006) - Table D2.1
As shown in this figure, 28.6 percent of primary school teachers in 2010 were university graduates which indicate that they have at least a bachelors degree. Thus, the target for primary education in the 9MP has been successfully achieved, but the big challenge is to reach the target of 100 percent of graduate teachers in secondary education. Consequently, the government has planned a new target in the 10MP, that is to increase the percentage of graduate teachers from 89.4 percent in 2009 to 90.0 percent by 2015 in secondary schools, and from 28.0 percent in 2009 to 60.0 percent by 2015 in primary schools.

The other challenge is to have a more equal balance of male and female teachers in primary and secondary schools. The Educational Development Plan 2001-2010 acknowledged the problem of sending female teachers to remote areas. Nevertheless, the goal of reducing the teacher-student ratio has achieved remarkable results as shown in Figure 14.25.
The primary school teacher-student ratio in 1980 was one teacher for every 27.3 students, while at secondary level it was one teacher for every 22.5 students. These ratios improved to one teacher for every 13.3 students and one teacher for every 13.7 students, respectively, by 2009. By comparison, the OECD teacher-student ratio in 2009 was 16 students for every teacher in primary schools and 14 for every teacher at secondary level. Thus, the Malaysian ratios were better than the OECD averages at each level. This indicates that the 2009 teacher-student ratio in Malaysia was at an internationally comparable level, even though, it may not be representative of the situation for the classrooms across the country today, since some schools located in rural areas or small towns are under enrolled, while those schools in bigger towns are over populated.

In addition to lacking qualified teachers, some schools do not have basic facilities such as running water and electricity even though the country achieved independence 54 years ago. In 2005, Ministry of Education reported that there were schools still lacking of basic amenities in 2005, as shown in Table 14.4.
Table 14.4  Malaysia: Number of schools that lack adequate infrastructure, 2005

<table>
<thead>
<tr>
<th>Item</th>
<th>Primary schools</th>
<th>Secondary schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (%)</td>
<td>Number (%)</td>
</tr>
<tr>
<td>No 24-hour electricity</td>
<td>767 10.1</td>
<td>28 1.4</td>
</tr>
<tr>
<td>No clean water supply</td>
<td>1517 20</td>
<td>68 3.4</td>
</tr>
<tr>
<td>No computer laboratory</td>
<td>2630 34.6</td>
<td>138 6.8</td>
</tr>
<tr>
<td>No science laboratory</td>
<td>1639 21.6</td>
<td>25 1.2</td>
</tr>
</tbody>
</table>


As can be seen in the above table, lack of facilities was far more severe in primary schools than secondary schools in 2005. Twenty percent of primary schools did not have a clean water supply and 10 percent did not yet have reliable electricity. There was also a substantial percentage of primary schools which were not equipped with adequate educational facilities. Nearly 35 percent of primary schools were operating without computer laboratories and about 22 percent without science laboratories. These facts would indicate that the educational resources were unequally distributed between primary and secondary schools and those primary schools may not have an adequate teaching-learning environment. Thus, does it mean that secondary education is more important than primary education? If that is the perception, can secondary schools complain if graduates from primary school are not achieving well?

Such unbalanced distribution of education resources is even greater between cities and remote areas. A number of schools in Sabah and Sarawak were powered by diesel generators as their main energy source and depended on rain harvesting, tube wells or a river piped system to obtain their water supply (Ministry of Education, 2006). However, the government has long been aware of the rural-urban gap and the process of change has continued since the 1MP to help bridge the development gap between rural and urban areas. In a speech on projects listed under the 9MP, the-then Prime Minister, Dato' Seri Abdullah Bin Haji Ahmad Badawi (2006) stated that “RM1.15 billion was allocated to improve and enhance schools facilities in rural areas, particularly in Sabah and Sarawak.”

Another important finding by Boylan et al. (1996) was that some teachers in rural schools, who were not trained to teach critical subjects such as mathematics, science
and English, were nevertheless required to teach those subjects in order to meet the needs of the students. Due to their lack of experience and knowledge of the subject, they failed to deliver the content. Borneo Post, an online news service, has revealed that several areas in Sabah experienced major teacher shortages, especially in English language. One finding was that, “several schools and classes in a remote area in Baram (Sabah) have no other option but to share one English teacher” (Edward, 2010). The main reason for this is due to the difficulty in recruiting qualified teachers to live and serve in the rural and remote areas, even though special allowances and additional housing facilities are offered to them.

From the findings above, there is a clear mismatch between supply and demand in education. The supply-side of education has been unable to accommodate the rapidly rising demand for primary and secondary education. Thus, shortages in educational resources occur as the demand exceeds the limited supply. This may also lead to poor academic standards. More investment at school level is required, not only for school amenities and equipment, but also for modern teaching and learning facilities.

14.4 Conclusion

Malaysia has achieved good progress in developing and strengthening the school system. Since independence, education has been regarded as a key factor driving social and economic development. Through several initiatives such as free education in public schools and educational assistance programs for needy families, the government aims to provide greater access to primary and secondary education and to ensure equitable participation at each level of education. The result has been a remarkable rise in primary and secondary school enrolments over the past decade. It was a major success for the country when there are many children today finishing their school education and going to university in numbers not seen before, even 20 years ago.
In another step forward, since the 1990s the government has been expanding the higher education sector and broadening access to higher education institutions. The higher education participation rate was to reach a target of 25 percent by 2000 (for age group 17+ to 23+), 30 percent by 2005 (for age group 17+ to 23+) and 40 percent by 2010 (for age group 16 to 22+) (Ministry of Education, 2001). The government, however, is likely to find itself under great pressure in the future to meet these targets and fulfil its plans. Why is this happening? The findings in earlier sections have provided strong evidence that after more than 55 years of independence, school education system is still facing many challenges. While public schools are open to all children regardless of their backgrounds, educational access and opportunity for some groups and communities are still limited. Students are being left behind because of low academic performance. Worse still, a significant number of young children do not even participate in the formal school system. It is therefore clear that while enrolments at primary and secondary levels have grown dramatically, the quality of school education remains problematic. Figure 14.26 illustrates how the quality of school education, which is indicated by educational performances, is shaped by issues of educational provision and also context and environment of the country.
Figure 14.26  Malaysia: A framework on challenges facing the school education sector and recommendations

As can be seen from Figure 14.26, Malaysia is still far from achieving a good quality and equitable school education system for all students. The major problem facing the country is to maintain high enrolment rates at school level, while achieving both equity and quality. At the school level, all students do not receive the same educational opportunities provided by the government. As a consequence, students at primary and secondary levels exhibit differences in performance, specifically in participation and academic achievement. The dropout rates at secondary level are very high as compared with primary level and the transition rate from primary to secondary school is still a major area of concern. In addition, children from disadvantaged communities, particularly in remote areas of Sabah and Sarawak, still have limited access to quality schooling which limits their opportunities and potential. And the gap in academic achievement between urban and rural areas, mainly at secondary level, has put great pressure on the educational system. A number of studies have found that rural students lag behind their advantaged urban
peers in academic achievement, with the likelihood of poor performance and school dropout later on.

These negative outcomes, in both participation and performance, result from a complex interaction of forces within and outside of school. First, inequalities in the provision of education between rural and urban areas affect the opportunity, access and quality of school education. Schools in urban areas are better equipped with modern learning resources, while some rural schools lack basic services such as clean water as well as basic education facilities. Besides that, teacher shortages are more severe in rural areas, especially in important subjects such as English, mathematics and science. Social context and surrounding environment also have a direct impact on student achievement. Poverty is the greatest barrier to educational success in the country. It has been reported that a significant number of population live under the poverty line in remote rural areas, particularly in Sabah and Sarawak. Students from these poor families do not have access to appropriate education and many of educational resources such as tuition, books, computers and more. Thus, they lag far behind other students academically and they fail to benefit from what education has to offer them, even though they may receive educational support from the government. Another group that is excluded from the mainstream educational experience is the indigenous population of Malaysia, the Orang Asli. Only a small number of them manage to attend schools in their community area, and almost half of them have to drop out along the way.

Improving all aspects of education from the earliest levels of education is therefore essential before progressing to the next higher levels. The school system must have a strong foundation or ‘platform’ of improving access, quality and equity in education. This is because school improvement initiatives will most likely lead to increased enrolment in higher education and also contributes to economic development. Recommendations contained in several reports by the OECD can be a guideline to develop an appropriate mix of policies for improving the quality of school education. Figure 14.27 shows the improvement strategies so that every child will have access to school education and an equitable opportunity to achieve a high level of academic success.
The proposed framework starts by setting the educational goal. There is a large volume of government reports and strategic plans describing the goals, priorities and strategies for education. Through its commitment to Education For All (EFA) the government has shown its commitment to ensuring that basic education is accessible to all children regardless of background. The outstanding progress in school education sector shows that Malaysia is able to achieve the six EFA goals by 2015. These are:
1) Expand early childhood care and education
2) Provide free and compulsory primary education for all
3) Promote learning and life skills for young people and adults
4) Increase adult literacy by 50 percent
5) Achieve gender parity by 2005, gender equality by 2015
6) Improve the quality of education

In addition to EFA, a clear obligation to provide quality basic education was set under the Educational Development Plan 2006-2010. One of the priorities under the Plan was to narrow the gap between location, types of school, ethnics, gender, socio-economic status in student performance, dropout rates and the provision of physical and non-physical amenities. The main focuses were to provide school in rural areas of Sabah and Sarawak with an infrastructure and educational facilities which meet minimum standards, to offer more assistance to poor students, special needs and minority groups, to reduce the digital divide, and to supply enough trained teachers in rural and remote areas (Ministry of Education, 2006).

The objective of expanding the accessibility and quality of education has remained in the 10MP. One of the stated strategies was to “ensure that every child can succeed. Set the same high expectations for all students regardless of background and provide systematic help and support to students who fall behind.” The Plan also shows an attempt by the Government to keep Malaysians on the education pathway by introducing a new approach called ‘an integrated human capital and talent development framework’ to develop high quality human capital. “This approach will nurture and develop Malaysians across their entire life-cycle, from early childhood education, basic education, tertiary education and all the way to their adult working lives.”

From the examples given above, therefore, it is clearly illustrated that the main goal of the government is ‘to ensure that all children, regardless of ethnicity, income, or background, have an equal opportunity of attaining 12-year school education and receiving a high quality public education including the adequate provision of qualified teacher supply and physical infrastructure in schools.’ This goal, however, cannot be achieved when there are several issues going on within school education. The findings presented in the previous sections have identified a need for
improvement priorities in three areas: the provision of equal educational opportunity for all children, the gaps in student achievement, and lifting teacher performance. In this process of improvement, several OECD recommendations provide examples of action steps that can be considered in improving each of these three areas. The corrective action taken will in turn lead to the identified outcomes that specifically improve student performance, narrow the achievement gap and achieve better educational provision for all students. The greatest gain will be seen as a large number of students across a diverse range of backgrounds succeed in secondary education and they are academically prepared for higher education.

To sum up, Malaysia has made significant progress since independence in improving access to school education. The strong demand for places in primary and secondary education is highly encouraging as primary enrolment rates almost reach the universal standard and secondary enrolments steadily increase. However, the quality of school education is uneven – often very good, but sometimes the outcomes are less than optimal. Students from disadvantaged backgrounds continue to fall further behind their more advantaged peers and the rural-urban educational gap persists. This indicates that social inequalities remain unchanged within the school system. Therefore, more effective policies are essential to remove the inequalities and support all students, regardless of social class.
CHAPTER FIFTEEN

TERTIARY EDUCATION IN MALAYSIA

15.1 Growth of tertiary education in Malaysia

Tertiary education in Malaysia has undergone remarkable expansion both in quantitative and qualitative terms since the country’s independence in 1957. These changes can be seen in the increasing number of higher education institutions across the country and a growing number of students enrolled in these institutions. This has forced the government to initiate several reforms in order to enhance the performance and quality of higher. The growth has also led to many changes in the role and functions of tertiary education in Malaysia in response to the rapid economic changes and the needs of the society. The development of Malaysian tertiary education can be divided into three stages: Stage 1 is the establishment stage of tertiary education, Stage 2 the expansion stage, and Stage 3 the diversification stage. Each of these stages is discussed in more detail in the sections to follow.

15.1.1 Stage 1: Establishment of tertiary education

Stage 1 covers the period from the 1900s to the 1940s. This is an early stage of development during the British colonial era in which the demand for tertiary education was low since having a higher education was not considered a necessity by most Malayan citizens. The Malayan economy, dependent on primary commodity production and exports, was dominated by labour intensive activities, mainly centred on agriculture and tin mining, and performed largely by unskilled labour. In addition, the British administration was not fully committed to tertiary education as it was to
primary education. Stockwell (2009, p. 1151) states that “British reluctance to develop higher education was influenced by current principles of colonial government, previous experience in India, contemporary attitudes to race and constant financial constraints.” For that reason, university education was not available and college education was only accessible to a small proportion of the population. The main emphasis of college education was to supply qualified human resources for public services, mainly in the education and healthcare sectors.

In the past, college education was divided into two categories based on the medium of instruction: English or Malay (Moris, 2008). Malacca Training College, established in 1901, was the first Malay-medium training college to train school teachers for service in the Straits Settlements. The increasing need for Malay teachers led to the setting up of the second college, Matang Training College, in 1913. By 1922, these two colleges were closed and all students were transferred to a new college called Sultan Idris Training College which “had become the main centre for teacher training in Malaya and which came under the Federal administration” (Moris, 2008, p. 9).

The English-medium Straits and Federated Malay States Government Medical School was opened in Singapore in 1905 (Cheah, 2003). It was the first medical school in Malaya established to train skilled medical workers to meet the high demand in the health care sector, and particularly the remote populations living in poor settings. However, the enrolments were limited to particular ethnic groups only. The Singapore Free Press, in its notice in 1905, reports rather vaguely that the new medical school will enrol “Chinese and other non-European residents in the Colony and the F.M.S – Federated Malay States – (who) might be trained to enter Government service as assistant surgeons or to qualify as general practitioners.” Of the 22 students who had enrolled in the institution, nine were Chinese, one a European and the other twelve were variously Tamils, Singalese and “other Orientals”. In 1913, the school was renamed to King Edward VII Medical School, Singapore and in 1921 became King Edward VII College of Medicine (Cheah, 2003).

In 1928, a new English-medium college was set up in Singapore. Rather than offering a medical program, Raffles College was focused on social science
disciplines such as English, economics, education and geography. However, “Raffles was not making the sort of progress expected of an embryonic university. Its diploma was not recognised outside Malaya, and its management lacked direction” (Stockwell, 2008, p. 1154). During the 1920s, a wave of industrialization reached Malaya where the emphasis shifted to science and technology and the first Technical School in the country was established in 1925, followed by the School of Agriculture in 1931. The Technical School was strategically located in Kuala Lumpur and the School of Agriculture was built in Serdang, an area close to Kuala Lumpur. Founded in 1936, Goon Institute was the first private academic college in Kuala Lumpur focused on basic training courses for secretarial and typist posts.

From the 1920s, tertiary institutions in Malaya and Singapore operated continuously except during the Japanese Occupation between 1941 and 1945. Each institution had begun slowly to pave the way for the second phase of development soon after the Japanese surrendered. The Technical School was renamed the Technical College in 1946, while the School of Agriculture was changed to the College of Agriculture Malaya in 1947. In 1949, the King Edward VII College of Medicine and the Raffles College were merged to form a university-level institution which was officially named as the University of Malaya to meet the needs of the Federation of Malaya and Singapore.

15.1.2 Stage 2: Expansion of tertiary education according to specific roles and functions in the economy

Stage 2 covers the time between the 1950s and 1980s in which the newly independent state dictated the direction of tertiary education. At the time of independence in 1957, there was no university-level institution located in Malaya (the University of Malaya was established in Singapore). The strong demand for university education led to the opening of the University of Malaya branch campus in Kuala Lumpur in 1959. However, the separation of Singapore from Malaya as an independent country totally changed the organisation of the university. In 1962, the
two branch campuses separated into independent universities that were called the University of Singapore and the Universiti Malaya (University of Malaya, UM). The UM was a first national institution of higher education in Malaya. University places, however, were limited. The role of the institution was to produce the professional classes who would become the elite of Malaysian society. Furthermore, since English was used as the medium of instruction, those students who were schooled in non-English medium schools were prevented from taking up university places.

In the early years of independence, Malaysia's economy was based on producing and exporting primary commodities utilising the labour of low skilled and minimally educated workers. They performed production jobs which required a minimal level of education. Table 15.1 indicates the distribution of the labour force by occupational group in the period 1957 to 1958.

Table 15.1 Malaysia: Distribution of labour force aged 10 and over by occupational and ethnic groups, 1957/58

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>All (1,000)</th>
<th>Malay (%)</th>
<th>Chinese (%)</th>
<th>Indian (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, animal husbandry, and forestry workers, fishermen, and hunter</td>
<td>1,212.4</td>
<td>62.6</td>
<td>24.4</td>
<td>13.0</td>
</tr>
<tr>
<td>Production and related workers, transport equipment operators and labourers</td>
<td>404.0</td>
<td>26.9</td>
<td>54.1</td>
<td>19.0</td>
</tr>
<tr>
<td>Sales workers</td>
<td>183.7</td>
<td>16.2</td>
<td>66.8</td>
<td>17.0</td>
</tr>
<tr>
<td>Service workers</td>
<td>160.3</td>
<td>46.6</td>
<td>38.5</td>
<td>14.9</td>
</tr>
<tr>
<td>Clerical and related workers</td>
<td>59.3</td>
<td>29.4</td>
<td>49.5</td>
<td>12.1</td>
</tr>
<tr>
<td>Professional, technical, and related workers</td>
<td>54.5</td>
<td>39.5</td>
<td>46.7</td>
<td>13.8</td>
</tr>
<tr>
<td>Administrative and managerial workers</td>
<td>22.7</td>
<td>18.1</td>
<td>68.1</td>
<td>13.8</td>
</tr>
<tr>
<td>Occupation not adequately described or not stated</td>
<td>11.8</td>
<td>68.8</td>
<td>25.9</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,108.7</strong></td>
<td><strong>48.5</strong></td>
<td><strong>36.6</strong></td>
<td><strong>14.9</strong></td>
</tr>
</tbody>
</table>

Source: Ikemoto (1985), pg. 364

The table shows that the majority of workers were employed in low skilled labour positions, mainly in the primary and secondary sectors, with a much smaller
percentage engaged in professional and technical work. Most Malays were involved in the production of commodities, while many Chinese engaged in industrial production. The number of Chinese professionals and technicians also exceeded those of a Malay or Tamil background. From this analysis, it appears that the Chinese were the most highly educated group, followed by Malays and then Indians.

By the 1960s, tertiary education started to expand rapidly to support the economic development plans of a newly independent Government. The second university in Malaysia was set up in Penang in 1969. The Universiti Sains Malaysia (University of Science Malaysia, USM), located on the north-west coast of Peninsular Malaysia, had a specific mandate during the first five years of its existence to produce professional human resources in the science and technology disciplines, such as engineers, scientists and technologists (1MP, 1966). The programs offered were expanded from 1970 to include social science and humanities. Other than USM, there were three other tertiary institutions established in 1960s – Institut Teknologi MARA (MARA Institute of Technology, ITM) in 1967, Politeknik Ungku Omar (Ungku Omar Polytechnic) and Kolej Tunku Abdul Rahman (Tunku Abdul Rahman College, KTAR) in 1969. In addition, the private sector expanded to include Stamford College (1952), Taylor’s College (1959) and Maktab Adabi (1969). The programs offered, however, were still focused on secretarial and office administration training such as shorthand, typing, secretarial skills and bookkeeping (Lee in Ibrahim Bajunid, 2009).

Following the post-election race riots of May 1969, the Government launched Dasar Ekonomi Baru (New Economic Policy, NEP) in 1970. This led to a change in the economic imbalance between Bumiputera and other races, including increasing the representation of Bumiputera in local higher education institutions as one of the main objectives. The government believed that the ethnic Bumiputera majority population should have the same higher education opportunities as Chinese people. Accordingly, a quota system for university placements was introduced with 55 percent of places reserved for Bumiputera, followed by 35 percent for Chinese and the balance of 10 percent for Indians and other races (Singam, 2003). In the same year, Universiti Kebangsaan Malaysia (National University of Malaysia, UKM) was established in Selangor to meet the educational needs of the Malay population. The
setting up of UKM was primarily to produce professionally competent individuals among the Malay race. It was the first national university to use Bahasa Malaysia as the medium of instruction. Moris (2008, p. 23) expressed the opinion that, “the opportunities for further studies in the Malay language should be provided to cater to the needs of Malay children whose studies ended or are halted after a few years of studying in Malay schools.”

By 1980, there were five public universities in Malaysia including two colleges which had been upgraded to university level during the 2MP period. The College of Agriculture Malaya was renamed to Universiti Putra Malaysia (Putra University of Malaysia, UPM) in 1971 and the Technical College was changed to Universiti Teknologi Malaysia (University of Technology, Malaysia) in 1972. UPM was responsible for producing professionals to meet the needs of the agriculture sector and UTM concentrated on producing qualified scientists and technologists in order to enhance industrial and technological innovation. The initiatives for expanding tertiary education were continued in the 3MP, but the main focus centred on improving and enhancing educational infrastructures.

Tertiary development under the 4MP saw more expansion efforts as two new universities were created by the Federal Government. Universiti Islam Malaysia Antarabangsa (International Islamic University Malaysia, IIUM) was established in 1983 with the aim of upholding and enhancing Islamic studies. The university’s languages of instruction are English and Arabic. The other new institution, Universiti Utara Malaysia (Northern University of Malaysia, UUM), is located in Kedah, the northern part of the Peninsular Malaysia near to the Thai border. Established in 1984, UUM focuses on developing educational management. The progress in higher education in terms of the number of institutions and overall enrolments is shown in Figure 15.1. The number of public higher institutions increased from three in 1MP to seven universities in 5MP, and the enrolments increased by 85,836 students from the 1MP.
As the demand for tertiary education was set to grow enormously in 1980s, private colleges established their role as complementing public universities in Malaysia. A number of private colleges, such as INTI College, Metropolitan College, Kolej Damansara Utama (Damansara Utama College) and HELP Institute, collaborated with reputable overseas universities in the USA, United Kingdom, New Zealand and Australia, and started offering twinning degree programs instead of certificate and diploma courses. The twinning arrangements attracted students from middle and high income families, as they offered a lower cost option for obtaining an international degree (Goi and Goi, 2009). “In a ‘2+1’ or ‘1+2’ twinning programme, students can pursue either 1 year; 1½ years; 2 years; or 2½ years at a private higher educational institution in Malaysia, out of a 3-year degree programme before going to the twinning partner university overseas to complete the remaining modules of the course” (Ministry of Higher Education, 2010a, p. 4).
15.1.3 Stage 3: Diversification of tertiary education for economic and social needs

Stage 3 covers the period from the 1990s up to the present day. During this stage, the tertiary education sector became more diversified after the period of expansion. The main factor influencing this diversification has had to do with the changing structure of the economy, as the sector and production of raw materials gave way to the secondary sector and the production of manufactured goods. This change started in the early 1980s and by the 1990s, Malaysia succeeded in transforming itself into a newly industrialised country, emerging as one of the world’s main exporters of electronic products. In addition, the Government was totally committed to ensuring the growth of this sector by attracting more overseas investors to Malaysia. Yusoff et al. (2000) in their report stated that,

“There was a big increase in FDI (Foreign Direct Investment) investment between the periods 1980 to 1995 with a volume of RM120 billion. During the same period, the average growth of FDI was 45.8 percent while for domestic investment was 55.2 percent. FDI has been attributed as the main engine of growth for the Malaysian economy. As was discussed above, the main benefits from FDI to the Malaysian economy are in creating jobs, technology transfer, linkages, increased exports, output and balance of payments.” (p. 30)

Vision 2020, which was introduced by the former Prime Minister, Tun Mahathir Mohamad during the 6MP in 1991, stimulated further expansion and growth in economic activity. This Plan sets out a clear direction for the country to be a self-sufficient, industrialised and fully developed country, by the year 2020. With economic boom in the first half of the 1990s and the attainment of middle income status in the middle of that same year (Abidin, 2011), the government came under strong pressure to make major changes to the tertiary education system. A large pool of skilled workers was urgently needed to support the manufacturing industry and ultimately sustain strong, long-term economic growth. In order to ensure a balance
between workforce supply and demand, the government planned to strengthen and increase tertiary education sector.

In 1997-98, the country experienced a severe economic recession during the Asian financial crisis. The difficult economic situation affected the numbers of Malaysia students going aboard to study in developed countries such as the UK, USA and Australia. The program of sending government-sponsored students study overseas was suspended due to financial constraints and these students were subsequently placed in local universities across the country. Privately sponsored students were also staying in Malaysia and entering private higher institutions as overseas education costs became significantly more expensive.

The Private Higher Educational Institutions Act 1996 (Act 555) which was legislated in 1996, has been successful in solving the increasing demand for access to local tertiary institutions. The Act allows the private sector to participate in the provision of higher education and fill the gaps in the public higher education system (Sirat, 2006; Goi and Goi, 2009; Yean, 2010). Its purposes are to introduce greater competition, reduce public expenditure and increase productivity in the higher education sector (Sirat, 2006). Under this Act, the private institutions are allowed to offer a wide range of in-demand degree programs. The first private university, namely Universiti Multimedia (Multimedia University, MMU), was formed in 1999 by a telecommunications company known as Telekom Malaysia Berhad (TM), followed by Universiti Tenaga Nasional (Tenaga National University, UNITEN) which was established by an electricity supplier, Tenaga Nasional Berhad (TNB) during the same year. To support the setting up of a private distance university education, Universiti Tun Abdul Razak (UNITAR) started its operation in 1997, followed by Universiti Terbuka Malaysia (Open University of Malaysia, OUM) in 2000. In addition, foreign universities were also given authorisation to open international branch campuses in Malaysia. In 1998, Monash University set up a campus in Sunway, Selangor, and Curtin University of Technology was invited to open a campus in Sarawak in 1998. To encourage the growth of private institutions, the government has introduced several tax incentives which include “Pioneer Status (PS) with 100 percent tax exemption for a period of 10 years” and “Investment Tax Allowance of 100 percent for years offset against 70 percent of statuary income for
each year of assessment” (Department of Higher Education, n.d, http://jpt.mohe.gov.my/RUJUKAN/MALAYSIA'S%20INCENTIVE%20AND%20SUPPORT%20PACKAGE%20FOR%20HIGHER%20EDUCATION%20INVESTMENT.pdf). The new policies have led to the proliferation of private universities in the 1990s, adding to the number of tertiary institutions that already existed in the country.

Public higher educational institutions continued to grow at a rapid pace in the 1990s. Four new universities were established under the 6MP and 7MP, namely Universiti Malaysia Sarawak (University of Malaysia Sarawak, UNIMAS), Universiti Malaysia Sabah (University of Malaysia Sabah, UMS), Universiti Pendidikan Sultan Idris (Sultan Idris University of Education, UPSI) and Universiti Teknologi MARA (MARA University of Technology, UiTM). However, this expansion in public tertiary institutions was still not sufficient to meet the demand for tertiary education since the growth in the number of public institutions was accompanied by significant increases in the number of students. Figure 15.2a and 15.2b show the growth in the number of students pursuing tertiary education in public institutions between 1986 and 2000.
Figure 15.2a  Malaysia: Number of enrolments in public tertiary institutions by type of institutions, 1986, 1991 and 2000

Note:  ITM was upgraded to university status in 1999.

Figure 15.2b  Malaysia: Growth rate of enrolments in public tertiary institutions by type of institutions, 1986, 1991 and 2000

Note: 1) ITM was upgraded to university status in 1999, 2) 1986 = 100
Figure 15.2a indicates that enrolment numbers at public institutions grew at a slower rate between 1986 and 1991. The enrolments strongly increased after 1991, especially in public universities where they increased from 62,114 in 1991 to 211,584 by 2000. It is likely that this growing demand for university education during that period reflected the fastest growing employment sector (requiring at least a bachelor degree). Figure 15.2b, on the other hand, illustrates the enrolment growth rate over the same period of time. One unanticipated finding was that the highest growth rate was seen in polytechnics where the rate in 2000 was 599 percent points higher than it was in 1986. The second highest was in public universities (435 percent), followed by KTAR (234 percent).

The rapid demand and increase in enrolments in public institutions was paralleled in private universities. As Figure 15.3a illustrates, enrolments at both institutions were on the rise between 1985 and 1995. The number of students enrolled in public institutions increased from 86,330 in 1985 to 189,020 in 1995, whereas private institution enrolments grew from 15,000 to 127,584 during the same period. By 2000, the number of students enrolled in private institutions exceeded those of public institutions. A negative trend displayed in Figure 15.3a was that the number of students going abroad to study declined from the year 1990 to 2000.

A clear trend in which private institutions have been taking the market share from public institutions is shown in Figure 15.3b. In 1985, only 8.9 percent of students enrolled in private higher institutions. By 1995, the number jumped to 34.7 percent and by 2000, it reached 53 percent. In contrast, public higher institutions maintained their share of at least 50 percent of the total enrolment between 1985 and 1995, before dropping slightly to 43.6 percent in the year 2000.
The shrinking market share for public higher education institutions demonstrated to the government the urgent need to expand the public higher education system. The launch of the 8MP in 2001 complemented the ‘Vision 2020’ by placing strong...
emphasis on the importance of the k-economy. The Plan highlighted, “the creation of a strong human resource base to support the development of a knowledge-based economy and enhance productivity and competitiveness” (p. 15). The shift from a production-based economy to a k-economy was seen to require different human resource requirements. With knowledge becoming the most important factor in production, efforts are being made by the Government to develop an efficient and responsive education and training system to meet the demand for a knowledgeable and highly skilled labour force. This necessarily means that the country must constantly produce a large enough pool of graduates who are equipped with the right skills, knowledge and attitudes to meet industry specific needs.

The idea of the k-economy was then continued into the next planning period, the 9MP (2006-2010). This Plan places strong emphasis on the k-economy by expanding the existing programs with new initiatives to increase the supply of skilled workers. The Plan clearly states that,

“...capacity building will be strengthened to develop knowledgeable, skilled and innovation human capital to drive a knowledge-based economy. Programmes will be implemented to develop human capital that is innovative and has high capability in S&T as well as strong entrepreneurial skills...” (Malaysia, 2006, p. 237).

Under this plan, the government aimed to increase accessibility to higher education. As part of its long-term strategy, a target had been set of 40 percent participation rate of the age group 17-23 years in undergraduate programs and a target at post-graduate level of 25 percent in 2010 (Malaysia, 2006). At the same time, the Ministry of Higher Education embarked on a mission to raise standards of higher education and to make Malaysia a hub of higher education in the Asia region by the end of 2015. This idea was first put forward at a Globalising Higher Education in Malaysia conference in 2006 (Down, 2009). This implied that while the target of increasing the access to higher education for Malaysian school leavers was being set, movement towards developing world-class higher education system was also taking place. The answer, of course, is that there is no perfect solution to balance quality and participation goals, but the government was making every possible effort to meet the challenges.
The target set out under the 9MP period, however, was an ambitious one, given that the participation rate for students aged 17 to 23 years rose from 27 percent in 2005 to 31.4 percent in 2009. The enrolment of post-graduate students, on the other hand, was 19.5 percent in public institutions (Malaysia, 2006). An implication of these figures is that the country was still far from meeting both targets by 2010.

**Reorganising public higher education**

In October 2006, public universities were classified according to their main roles in an effort to better promote higher education and to enhance the quality of teaching and research. Under the National Higher Education Strategic Plan launched in 2007, the public universities have been re-categorized into three main groups: Research Universities, Comprehensive Universities and Focussed Universities.

There were four research universities (RU), namely USM, UM, UKM and UPM, four comprehensive universities (CU), and twelve focussed universities (FU) under the classification introduced at the time. “Research Universities focus on research, Focussed Universities concentrate on specific fields related to (their) establishment, while Comprehensive Universities offer a variety of courses and fields of study” (Ministry of Higher Education, 2012, http://www.mohe.gov.my/portal/en/institution/pihe.html).

In 2007, the Rating System for Malaysian Higher Education (*Sistem Penarafan Institusi Pengajian Tinggi Malaysia, SETARA*) was implemented to promote quality and best practice among public and private tertiary institutions in Malaysia. The main purpose is to measure the performance of undergraduate teaching and learning. SETARA involves a quantitative survey where data collected is analysed according to six domains – academic staff (25 percent), students' selectivity (10 percent), research (15 percent), academic programs (25 percent), resources (15 percent), and management (10 percent). The institutions are rated on a six-tier scale, ranging from the weakest, Tier 1, to the strongest, Tier 6. In 2007, UM was the only public higher
education institution to obtain a five-star Tier 5 rating or “Excellent” status, followed by UPM and UKM that were placed in Tier 4 (Very Good) and USM in Tier 3 (Good). The same assessment was carried out in 2009. Among the 20 public universities, only seven of them were classified as Tier 5, namely the four RUs, UIA, UTM and UiTM Shah Alam campus. In 2007 and 2009, no institution achieved the highest tier that carries the status of “Outstanding”.

By the year 2009, all 13 states in Malaysia had at least one public university, allowing more opportunities for higher education for all, regardless of location. Several institutions with university college status were upgraded to university status and a number of private colleges were granted university status or university college status. The rapid increase in the number of tertiary institutions from 2002 to 2010 is presented in Figure 15.4.

**Figure 15.4** Malaysia: Tertiary institutions in Malaysia by types of institutions, 2002 and 2010

![Figure 15.4](image)


The figure shows that the government's goal for public tertiary institutions between 2002 and 2010 was focused on expanding technical and vocational education. The number of polytechnics and community colleges increased rapidly during this period. The increasing number of private higher institutions indicates that there has been a
greater demand for private higher education and these institutions have the potential for future expansion.

The 10MP (2011-2015) outlines more detailed measures to transform the nation into a high-income economy. The Plan sets out an integrated human capital and talent development framework to produce a pool of highly skilled professionals for the workforce. The framework will shape Malaysians across their entire life-cycle, from early childhood until their adult working lives. Beginning in 2011, the Government is revamping school education to improve student achievement and ensure that more students complete their schooling. As the students enter tertiary institutions, they will be equipped with deep industry knowledge to increase employment opportunities. Under this Plan, however, the government has decided to maintain the number of existing public universities, while the private sector is completely free to expand.

15.2 Diversity in public university education

Malaysia has significantly increased student participation in tertiary education from the 1980s through the 2000s. The number of public and private tertiary education institutions has multiplied so rapidly over the past decades. As Malaysia gears up for the k-economy, the government has decided to build a first class public higher education system. The process has begun with enlarged and differentiated public universities to allow for a major expansion of the existing system and a wider range of students to enter higher education. It is, however, not just a larger, more accessible system that is on the government’s agenda, but also quality enhancement. This section, therefore, discusses the progress that has been made in diversifying public universities and the challenge of balancing the demands of greater access with those of improving quality. It is even more difficult when some public universities have limited resources in terms of funding and expertise.

The demand for access to public universities in Malaysia has increased significantly in the last few years. As reported by Malaysian National News Agency, known as
BERNAMA, there were 134,227 SPM holders applying to public tertiary institutions for the 2006/2007 academic year. However, only 106,326 students met the minimum requirement and 26,693 people were given offer letters to public institutions (BERNAMA, 2006). More recent data shows that the Ministry of Higher Education received 64,703 applications from STPM holders for the 2011/2012 academic year. Of these applicants, 82 percent of students were qualified and only 77.5 percent were offered a public university place. Due to insufficient institutional capacity, the government was required to set up more public universities and upgrade several university colleges to university status. The number of research universities (RU) has also increased to five institutions with UTM joining the group in 2010. The current classification of 20 public universities is shown in Figure 15.5.

Figure 15.5 Malaysia: Number of public universities, 2010

Source: Ministry of Higher Education (2010b)

There are five research universities (RU), four comprehensive universities (CU), and 11 focussed universities (FU) in Malaysia. Each category has its own criteria which are set by Ministry of Higher Education. The status of Research University requires the listed institutions (UM, USM, UKM, UPM and UTM) to disseminate research undertaken in various fields at the highest level so that they are comparable to the world’s renowned universities (Moris, 2008). These institutions are given additional support to fulfil the following objectives:
a) Intensify activities of research, development and commercialization (R&D&C)
b) Increase the number of postgraduate students and postdoctoral staff
c) Increase the number of academic staff with PhD qualification
d) Increase the number of foreign students
e) Strengthen centres of excellence
f) Improve the position and ranking of local universities
(Source: Department of Higher Education, 2012)

In addition, each institution received RM100 million a year in 2010 for research, development and commercialisation activities which was RM9.2 million more than the allocation in 2009 (Department of Higher Education, 2012). Because of the strong emphasis on research, RU have a balance ratio between undergraduate and post-graduate students that is 50:50.

Comprehensive universities (namely, UiTM, UIA, UMS and UNIMAS), on the other hand, offer a variety of courses and fields of study. The ratio of undergraduate and post-graduate students is 70:30. The other public higher institutions are categorized as focussed university, concentrating on specific fields related to their origins. UPSI, for example, is the first university of education which focuses on producing leaders through education-based courses. UTeM, UMP, UniMAP and UTHM offer various programs in technical and engineering fields. Similar to CU, FU have the same ratio of students, 70:30.

One major drawback of ranking the institutions according to types of institutions is that RU are considered to be ‘elite’ institutions, the country’s top universities. Although the ranking system does not necessity correlate with educational standard, these leading universities are believed to have a better reputation than other higher learning institutions and are perceived to guarantee quality. Thus, they are regarded as the nation's most 'in demand' universities. Consequently, RU have far more applicants of outstanding intellect to increase their selectivity. Upon receiving research university status, UTM decided to increase the minimum entry requirement to 3.26 CGPA (Cumulative Grade Point Average), mainly for high-demand undergraduate programs such as engineering right (Ibrahim, 2010). From 2011, the minimum CGPA requirement has been raised to 3.48/4 (Utusan Malaysia Online, 2011). UM, one of the first RU in the country has raised its academic requirements
for undergraduate courses in 2012. The minimum CGPA for STPM candidates and those from matriculation programs is 4.00/4 for medical and dental programs, and 3.50/4 for arts (mStar Online, 2012a).

In contrast, CU and FU are seen as ‘mass’ institutions which aim to improve entry rates to higher education and provide greater opportunities to obtain a degree. Eight out of ten FU are newly established institutions which were upgraded and improved from college university status between 2006 and 2007 under the 9MP. Nine of these institutions were given Tier 4 status (Very Good), while the other two institutions, UMK and UPNM, were granted Tier 1 status (Weak) in 2009 SETARA. The breakdown of new undergraduate student intake numbers in 2010 indicates that 56.3 percent of students gained entry to FU, 26.2 percent to RU and 20.2 percent to CU (Ministry of Higher Education, 2011a).

It should be emphasized that the Ministry of Higher Education’s purpose in categorizing the institutions of higher education is in order to achieve better utilization of the high-end public institutions. This is because the government needs to have confidence in its investment in institutions that have excellent academic facilities for teaching and research and also highly qualified and experienced academic staff that are capable of producing well-rounded, competent graduates, primarily in science and technology fields. The quality of higher education is also ensured by these highly trained teaching staff that create an effective climate and environment for excellent teaching and learning process. Figure 15.6 shows the range of qualifications of academic staff working in the Malaysian public universities in 2010.
In 2010, 51 percent of teaching staff at RU had a PhD compared with only 33.1 percent at CU and 14 percent at FU. The advantage of having more than half their staff highly qualified, including 10.6 percent non-citizen PhD academic staff who are leaders in their fields, is that RU are capable of training students to higher professional levels (Ministry of Higher Education, 2010b). The differences in staff qualifications between the three types of university shows clearly that RU have the most qualified teams and they also have the potential to become world-class higher learning institutions. Along with well-equipped research facilities, they derive considerable strength from experienced and knowledgeable professors who can contribute towards the development of new knowledge and produce high quality inventions. Figure 15.7 compares the academic level of staff in 2010 according to the type of university at which they teach.
As the graph shows, 11.8 percent of academic staff employed at RU were professors, 20.1 percent associate professors and 57.2 percent lecturers, while CU employed 5.8 percent professors, 12.6 percent associate professors and 60 percent lecturers in 2010. In contrast, FU had the lowest percentage of professors and associate professors employed, but the highest rate of lecturers of all three institutions. It is clear that CU and FU are still at an initial stage of building research strength and capability. With their limited number of experienced academic staff, they lag far behind in research when compared to RU that are actively conducting research activities and also publishing papers and books. The commitment to research will improve the quality of education at RU as the academic staff are keen to share their findings and experiences with their students.

The status of Research University requires the RU to expand their postgraduate education programs and promote research work in all the major subjects. This is to build a foundation of research experience and knowledge for their students. RU therefore have more postgraduate students than CU and FU, as shown in Figure 15.8.
The graph in Figure 15.8 is revealing in several ways. Firstly, there was specialization according to the type of award offered at each institution in 2010. RU mainly enrolled students in postgraduate and bachelors programs, CU focused on bachelors programs and FU concentrated on bachelor and diploma programs. Secondly, the number of postgraduate students enrolled at RU was around six times more than at FU and double the number at CU. Thirdly, the majority of students in each intuition were pursuing bachelors degrees, the highest proportion being at CU.

The evidence in previous paragraphs supports the conclusion that a large portion of government resources is given to RU due to their employment of high-value human capital assets, namely, high qualified academic staff, experienced researchers and also outstanding students. With these assets they are already starting to compete with other leading higher educational institutions and gradually moving up the world ranking. These ‘elite’ institutions are seen to represent the strength of the higher education system in parallel with rapid economic growth in Malaysia. Therefore, the RU have been granted autonomy in administrative and academic matters by the Higher Education Ministry starting from 2012 to encourage greater innovation. The
online daily newspaper stated that "the universities will be given autonomy in the areas of institutional governance, finance and wealth generation, human resource and academic management, as well as student intake" (Kulasagaran, 2012, http://thestar.com.my/education/story.asp?file=/2012/2/5/education/10563689&sec=education). As an ‘elite’ category, RU are aiming to be world-class quality universities by producing world-class research and graduates.

However, CU and FU are at risk of being overshadowed by the rise of RU. Although some of these higher institutions evolved from university colleges, they should not be regarded as second class public higher education providers. In the massive expansion of student numbers in higher education, CU and FU have played a major role in increasing opportunity and access to higher education for all, particularly to school leavers. They are the institutions responsible for achieving mass tertiary education, with a 40 percent participation rate of 19 to 24 years old in Malaysia. Some of CU and FU, for example, are located in underdeveloped states of Terengganu, Kelantan, Perlis as well as Sabah and Sarawak in Borneo. It is now possible for students living in rural areas to have educational opportunities beyond secondary education. As the number of students finishing school is continually growing, the expansion of public higher education providers is essential so that students are able to ‘shop around,’ choosing the institutions which best meet their needs.

The establishment of CU and FU opens up additional places in higher education, although in more specialised fields. In 2010, 44 percent of students gained admission to undergraduate programs in RU, 24 percent in FU and 30 percent in CU (Ministry of Higher Education, 2011a). The enrolments by fields of study are shown in Figures 15.9a and 15.9b.
Figure 15.9a  Malaysia: Undergraduate enrolments by broad fields of study, 2010

Source: Ministry of Higher Education (2010b)

Figure 15.9b  Malaysia: Undergraduate enrolments by types of universities and specific fields of study, 2010

Source: Ministry of Higher Education (2010b)
Figure 15.9a gives a breakdown of enrolment by broad field of study in 2010. A number of observations can be made for each type of institution. Firstly, RU had a balanced enrolment in the three major disciplines. Secondly, CU had by far the highest number of students in arts, accounting for 70 percent of enrolments. Thirdly, the arts discipline also accounted for more than 50 percent of total enrolments in FU, followed by technical and vocational which represented 30 percent of students.

Figures 15.9b, on the other hand, gives a more detailed analysis by field of study in the three university types. Programs relating to social science, business and law recorded a high participation rate in FU and CU, followed by engineering, manufacturing and construction, and science, mathematics and computer. Enrolments in the field of engineering, manufacturing and construction attracted the majority of enrolments in RU (28 percent), followed by social science, business and law. Overall, programs relating to arts were the most sought-after fields of study offered by the Malaysia higher education sector 2010.

The findings presented in previous paragraphs have important implications for future challenges faced by the Malaysia higher education sector. The setting up of RU is a good policy decision made by the Government. It is designed to improve higher education by attracting a strong pool of highly qualified staff as well as the highest performing students. This will then lead to improved student performance in higher education since students are being educated by highly competent and experienced staff. There is a high likelihood that most students will obtain a prestige degree from highly regarded university. Upon graduation, students may have an interest in furthering their education to post graduate level. With regard to employability, it has been found that more than 75 percent of RU graduates held a job, while those from CU and FU were between 50 to 70 percent (Ministry of Higher Education, 2011b). In addition, a big injection of funds provided by the Government enables these top universities to expand at a relatively faster pace. By demonstrating excellence in research and teaching activities, RU also gain a competitive advantage over their competitors in the industry.

CU and FU, however, will struggle to compete with RU. They are considered as ‘second-choice’ public universities in public sector after RU and are more likely to accept less academically competent students who are presumably coming from
disadvantaged families. Numerous studies have reported that socially disadvantaged students are linked to poor educational performance since they are at greater risk of dropping out. When funding constraints intersect with less competent students, CU and FU have very limited growth opportunities and weaker performance profiles. This is because their cohorts of students need extra assistance and therefore more resources.

15.3 Conclusion

Malaysia strives to achieve the correct balance between expanding access to bachelors programs and improving the quality of its public universities. These two goals are in competition with each other since aggressive growth in enrolments and also the numbers of public universities are more likely to contribute to deterioration in quality. This conflict is not easy to resolve, particularly at CU and FU for the reason that these institutions do not obtain additional funds and attract high quality staff or well-prepared students. It is a challenge for these institutions to offer the same quality programs as RU, while operating in an environment of limited resources. The key to this problem is to provide an allocation of significant additional resources to CU and FU so that they are able to improve their teaching standards and increase research productivity. While extra resourcing may solve the problem, it remains debatable whether the improvement process should begin at school level in order to produce better quality students. All in all, the evidence clearly shows that the ranking system may not prove effective in improving the overall quality of higher education.
Although educational systems around the world are emphasizing four-year university programs, there is no denying the huge importance of tertiary short-course education in driving economic development in Malaysia. Most short-course programs in the public sector are provided by the non-university sector, namely polytechnics and community colleges. These two institutions are often viewed negatively by society due to the belief that they are continuation schools for low achieving and dropout students as well as rejected university applicants. However, the biggest human resource development shortfall in the country is in technical and vocational skills. In order for Malaysia to achieve developed nation status by 2020, industrial workers need to be more skilled and knowledgeable than ever before. Thus, the government has developed a National Higher Education Strategic Plan 2011-2015 (Phase 2) to reform polytechnics and community colleges. The main purpose of this reform initiative is to shift towards a shared responsibility between universities and short-course institutions in meeting the labour demands of all sectors of industry. Polytechnics and community colleges have a major role to fulfil the high demand for semi-skilled and middle-level, workers mainly in technical fields. They are doing so along with a number of the focussed universities that have a technical orientation, such as engineering.

Public universities and non-university institutions, however, each have a different educational focus. The university system provides a strong theoretical basis of learning and is becoming highly research oriented. In contrast, polytechnics and community colleges have different approaches to education that are more vocationally orientated. As admittance to four-year public institutions is becoming more competitive, there has been a growing demand for technical education and vocational training in the public tertiary education system. Polytechnics and
community colleges provide an alternative pathway to higher education by offering various programs which can lead to bachelor degrees. These short-course institutions assist students to improve their academic achievement and prepare them for higher education or future employment. In other words, polytechnics and community colleges provide targeted middle-level technical training as well the opportunity to go on to university. These institutions manage to maintain their share of the higher education market not only because of their ‘second chance’ function but also because they provide training that is essential for the service and manufacturing industries. They also deliver training at an affordable cost as tuition rates are significantly lower than those of public universities. Both polytechnics and community colleges are more easily accessible since they have set lower entry requirements and also allow more flexible study options as compared to regular undergraduate programs. Therefore, polytechnics and community colleges indirectly portray an element of social responsibility towards the community by providing educational opportunities for everybody regardless of background and socio-economic status.

Although both polytechnics and community colleges belong to the non-university sector, there are significant differences between them. Polytechnics play a specific role in training semi-professionals to support the technological and economic development of Malaysia. As well-established institutions (since 1969), polytechnics offer a range of certificate, diploma and advanced diploma programs. They predominantly focus on courses in engineering disciplines as well as Information Communication and Technology (ICT), commerce, and hospitality, as shown in Figure 16.1.
The figure shows that polytechnics offered only engineering at advanced diploma level. This program consisted of four streams of study, namely electronic engineering (medical), mechanical engineering, automotive design and manufacturing engineering, and mechatronic engineering. There were only 109 students enrolled in this program, comprising 69 males and 40 females. The majority of diploma students (61.8 percent) enrolled in engineering, followed by business and administration (12 percent), accountancy (8.1 percent), and tourism and hospitality (4.9 percent). A similar situation existed at certificate level where the majority of students (71.4 percent) were enrolled in engineering.

The oldest polytechnic in Malaysia, Politeknik Ungku Omar, was built in the state of Perak in 1969, funded by the United Nations Development Program (UNDP) and supervised by the Technical and Vocational Education Division of the Ministry of Education. During its early stages, this polytechnic offered various academic programs at diploma and certificate levels. The polytechnic sector has undergone significant developments over the years, including expanding the number of new courses on offer to students. The most notable change was made in 2010 to improve the quality of existing polytechnics. Starting from July of that year, all polytechnics
ceased offering certificate-level courses to new students, focusing on diploma and advanced diploma programs. Some selected polytechnics are able to award bachelor degree programs. In the same year, three polytechnics were selected to be ‘metro polytechnics’, namely Politeknik Sultan Salahuddin Abdul Aziz Shah in the state of Selangor, Politeknik Ungku Umar in the state of Perak and Politeknik Johor Bharu in the state of Johor. With this ‘metro’ status, they are entitled to offer degree courses and also enrol international students (Ministry of Higher Education (c), 2011). The main aims for metro polytechnics are to obtain university status by 2015 and “foster the internationalisation of local knowledge, innovation and technology applications to other countries – especially developing nations” (Lim, 2010, http://thestar.com.my/news/story.asp?file=/2010/2/25/nation/20100225115036&sec=nation).

Community colleges which began in 2001 with 10 pilot colleges are more strongly focused on vocational training. They are workforce development centres which provide job training, re-training, and certification for the skills required across a range of industries. The government’s original master plan, as described by Abas (2000) in New Straits Times, was to build one community college for each electorate area. Community colleges first offered only certificate courses, but since 2007, they have been authorized to deliver diploma courses (Ministry of Higher Education, 2007a). Since 2010, community colleges have offered a wider range of programs at certificate and diploma level, including such fields of study as agriculture and fisheries. The enrolment distribution by field of study is shown in Figure 16.2.
As Figure 16.2 shows, community colleges enrol more students in engineering than in other disciplines at both levels of study (30 percent at certificate level and 34 percent at diploma level). The Tourism and Hospitality Diploma is also in high demand, accounting for 29 percent of all diploma enrolments. This program focuses on five sectors of the tourism industry: recreation and parks, hotel and catering, food service (halal practice), tourism management, and event management. In addition to the above courses, community colleges also introduced short courses of three to six months from 2010. These courses, called national modular certificates, are designed to meet the educational needs of local communities. “The courses cover nine key areas: refrigeration and air conditioner servicing, aquaculture, light vehicle servicing, wiring, building maintenance, boat repair and maintenance, tourism operations, hotel operations and culinary arts” (Chin, 2010, http://thestar.com.my/education/story.asp?file=/2010/7/18/education/6674638).

By 2002, the technical and vocational sector comprised 32 institutions (15 polytechnics and 17 community colleges), and enrolled a total of 28,663 students (Ministry of Higher Education, n.d). Over the rest of the decade, the sector experienced a significant expansion both in student numbers and providers.
Technical and vocational institutions tripled in number as did the total number of students, reaching 105,951 enrolments by 2010. A detailed list of the breakdown of student enrolments by type of institution attended is provided in Figure 16.3.

Figure 16.3 Malaysia: Enrolments in public tertiary institutions, 2010

![Diagram showing enrolments in public tertiary institutions]

Source: Ministry of Higher Education (2010b)

The tertiary system comprises five research universities, four comprehensive universities, 11 focussed universities, 27 polytechnics and 70 community colleges. In 2010, 462,780 students which comprised 81.4 percent of total enrolments were attending public universities, while the remaining 18.6 percent were enrolled at technical and vocational institutions, 15.4 percent in polytechnics and 3.2 percent in community colleges. These figures confirm that universities are still the nation's leading public tertiary education providers producing professionals across a wide range of discipline and contributing greatly to the national enrolment target of 40 percent of 17 to 23 year olds in tertiary education by 2010 and 50 percent by 2020.
The technical and vocational sector, on the other hand, while much smaller in size, still plays a significant role. The findings discussed above are consistent with those of other studies and suggest that there is a positive relationship between the expansion of the tertiary education system and the diversification process. A more diversified technical and vocational sector is necessary so that polytechnics and community colleges are able to provide a different style of instruction and curriculum to students from diverse backgrounds and age groups. This also reflects a focus on improving equity in tertiary education since everyone will have the opportunity to acquire new skills, upgrade existing skills and obtain a qualification demanded by the industry. The traditional model of tertiary education for a select few, therefore, is slowly being transformed through the expansion of the technical and vocational education sector. The need for a highly skilled workforce is enlarging the tertiary sector, albeit with the establishment of less prestigious institutions.

16.1 The driving forces of technical and vocational higher education

The government’s plan for diversifying and expanding the technical and vocational sector has been motivated by five distinct factors: access, cost, time, economic growth, and sustainability. In the next paragraphs, each factor will be discussed in more detail with specific examples.

Firstly, technical and vocational institutions are generally more accessible to those seeking further education, regardless of their socio-economic background, age, gender, and level of ability. As noted earlier, these institutions offer the opportunity to pursue a vocationally focused education which can lead to a bachelors degree. Polytechnics have lower entry requirements than public universities and therefore give a number of upper secondary graduates, particularly those who have been rejected by the public universities, an alternative pathway to higher education and obtaining a degree. Polytechnics provide these students with a solid academic
content and skills that are essential for four-year degree programs in universities. Community colleges, on the other hand, provide the easiest access to further education through their open-door admission policy. These institutions have made an important contribution to the public tertiary system by accepting anyone in the community who is motivated to learn or acquire skills. They are the only type of institution in the tertiary sector to create an accessible educational path to higher education for those students with poor academic standing. Figure 16.4 describes the possible pathway options for these students. They may begin their journey at the certificate level and advance through diploma programs later before transferring to public universities.

Figure 16.4 Malaysia: Alternative access pathways to public university education

Note: The symbol ▲ refers to exit/work

There are a number of alternative pathways for entry to university education after completing upper secondary level, Form 5. Those students with good results in SPM can apply for entry to diploma courses at selected public universities or polytechnics. Completion of a diploma level course gives them eligibility for entry to undergraduate courses. Students in polytechnics can apply to public universities for enrolment in undergraduate courses or remain in polytechnics to pursue advanced diploma courses. If students earn a minimum academic result, they have a chance for entry to certificate courses at community colleges. If they successfully complete the certificate courses, they are eligible for diploma entry at the same institutions or transfer to either polytechnics or selected public universities. Their next destination
is public universities to obtain an undergraduate degree. There are also opportunities for students who do not have the formal qualifications. Their routes into higher education are long and complex. They can start with preparatory programs, followed by certificate module levels. They are required to complete all course modules in order to get a certificate at community colleges. Then, they can apply for further diploma study at polytechnics or selected public universities. Finally they may earn an undergraduate degree from a public university.

The admission requirements for entry to further education, however, vary depending on the institution level, as presented in Figure 16.5.
The chart shows that community colleges have the lowest admission requirements among all institutions. National Modular Certificate (Sijil Modular Kebangsaan, SMK) programs accept all students as long as they are Malaysian citizens above 17 years old. This is the only requirement, and poor academic performance of students...
in the SPM examination does not disqualify them from attending a community college. From this minimum level of achievement, students can attend any modular training program that fits their needs. For example, an Electrical Installation Certificate is split into four modules, each module running for four months. Students are awarded a SMK certificate upon completion of each module. After successfully completing all four modules, they are awarded a College Community Certificate (Sijil Kolej Komuniti, SKK-M) and are eligible to apply for entry into a diploma program in polytechnics or selected public universities. Those wishing to enrol directly in the SKK-T program, however, still need to pass the SPM examination with at least one credit in any subject. The minimum requirement to obtain the SPM certificate is simply a pass in Bahasa Melayu. There are only four programs offered under this direct entry scheme, namely computer support systems, architectural drawing, food processing and quality control, and agro-industry. Knowledge of English is not required for admission to community college programs.

Taking the Diploma in Engineering or Information Technology as an example, the entry requirements of polytechnics can be compared with those of public universities. The requirements of the former institutions are less rigid since applicants must possess only five credits (a minimum average of C grade, between 50 and 54 percent): one in mathematics or additional mathematics, one in either a science, technology or vocational humanities subject, and three in any other subjects. They must also gain a pass in English language. University Malaysia Pahang (UMP) and University Technology of Malaysia (UTM), on the other hand, set a higher standard for admission into a diploma program in civil engineering. These two public universities have similar entry requirements, except for English language proficiency. A candidate to UTM, which is a well-established research university, must obtain a D (between 45 and 49 percent) or higher in English, but UMP, a newer university (focussed, not research), accepts candidates with an E (between 40 and 44 percent) or higher.

The less stringent admission requirements and hands-on activities at technical and vocational institutions have attracted many male students. In 2010, we see a gender pattern in which public universities enrol higher numbers of women, while
polytechnics and community colleges enrol more men. This is illustrated in Figure 16.6.

Figure 16.6 Malaysia: Percentage distributions of enrolments by gender and types of institutions, 2010

The graph shows that student enrolments by males predominated at polytechnics and community colleges. The gender distribution in community colleges was 60 percent male and 40 percent female, while polytechnics enrolled 57 percent males and 43 percent females. Public universities, on the other hand, were female-dominated institutions enrolling 60 percent females and 40 percent males. This finding indicates that as well as having different occupational and course aspirations, female students perform significantly better in school than males, enabling them to enrol in universities in higher numbers. Male students are more likely to attend technical and vocational institutions that encourage hands-on learning activities as opposed to theory-based learning at universities. While their learning style and preferences may be for hands-on learning, they are also required to do some theory as a diploma or certificate course is not simply ‘practical vocational training’.

The second factor driving institutional diversification is cost. Technical and vocational tertiary institutions generally cost the government less than research-
intensive universities. Infrastructure costs are lower, as are general operating costs, but the biggest difference in recurrent costs relates to salaries. Public universities have more highly credentialed staff who attract higher rates of pay. Figure 16.7 provides a comparison of academic staff by levels of qualifications in three different institutions.

Figure 16.7 Malaysia: Percentage shares of academic staff by academic qualifications and types of institutions, 2010

In 2010, the teaching staff in public universities consisted of 30,252 of whom 30.4 percent had doctoral degrees, 54.3 percent had Masters degrees and 14.3 percent had bachelor degrees. About one-third of polytechnic academic staff had Masters degrees, dropping to 17.8 percent at community college. Those with PhDs were minuscule in number – 0.2 percent in polytechnics and 0.1 percent in community colleges.

For many students, a major attraction of technical and vocational tertiary institutions is their low cost. Polytechnics and community colleges offer an affordable qualification since the tuition fees are highly subsidized by the government. The low cost of attending these institutions makes them widely accessible, particularly to students from economically disadvantaged backgrounds and those living in regional
and rural areas. The tuition fees in polytechnics and community colleges are much lower than those of public universities, as shown in Figure 16.8.

Figure 16.8  Malaysia: Total tuition fees for selected courses by type of institution


As technical and vocational institutions, polytechnics and community colleges impose a standard tuition rate for certificate and diploma level courses of RM200 per semester. Thus, the total fees are RM800 for a certificate and RM1200 for a diploma. In fact, only RM10 per month is charged to students attending SMK courses of three to six months’ duration in community colleges. By comparison, students in public universities have to pay higher fees since these institutions have higher costs and are also perceived as being more prestigious than technical and vocational tertiary education providers. In this example, the fee for a diploma program at UMP is RM1600 higher than at polytechnics and community colleges, and the cost for a bachelor degree in engineering can be as high RM8176 at UM, a research university. Therefore, it is difficult to ignore the obvious financial benefit of going to polytechnics and community colleges.

The third factor is time. Technical and vocational tertiary institutions train and supply skilled workers within a short time period, with certificate programs in polytechnics and community colleges requiring only four semesters of study.
Completion of diploma programs in community colleges for students with a community college certificate requires an additional six more semesters, while diploma students in polytechnics may complete the course in four to seven semesters. These short courses allow students to enter the labour market with relevant technical and vocational skills whereas undergraduate courses offered by public universities are longer in duration. Figure 16.9 shows the findings of graduate tracer studies conducted by MOHE in 2011 on graduates from 39 community colleges, 22 polytechnics and 21 public tertiary institutions (including KTAR) within three to four months after completing their studies. The bar chart at the top indicates the number of graduates by institution and the graph below shows the percentage distribution.
According to the study, 51.6 percent of public tertiary institution graduates were employed in 2011. Polytechnic and community college graduates experienced similar employment levels, at about 50 and 51 percent, respectively. However, graduates from community college were the least likely to move on to higher levels.
of education. This is probably due to the fact that these inexpensive institutions are more accessible to students from poor backgrounds who cannot afford to pay for higher education expenses. However, 35 percent of them were unemployed since employers are increasingly seeking more highly educated and highly skilled university graduates in order to achieve maximum productivity.

The fourth motivating factor for institutional diversification is economic growth. The setting up of technical and vocational tertiary institutions in rural and remote areas can contribute to economic development due to increasing overall population and employment opportunities. Community colleges in isolated and remote areas of Sabah, Sarawak and Kelantan have considerably improved infrastructure and new technology in services such as electricity, water supply, transportation, and communication. They also provide economic opportunities and create jobs as well giving rural and remote dwellers the educational opportunity to gain the skills and knowledge required by the local industry. Since 2001, the government has been working towards achieving its goal of building one community college in each of the 193 electoral constituencies. By 2010, there were 70 community colleges and 27 polytechnics across the country, as shown in Figure 16.10.

**Figure 16.10** Malaysia: Number of polytechnics and community colleges in Malaysia 2010

Source: Ministry of Higher Education (2010b)
As the figure shows, all states in Malaysia have at least two polytechnics and two community colleges with the exception of Perlis. This is probably due to the fact that it is the smallest Malaysian state. However, community colleges are unevenly distributed across the country with more of them located in the developed states and fewer in the less developed states. By contrast, the distribution of polytechnics is more even.

Finally, the expansion of technical and vocational tertiary sector is a strategy to expand the economy. Since Malaysia needs more and more skilled employees due to the emergence of k-economy, it must invest in human capital by training and retraining its workforce in order to keep up with economic restructuring and to ensure that the country has a continuous supply of workers with the right skills, knowledge, and abilities, which in turn will ultimately lead to positive economic outcomes. In addition, the technical and vocational tertiary sector has the potential to educate and train workers in the rural locations to the required level in order to improve their economic and social status.

### 16.2 Issues in technical and vocational tertiary education

There is no denying the fact that the technical and vocational tertiary education sector has made many advances over more than three decades. It has become an important part of the tertiary education system, providing training in technical and vocational fields to meet the changing needs of a modern workforce. The findings discussed in this section suggest that technical and vocational tertiary education has played a prominent role in promoting economic mobility. Polytechnics support economic development by producing a pool of qualified and trained employees for the educated workforce, while community colleges are committed to lifting the state’s economy through vocational education. Thus, these two providers will ensure that Malaysia has a workforce with the right skills and knowledge to meet the economic needs.
In addition to their significant contribution to the economy, technical and vocational tertiary institutions also create opportunities for social mobility. With less strict entry requirements and lower tuition fees, technical and vocational tertiary institutions open many doors for students regardless of their background, income, or secondary school achievement. By gaining an educational qualification, economically disadvantaged students can potentially improve their social ranking.

In reality however, large numbers of graduates who have attended technical and vocational tertiary institutions are unemployed, even though job opportunities for semi-skilled or skilled workers remain unfilled. While this sector has been highly successful in providing educational opportunities to a wide range of students, having a qualification does not guarantee future employment. The employment prospects of community college graduates are the worst among all public tertiary institution graduates. In 2011, three out of ten (35.4 percent) were without a job between three and four months after graduation. This situation raises three issues: the low quality of graduates seeking to enter the labour force, the low progression rate to the next level of study, and the need for a seamless system of tertiary education.

The basis for getting a well-paid job begins with a good education. Many students from public tertiary institutions, however, experience difficulty finding a job after graduation. This is due to the relative value of the credential issued by different tertiary providers and whether it reflects inadequate skills and training. Certificate holders suffered the highest jobless rate in 2011, at 29.6 percent, followed by bachelors, diploma and advanced diploma holders with 24 percent each (Ministry of Higher Education, 2011a). It raises the issue of the value of low level credentials and the perception of the relative quality of graduates. It appears that a community college certificate does not sufficiently distinguish its holder from other job applicants who are cheaper to employ but who do not hold any recognised credential. In other words, the certificate holders have little to no labour market advantage. Although these graduates have obtained higher qualifications, they may not have the right skills required for the available jobs. A skills mismatch arises when the curriculum does not match the necessary skills needed in the labour market. A considerable body of literature has pointed to several reasons for poor qualification match such as outdated teaching methods and curricula, inadequate supply of
qualified and experienced instructors, lack of equipment and instructional materials, and weak linkages between tertiary education and industry.

The relative value of qualifications, however, is not the only issue in relation to the different employment rates among graduates. Even university and polytechnic graduates face unemployment due to their lack, in some cases, of basic employability skills such as communication and teamwork skills, critical thinking and problem solving. A survey by the Malaysian Employers Federation (MEF) on salary rates for executives in 2010 found that English communication proficiency was the most important factor in getting a job. “Sixty-eight percent of the companies surveyed named communication skills as the top quality required in job applicants, followed by working experience (67 percent), interpersonal skills (56.2 percent) and passion and commitment (55.7 percent)” (Azizan & Mun, 2011, http://thestar.com.my/news/story.asp?file=/2011/4/10/nation/8454838&sec=nation).

However, approximately 30 percent of 132,000 students who graduated from public tertiary institutions, namely public universities, polytechnics and community colleges, scored Bands One and Two in the Malaysia University English Test (MUET) (Abu Bakar, 2007; Chapman, 2007). Note that MUET are graded in 6 bands, from the lowest Band 1 to the highest Band 6. This finding indicates that students’ lack of English language skills is likely to affect their chances of getting a better job, particularly in the private sector, due to the fact that most employers currently seek candidates that have relevant qualifications with proven skills and positive attitudes. Without strong English language skills, these students are at a greater risk of being unemployable in today’s highly competitive job market. If this is indeed true, many community college graduates may end up being jobless because of English language deficiencies.

Technical and vocational tertiary education graduates have been associated not only with the highest unemployment rate, but also the lowest progression rate to higher levels of education. This finding indicates that there is a tendency for the graduates to overlook or ignore the long term benefits of higher education. They may be deterred from paying tuition fees and foregoing an income while getting higher qualifications. The decision to go into the workforce, however, offers limited benefits since they are
only able to find low-paid positions with little job security and career advancement. Figure 16.11 shows the salary differentials by qualification levels in 2010.

Figure 16.11  Malaysia: Monthly income of employed graduates by award level, 2010

Source: Ministry of Higher Education (2010b)

The graph shows that students graduating with a bachelors degree have far greater earning capacity than those with a diploma or certificate. The most remarkable finding was that 95 percent of certificate holders earned no more than RM1500 per month. In fact, more than half of them received RM1000 or less in earnings per month.

The findings above reveal that while obtaining a certificate enables those with a lower academic performance to gain the skills and knowledge for workforce entry, it is not enough to enhance future career opportunities because increasing numbers of well-paid jobs require at least a four-year degree. Although continuing their education to a higher level may be a better option for them, there is a growing concern that technical and vocational graduates find it harder to gain entry into university because the process of admission is not always smooth. The reason for this is not clear, but the issues concerning higher education quotas and the applicants who are not achieving the minimum academic standard may provide possible
explanations. The evidence from the 2011 tracer study shows that about 27 percent of unemployed graduates from polytechnic and also community colleges were still waiting for a further study placement between three and four months after completing their education (Ministry of Higher Education, 2011a). Due to data constraints, no reliable data are available in order to analyse student transition from technical and vocational education into higher education at the university.

Government policy has created various educational pathways to higher education and the opportunities to progress to the highest level of education have opened many doors for students, particularly those from underrepresented groups. The progression routes, however, may be blocked when there is a lack of cooperation between tertiary institutions. There is thus a strong need for establishing a seamless pathway that allows a smooth transition from certificate level to undergraduate programs. All tertiary institutions must work in close partnership and a strong connection between different education sectors is necessary to remove the barriers to educational advancement. Although different providers have different institutional models, flexible programs of study are reasonably required to accelerate student mobility between institutions, mainly from the non-university to the university sector. By building a seamless higher education system, it becomes possible for those with lower educational levels to obtain a bachelors degree and upgrade their skills.

16.3 Conclusion

In summary, technical and vocational tertiary institutions make a direct impact on the entire education system by providing access to higher education for those students who are unable to move directly from secondary school to post-secondary education, either by continuing with Form 6 or by entering matriculation (pre-university programs). In economic terms, these institutions are becoming increasingly important in today’s k-economy by ensuring a supply of skilled workers at all levels of the workforce, particularly in scientific and technical fields. Technical and vocational tertiary institutions, therefore, must move forward to continuously improve the
quality of education services and ensure excellence. There is a great need for highly qualified and experienced academic staff to achieve high learning standards.

However, the benefits of graduating from technical and vocational tertiary institutions are questionable. Although these institutions are opening educational doors for many students, particularly those from disadvantaged groups, many graduates from community colleges are at risk of being unemployed or engaged in low paid jobs. It hardly needs to be said that community colleges provide opportunities for every student, but do not guarantee future returns. This could suggest that technical and vocational education should serve as a key tool to generate benefits to all individuals in making major life changes, mostly to those students from low income backgrounds who have no other choice than to attend the low-cost public tertiary institutions due to economic constraints. Students from middle to high income families, on the other hand, can choose from a wide selection of private institutions which although more expensive, possibly offer a better quality education and a higher return on their investment.
CHAPTER SEVENTEEN

GROWING ROLES OF THE PRIVATE SECTOR IN MALAYSIAN TERTIARY EDUCATION DEVELOPMENT

Private tertiary education has a long history in Malaysia beginning with the establishment of the first private college, Goon Institute, in 1936. From a small subdivision of tertiary education providers, private sector participation has undergone remarkable growth, particularly after the financial crisis of 1997. Tough economic times during that period placed challenges on the public provision of tertiary higher education as the Government, with only limited resources, found itself under pressure to meet the huge demand for higher education. The private sector was therefore encouraged to play a more active role in the provision of tertiary education by setting up more universities and colleges to meet the rising demand. The greater involvement of the private sector from the late 1990s has significantly expanded the tertiary education sector in Malaysia.

This chapter discusses the nature and growth of private tertiary education providers in Malaysia. It explores the ways in which the private sector has provided educational opportunities to a range of students. With many private tertiary institutions offering multidisciplinary programs across many locations, students are able to pick and choose the institution that matches their interests and needs. In addition, growing competition between public and private sectors should improve the quality of tertiary education in the country as a consequence of competing with each other to attract potential students. Along with the benefits, however, there are several issues emerging from the expansion of private tertiary education. The major concerns are how to ensure quality of provision and outcomes in the face of the rapid growth of the private sector and whether the growth of this private sector has helped reduce social inequalities by increasing access to Malaysian higher education and improving student outcomes.
17.1 Hierarchically structured private sector

In order to expand the choice of institution at the tertiary level, the government has come up with a strategy to categorise private tertiary institutions into two groups, namely private university status institutions and private non-university status institutions. Private local universities, foreign universities with campuses in Malaysia and university colleges are generally referred as private universities. A university college is regarded as a small scale private university that, “1) awards its own degree qualifications, (2) has an enrolment around 10,000 students, (3) offers 70 percent degree courses and 30 percent diploma courses, and (4) is practice and application oriented” (Goi &and Goi, 2009, p. 171). The non-university status institutions are called private colleges. Figure 17.1 illustrates the distribution of private tertiary institutions operating in 2010.

Figure 17.1 Malaysia: Distribution of private tertiary institutions, 2010

There were 452 private tertiary institutions in Malaysia in 2010, of which 23 were categorised as local universities, five foreign universities, 21 university colleges and 403 colleges. It is important to note that the private local universities had 24 campuses spread across Malaysia. All of these private tertiary institutions are
independently owned and operated, mostly by private companies, and they do not receive government subsidies.

Private universities and colleges offer a wide variety of study options from certificate level courses through doctoral degrees. However, as they prioritise teaching and learning over research, the vast majority their students are enrolled in bachelors, diploma and certificate programs, as demonstrated in Figure 17.2.

Figure 17.2 Malaysia: Percentage share of enrolments, by type of private institution and award level, 2010

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Private colleges</td>
<td>12.5</td>
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<tr>
<td></td>
<td>62.4</td>
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<td></td>
<td>23.8</td>
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<tr>
<td>Private universities</td>
<td>4.1</td>
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<td></td>
<td>60.4</td>
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<td></td>
<td>24.5</td>
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<td>9.7</td>
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Source: Ministry of Higher Education (2010b)

In 2010, the majority of students at private universities were enrolled in bachelor degree programs (60.4 percent), compared with private colleges where a similar percentage of students were undertaking diploma courses. Through their collaboration with foreign higher institutions, these colleges also enrol a small number of students in bachelor degree programs. The degrees, however, are awarded by the foreign universities as these colleges are not permitted to confer degrees. Both private universities and colleges offer a wide variety of fields in which students can study, as shown in Figure 17.3.
Each type of institution responds to different educational needs. The most sought-after disciplines at both institutions are social science, business administration and law. At private universities, the next three disciplines chosen by students are: engineering, manufacturing and construction; science, mathematics and computing; and education. Private colleges, on the other hand, emphasize health and welfare, arts and humanities; and science, mathematics and computing. Agriculture and veterinary science, with an enrolment of only 0.3 percent, are not a popular field of study and are only offered in private colleges.

Tuition fees at private universities are much higher than at private colleges. Figure 17.4 compares tuition fees for a bachelors degree in accounting at several private universities and private colleges to the same program at one of the public research universities, University of Malaya.
At one end of the scale, the cost of undertaking a bachelors degree in accounting at a private international university, in this example Monash University at Sunway campus, can be as high as RM148,710. At a local private university the fees are more moderate, ranging between RM40,000 and RM70,000. Private colleges have cheaper rates than private universities, between RM25,000 and RM31,000, but this cost is still considerable, particularly for students from low income families. At the other end of the scale, tuition fees at UM are the lowest among all institutions since this research university is heavily subsidized by the government. The cost of tuition at this public university is approximately a quarter that of private colleges and less than a seventh the cost of private universities.

Private universities are more established and better known than private colleges. They are usually large and well-funded by big corporations such as national oil and gas companies, power producers, publicly listed companies and political parties, or they are campuses of the world's leading foreign universities. Such funding enables these institutions to be equipped with better facilities and to provide campus environments to enhance the student’s learning experience, as well as offering a high quality education. A number of private universities managed to achieve the same recognition as public universities in 2009 SETARA. Eleven private universities were
rated Tier 5 (Excellent) and 14 other universities in Tier 4 (Good) along with 11 public universities. Those private universities in Tier 5 included Curtin University of Technology Sarawak Campus, Universiti Kuala Lumpur, Universiti Teknologi PETRONAS, Taylor’s University College and The University of Nottingham, Malaysia Campus. This rating listed them in the same group as five high-ranking research universities in Malaysia.

Some of private colleges on the other hand struggle to stay in business. They do not have their own buildings, operating instead from rented shop houses. Although they actively collaborate with overseas universities, these partners are among low ranked universities on world tables. None of the private colleges managed to be listed in SETARA 2009.

17.2 Growth of private tertiary education

The expansion of the private sector has given students even greater choice in selecting institutions. This expansion is illustrated in Figure 17.5 which shows the number of private institutions in 2003 and again in 2010.
From the graph, the most spectacular increase was primarily in the number of university colleges, from 5 in 2003 to 21 in 2010. In addition, the number of local universities rose from 11 to 23 and foreign universities from four to five, whereas the number of private colleges shrank by 116 during the same period. Private universities in 2010 were far greater in number than public universities established by governments (49 private universities vs. 20 public universities). This seven-year trend shows that the expansion of the private sector was driven by an increasing number of local university institutions.

The increasing number of private tertiary institutions has had a very significant impact on total enrolment figures. Figure 17.6 shows the share of enrolments across all institutional types by comparing 2003 with 2010 enrolments.
In 2003, the public sector enrolled 53 percent of all students in the country, while the rest of the students (47 percent) were attending private institutions. The majority of students (44 percent) enrolled in public universities during that year. By 2010, the public sector’s enrolment share decreased to 51.2 percent and public university enrolments decreased to 41.7 percent. Polytechnics experienced a slight decrease in their share by 2010 (0.1 percent), while community college enrolments rose by 0.6 percent.

The enrolment share for private universities, on the other hand, more than doubled over the same period, from 9.5 percent in 2003 to 20.3 percent in 2010, and the share for private university colleges rose approximately four times higher. The private colleges’ enrolment share shrank by 15.6 percent from 2003, the largest drop of any institution. These figures therefore provide evidence that private tertiary institutions were the leading players in the tertiary education industry by 2010 and have the potential to meet growing demand for higher education in the future.

The enrolment growth at private tertiary institutions between 2003 and 2010 was most likely due to increased international student enrolments. In 2003, there were
25,158 international students in private tertiary institutions across the country with the number increasing to 62,705 students by 2010. The breakdown by type of private institution shows that the distribution was 31.2 percent (19,589) in private universities, 26 percent (16,295) in private university colleges and 42.8 percent (26,821) in private colleges. Figures 17.7 and 17.8 seek to demonstrate the trend in local student enrolments at private institutions. There are no data available prior to 2008 to show the local student enrolments at private tertiary institutions according to the type of institution.

Figure 17.7 shows the number of local student enrolments in all types of institution over the period 2008 to 2011. What is interesting about this data is that there is clear evidence of a decline in enrolments among local students at private tertiary institutions by 2011.

**Figure 17.7** Malaysia: Local student enrolment by type of institution, 2008-2011

Overall, the aggregate number of local students in public institutions by 2011 was much larger than that in private institutions and showed a steady rise between 2008 and 2011. Private institution enrolments demonstrated an upward trend in the first two years but then declined to below 2008 levels by 2011. The enrolment rates in public universities increased by 81,552 between 2008 and 2011 and private
university enrolments also rose by 19,980 during the same period. Private university college enrolments showed marginal growth between 2008 and 2010 before dropping drastically to 33,311 by 2011. Enrolments at private colleges oscillated between 2008 and 2010 and shrunk overall by 27,453 over the three-year period. The technical and vocational sector had the slowest increase in enrolment among all institutions and is hardly noticeable on this graph.

The patterns illustrated in Figure 17.7 signify that local students give preference to public tertiary institutions over private ones. This is probably due to the higher quality of education at public institutions and at a very affordable cost. It may indicate that public institutions have been set up to cater primarily for local students, while private institutions have been chosen by both local and also international students. Figure 17.8 shows that public universities had a predominant role in providing tertiary education for local students between 2008 and 2011. Although the number of private universities outnumbered the public universities, the involvement of the private sector remained relatively small since they had a smaller enrolment share compared to the public sector.

Figure 17.8  Malaysia: The distribution of local student enrolment by type of institution, 2008-2011

The public sector enrolled 55.7 percent of all local students in 2008 and the other 44.3 percent of students attended private institutions. The enrolment share for the public sector increased to 60.9 percent, while the private sector share shrunk to 39.1 percent by 2011. The majority of local students enrolled in public universities, followed by private universities and private colleges. There was a significant improvement in enrolment achieved by public universities by 2011 and community colleges achieved a slight growth over the three years. The positive growth rates in public universities and community colleges indicate that they grew in capacity and offered more places to accommodate local demand. The enrolment share at polytechnics and private universities, on the other hand, did not change significantly between 2008 and 2011, while private colleges demonstrated a slight decrease. A remarkable enrolment decline of 3.3 percent occurred at private university colleges over the past three-year period.

The pattern of growth and development of private tertiary education in Malaysia over the last three decades reveals that there is a strong move towards private involvement in the provision of tertiary education to take a larger share of tertiary education market. There are several factors underlying the rapid growth in both student enrolments and the number of private tertiary institutions. Firstly, it is in response to the government’s policy to expand private higher education provision. In report entitled "Economic Transformation Programme: A Roadmap for Malaysia," published in 2010, it is stated that:

“The government is committed to unleashing the full potential of the private education sector by removing barriers to entry and growth. In return, we ask that the private sector take up the challenge, step forward and work with us on the journey to drive Malaysia towards high-income nation status.” (The Prime Minister's Department, 2010, p. 475)

The growing number of private providers adding to the supply-side of the education market has increased accessibility to higher education for a large number of students. Most public higher institutions have a quota of available places and their limited capacity has caused competition between students as only top ranked applicants with academic excellence obtain a place in public universities, particularly the research
universities. Figures 17.9a and 17.9b compare acceptance rates into public universities between students with SPM or other equivalent qualifications and those with STPM, matriculation or other equivalent qualifications for the period 2007 to 2012.

Figure 17.9a Malaysia: Number of applicants and acceptance into public universities (those with SPM - Form 5 or other equivalent qualifications), academic session 2007/2008-2011/2012


Figure 17.9b Malaysia: Number of applicants and acceptance into public universities (those with STPM – Form 6, matriculation or other equivalent qualifications), academic session 2007/2008-2011/2012

The number of places available for tertiary education among students with the SPM certificate is very limited. The rate of acceptance increased from 19.1 percent in 2007/2008 to 20.8 percent in 2009/2010 before falling to 18.4 percent in 2011/2012. Although the acceptance number rose by 36,124 over this five-year period, the number of applicants rose considerably more steeply from 68,110 in 2007/2008 to 104,234 in 2011/2012, resulting in an acceptance rate fall. The acceptance rate in 2011/2012 was the lowest of all years between 2007 and 2011 since only 18 applications were accepted out of every 100.

Applicants with STPM and matriculation qualifications, on the other hand, have a better chance of gaining a place into higher education, most likely because the number of applicants with STPM is far less than those with SPM. The acceptance rate for this group ranged between 60 and 66 percent for the period 2007 to 2011 before suddenly dropping to 39.6 percent in 2011/2012. This was probably due to a sharp increase in the number of applicants in that year, by almost 50,000. It also indicates that gaining a place at university is becoming more competitive. There are more applicants than available places at public universities.

Another factor is the growth of the private sector is that it reduces the burden on government higher education spending. As the sole provider of public higher education, the government is facing numerous challenges in meeting the increasing demand with the existing public resources. More students are entering higher learning institutions and there has been a huge increase in the public spending on tertiary education. Since 1997, the government has therefore decided to share the development cost of tertiary education by developing public-private partnerships. Under this arrangement, many secondary school leavers who qualify for admission to university can be redirected to the private sector. Figure 17.10 demonstrates how the cost of public tertiary education has burgeoned over successive five year plans.
The development expenditure on tertiary education has grown in every plan, reaching the level of RM1.6 million in the 9MP. In the wake of the Asian financial crisis 1997-98 and recognising that tertiary education makes a critically important contribution to the k-economy, the development expenditure on tertiary education as a percentage of overall education costs increased from 25.4 percent in the 7MP to 35.6 percent in the 9MP. So as to reduce the excessive burden on the government, the private sector has been encouraged to invest in higher education so that the shared responsibility of the private sector and government may speed up the process of developing and improving quality higher education.

In addition to the above factors, the establishment of private educational institutions is likely to deter students from studying abroad because they have the option of obtaining higher degrees at the campuses of foreign universities. Students may choose various degree options offered by these institutions such as twinning, franchised, split degree, distance learning and credit transfer programs. The aim is to discourage the outflows of foreign currency from Malaysia. “It was reported that in 1995, 20 percent of Malaysian students who were studying abroad cost the country around US$800 million in currency outflow, constituting nearly 12 percent of
Malaysia's current account deficit” (Sirat, 2005, http://jpt.mohe.gov.my). In addition, there is an increase in the foreign-exchange inflows due to the rising number of international students coming to Malaysia.

17.3 The changing roles of the private sector

During the early stage of its development in the 1980s, the private tertiary sector was regarded as a complementary provider to public tertiary providers. However, private tertiary education providers were not allowed to offer bachelors degree. Their focus was therefore on pre-university, diploma and certificate programs. However, a number of local private tertiary institutions created alternative routes to bachelors programs by collaborating with reputable international universities from overseas countries. They introduced '2+1' and '1+2' twinning programs. These arrangements require the students to study in Malaysia for one or two years and to complete the remaining part of their degree abroad at the partner university. The programs are identical in every respect to those offered at the university overseas. Students therefore obtain an international degree awarded by the partner university after completing their studies. The extension of these two programs is a 3+0 type for students to undertake the bachelors degree entirely in Malaysia, which is cost-saving and therefore a popular option. Marimuthu (2008, p. 274) reported that “only 19 private institutions were allowed to conduct the 3+0 degree programmes with 34 overseas universities comprising 17 from United Kingdom, 14 from Australia, and one each from France, Switzerland and the United States of America”.

By the late 1990s, both public and private universities were offering similar programs from the lowest certification level to the highest doctoral degree, and consequently their relationship moved from being complementary to competitive. Three private universities, which were founded between 1999 and 2000, were granted the authority to offer their own bachelors degrees during the same period. These universities are: Universiti Tenaga Nasional (UNITEN), Universiti Multimedia (Multimedia University, MMU) and Universiti Teknologi PETRONAS
(UTP). While both types of provider are expected to deliver high quality services, the private sector is likely to be more competitive because it is growing at a faster rate than the public sector.

As the private sector has grown, private providers have become a ‘catalyst’ in helping to create a hub for tertiary education in South-East Asia. Active participation of private providers is required to expand the tertiary sector and improve the provision of tertiary education in the country, producing quality graduates with the relevant knowledge and skills. The Prime Minister's Department (2010) reported that,

“Therefore, the Education NKEA focuses on the role of private institutions in leading innovation and driving growth in the industry. We see the private education sector as catalysts for industry transformation, and as indispensable partners in the government’s efforts to raise quality standards and to create an international higher education brand for Malaysia.” (p. 475)

The statement above shows that the private sector has been given a greater responsibility not only to drive economic growth through an expanded private tertiary sector, but also to support the government to gain a strong reputation around the world for providing quality higher education.

Although private tertiary sector is becoming a more significant competitor to public tertiary providers, this sector still serves to complement the public system. Private tertiary institutions, being profit oriented, have a strong commitment to undergraduate, diploma and certificate programs, while public universities have a central focus on undergraduate and postgraduate degrees. Figure 17.11 compares the programs offered by public and private tertiary institutions.
Figure 17.11 Malaysia: percent distribution of local student enrolment in public universities and private tertiary institutions by award levels, 2010

The pie charts show that the majority of enrolments at public universities are in undergraduate programs (61 percent), followed by diploma programs (21.4 percent), whereas private tertiary institutions have a bigger proportion of students undertaking diploma programs (43.5 percent), followed by undergraduate programs (40.1 percent). Private tertiary institutions do not offer matriculations program, but have 13.1 percent of students studying at certificate level. Postgraduate programs such as PhD and masters have higher enrolments in public universities as compared to the private tertiary institutions.

In order to maximize their profits, private tertiary providers avoid unpopular fields of study in preference to high demand and innovative programs that are most needed by
industry. For example, LimKokWing University of Creative Technology (LUCT) offers a Bachelor of Arts (Hons) in Broadcasting and Journalism and a Bachelor of Arts (Hons) in Games Design, while a Bachelor of Multimedia (Hons) in Virtual Reality is offered by Universiti TELEKOM Multimedia and a Bachelor of Engineering (Hons) Petroleum Engineering by Universiti Teknologi PETRONAS. All these undergraduate programs are highly relevant to industry needs. Figure 17.12 shows eight broad areas of study offered by private tertiary institutions in 2010.

**Figure 17.12** Malaysia: Number of private tertiary institutions by fields of study, 2010

![Source: Ministry of Higher Education (2010b)]

 Whilst the private tertiary providers offered a wide range of study options, a small number of programs predominated. The top five fields of study were business administration (237), information technology and communication (182), accountancy (158), engineering (118) and art, design and music (110). It is of note that agriculture was an insignificant program at private institutions. Furthermore, history and philosophy studies were offered at only two private institutions, while only 16 institutions offered economics in 2010. The reasons for these limited offerings may be two-fold. Not only are these fields of study regarded as unpopular, but they are also more established and successful at public universities. In an article by Fuller (1999) on one of the private colleges in Malaysia, previously known as Taylor’s College, he reports that:
“Most of the degrees offered by colleges like Taylor’s are science or business-related. Taylor’s dropped a history program last year because, one professor at the college said, the administration said there was no market for it. Administrators at private college defend their curricula, saying they are simply offering the courses that students want.” (para. 6)

Because of their size, some private institutions are unable to offer a breadth of courses. In some cases, they may specialize in a particular field of study. International Medical University, Malaysia (IMU) and Asian Institute of Medicine, Science and Technology (AIMST) focus on medical programs, while LimKokWing University of Creative Technology offers arts and design programs.

In Figure 17.13, a comparison is made of undergraduate enrolments at public and private tertiary institutions by fields of study. Note that total student enrolments are represented since enrolment data by field of study does not distinguish between local and international students.

Figure 17.13 Malaysia: Undergraduate enrolment shares by award levels and fields of study at public and private universities, 2010

Source: Ministry of Higher Education (2010b)
The graph highlights several interesting findings. Firstly, public universities compete with private universities for the share of enrolments in three fields of study namely: science, mathematics and computer; social science, business and law; and health and welfare. Secondly, enrolments in engineering, manufacturing and construction, arts and humanities, and services are significantly higher in public universities. Thirdly, agriculture and veterinary courses are only available in public universities. The reason for the relative low enrolment in education at public universities is that training for primary and secondary school teachers is mostly carried out by Institutes of Teacher Education under the direct auspices of the Ministry of Education Malaysia. Public universities focus on secondary teacher training programs which make up a relatively small proportion of the tertiary education field of study. Private universities, on the other hand, offer various educational programs such as early childhood education, educational administration, English studies and TESL.

These findings provide further evidence that private universities still complement, rather than compete with public universities. There is, therefore, no doubt that the private universities in Tier 5 cannot, and would never be able to, overtake the research universities in Malaysia since these two sectors have different focuses, including their missions and roles. Private universities, however, should be viewed as competitors to comprehensive universities, and particularly to focussed universities. This is because ten out of twelve focussed universities are relatively ‘young’ universities which were upgraded to full university status in the mid-2000s. They are in the early stages of building their reputations by improving and strengthening the quality of their existing academic programs and consequently they may struggle to find the balance between having a traditional teaching focus or being more research oriented.

17.4 The quality of private tertiary education

Although the government provides space for the private sector to take part more fully in tertiary education, the fact that private colleges outnumber private universities as
well as public tertiary institutions has become a serious concern. Out of 476 private tertiary institutions in Malaysia, 85 percent are private colleges. These colleges rely almost solely on student fees as their source of income, offering vocationally oriented courses to attract large numbers of students and occasionally entering into collaborative arrangements with overseas universities.

Between 2007 and 2009, the operating licenses of 78 private colleges were suspended because they had persistently provided sub-standard education services (Sabah Daily, 2010). In 2011, the Ministry of Higher Education took action against five private tertiary institutions located in Sabah for offering new courses without approval from the Ministry, for moving premises and for failing to renew their permits for their existing programs (BERNAMA, 2011). Recently, Alhadjri (2012) in The Sunday Daily reported that four private institutions, namely Lincoln University College, Kolej Seri Manjung, Institut Teknologi Lanjutan Sarawak and International College of Health Sciences, were fined between RM10,000 and RM60,000 for illegally offering a Diploma for Nursing program since 2011.

The biggest problem facing the students is when the degrees they earn at private tertiary institutions are not recognised by the government because those programs have not been approved and accredited by the Malaysia Qualification Agency (MQA) and Public Service Department of Malaysia (known as Jabatan Perkhidmatan Awam, JPA). As a consequence, these students are not qualified to work with the government or even to apply for further study at public tertiary institutions. For example, a group of seven graduates from one of the private university colleges in Kedah was astonished to discover that their courses were not approved by MQA (mStar Online, 2012a).

A major academic challenge facing private tertiary institutions is the lack of qualified teaching staff, especially those with doctoral degrees. This is another distinguishing feature of the difference between private and public tertiary institutions as evidenced in Figure 17.14.
The graph shows that less than eight percent of teaching staff in private tertiary institutions held doctorate degrees in 2010, 43.5 percent held masters, and 34 percent held bachelors degrees. A small, but significant percentage – 11.2 percent – held other qualifications, which could be certificate, advanced diploma or other professional qualifications. The reason for this profile is that private tertiary institutions do not have many post graduate students as they are most likely focusing on undergraduate degree and diploma programs. Thus, teaching staff with a Masters degree are more than qualified to teach in these the two programs. In most cases, a minimum of a Masters degree is required for employment as an academic staff member in a private institution, and even at some newly established public universities. However, serious problems can arise when public university lecturers take up part-time teaching positions in private institutions. Public universities struggle to retain their experienced academic staff and some private institutions hire those with academic qualifications, but without teaching experience or teaching credentials. In small private colleges, most of their teaching staff commonly hold only a bachelors degree. Due to data limitations, the number of teaching staff by type of private institution is not available. Nevertheless, the finding shown in Figure 17.14
confirms that private tertiary institutions lag far behind public universities in hiring qualified academic staff.

The other issue surrounding private tertiary institutions is whether their graduates are able to compete with those from public universities. Figure 17.15 on employability status of graduates from both institutions may seem to provide the answer to the question.
Figure 17.15 Malaysia: Number and percentage share of graduates by employment status and type of institution, 2011

Source: Ministry of Higher Education (2011a)
Note: Public tertiary institutions refer to public universities and KTAR

Figure 17.15 shows that private tertiary institutions had the highest percentage of graduates employed within three to four months after completing their studies in 2011 as compared to the other public tertiary institutions (56.7 percent: 51.6 percent). However, the percentage of unemployed graduates was still quite high, standing at 26.8 percent. In addition, their graduates were the second least likely, after
community college graduates, to move on to higher levels of education. From these findings, it may be inferred that students who attend private tertiary institutions have a better chance of quickly gaining employment in the competitive job market. This is probably due to their comparative advantage of having a good command of spoken and written English that enables them to communicate clearly and effectively. Having an internationally recognized bachelors degree from a well-known foreign university is another factor, as many graduates from private universities are regarded as being more marketable than their counterparts in public universities.

17.5 The issues of inequality

The expansion of private tertiary education which might be seen as one of the ways to make tertiary education more widely available has in fact resulted in educational inequality. Instead of ensuring that all students have more equal access to quality public tertiary education, the government has established a parallel institutional structure to cater to the demands of particular groups, with each system of tertiary education having its own language of instruction. English language is widely used in private tertiary institutions, while public tertiary institutions have mainly used the national language, Bahasa Malaysia, as a medium of instruction. However, they are increasingly using English and most mathematics and science based courses are also taught in English. The language differences have therefore caused social separation at tertiary institutions. Students who are weak in English are less likely to go to private tertiary institutions. This has led to situations in which Malays are overrepresented in public tertiary institutions and students from rural areas choose not to study in private university or colleges.

The so called for-profit private education providers have reacted quickly to opportunities and have focused on earning maximum profits. The reality is that they often offer a high-quality education at a high cost so as to generate high returns to their investors. With the cost of private education rising every year, what type of student can afford to attend private tertiary institutions? Due to confidentiality, there
are no data available to indicate ethnicity and socio-economic status of students attending tertiary institutions in Malaysia. However, it is common knowledge that Malays, the majority ethnic group, predominate at public universities, while many Chinese students prefer to enrol at private universities. Some Chinese families consider sending their children to study at overseas universities instead since they are more affluent than other groups, as shown in Figure 17.16.

Figure 17.16  Malaysia: Median household income per month, 2009

Source:  Malaysia (2011)

In 2009, the median income in Malaysian was RM2,830 per month. Chinese households had significantly higher incomes compared to the national average, while Bumiputera and other racial households, excluding Indians, had low median household incomes. This means that racial separation due to economic factors may exist in tertiary education such that more Malays attend public universities, while Chinese and, to a lesser extent, Indian students can afford to study in private universities. Access to public universities however is highly competitive and applicants are required to demonstrate excellent academic performance. Students from poor families are more likely to have lower grades at school and to have financial problems as well. Thus they have very limited opportunities for education beyond secondary school due to academic causes and also financial reasons.
In 1999, the government of Malaysia established the National Higher Education Fund Corporation (PTPTN) specifically to provide loans to students who are accepted into public or private local universities, but are unable to afford the fees. A study by the National Higher Education Research Institute (Institut Penyelidikan Pendidikan Tinggi Negara, IPPTN) entitled ‘Student Loan Scheme and Human Capital Development: The Case of PTPTN’ in 2006 reported, however, that the majority of loan recipients were from families whose incomes were greater than RM5,000 a month. The details of the findings are shown in Figure 17.17.

Figure 17.17 Malaysia: Proportion of borrowers by family income, 2006

![Figure 17.17](image)


Sixty-nine percent of the loan recipients had the capacity to self-finance their college costs, while the other 31 percent might struggle to manage their financial resources and experience large amounts of debt burden. It was also reported that 89 percent of the borrowers were students from public universities, 2 percent from university colleges, 7 percent from private universities and 2 percent from private colleges.

In summary, the growth and expansion of private higher education in Malaysia is a great success, in term of being responsive to the growing demand for tertiary education. It is difficult, or even impossible, to exclude the private tertiary sector from the system because it helps the government to improve the quality of tertiary education and provides more spaces for students to continue their study. While some people, mainly those from low-income groups, might feel that private tertiary education providers should disappear or become smaller, these institutions have in fact grown more significant in the Malaysian higher education system. Most private
universities are providing high-quality education, but they are more likely to cater to students from wealthy families or to foreign students. Small private colleges, on the other hand, charge much lower tuition fees than private universities, but they are regarded as lower quality institutions. Although the government is opening up more opportunities for tertiary education through the private sector, they are of benefit to already advantaged students who obtain larger overall benefits as compared to the disadvantaged groups. Thus, the government needs to ensure that all private tertiary institutions provide the same academic standards and equivalent resources so as to minimise segregation of pupils within the private education system.

17.6 Conclusion

Malaysia has achieved remarkable success in transforming tertiary education from an elite into a mass system and in achieving a massive expansion so that the private and public sectors share more equal responsibility for the provision of higher education. The government’s aim is to encourage greater participation in higher education and ensure that everyone has a more equal chance to access learning opportunities provided by a wide range of tertiary educational institutions across the country. This initiative may have indirectly resulted in limiting foreign exchange outflows that students would otherwise spend on study abroad. Many private and public tertiary institutions are also involved in rebranding strategies to improve both their quality and their academic reputations. Through these strategies, they aim to cater to the needs of the local student population, as well as to attract more international students. As Malaysia positions itself to become a hub for tertiary education in south-east Asia, it is providing foreign academic programs from recognized universities in the USA, UK, Australia, Canada, New Zealand and many other universities across the world.

Malaysia has also achieved quantitative growth in both the number of students attending tertiary institutions and the number of public and private tertiary institutions. International student numbers on campus continues to grow, particularly
at private tertiary institutions. One of the major developments is that students are much more representative of the wider community. There are increasingly more females than males going on to tertiary education and children from underrepresented groups, such as those from low income families and rural areas, have greater access to higher education. However, this democratization of tertiary education is more likely to provide benefits to the middle and the working classes rather than the most disadvantaged.

The main challenge now is to strike a balance between growth, equity and quality of tertiary education. To date, the development has been uneven since there are still people who are in need of help having been almost completely left out of the system, and a number of tertiary institutions demonstrate unsatisfactory quality of teaching and learning. Resource constraints are the main factors relating to the low quality as these institutions face inadequate funding, employ less experienced staff and have poorer facilities for students. Of greater concern is that many graduates are not able to get jobs upon completion of their studies. Does this mean that Malaysian tertiary institutions are not producing qualified graduates to meet the needs of the industry? Again, the quality of academic programs offered at the tertiary education level is a big issue here. Therefore, the tertiary education system needs to ensure that all tertiary institutions gain reputations for high quality education and have strong human and physical resources to enable them to produce high quality graduates with the knowledge and skills necessary for faster and greater economic growth.
CHAPTER EIGHTEEN

LEARNING FROM MALAYSIAN TERTIARY EDUCATION EXPERIENCE

Malaysia’s Vision 2020 and the demands of a knowledge-driven economy have fuelled the momentum to transform the Malaysian tertiary education system from an elite into a mass in order to respond more effectively to emerging global trends and also to the growing public demand for access to tertiary education. The government has developed strategies for expanding the tertiary education sector, including increasing the number of tertiary institutions, upgrading several public and private non-university institutions to fully fledged university status, co-opting the private sector and implementing institutional diversification. These strategies have been implemented to ensure more equitable access to tertiary education for all students through a variety of pathways, both traditional and non-traditional. The previous chapters disclosed that the Malaysian tertiary education sector has expanded significantly from seven public universities in 1990 to 20 universities in 2010, with the addition of 49 private universities and hundreds of private colleges. These institutions represent a wide variety in term of their purposes, category of students, organisational and funding arrangements, and the laws that govern their operations.

The process of expansion and diversification of the tertiary education system has resulted in increased enrolment and participation rates of students. More students are now attending tertiary institutions than ever before and Malaysia is producing more skilled knowledge workers to support the human capital needs of the k-economy and to facilitate economic growth. Making higher education more accessible to all citizens, especially to the most disadvantaged groups, is another priority of the government in order to improve the living conditions and livelihood of its people. Although economic growth is important to the country, it should support fairness and social justice to ensure a fair economy that can benefit all citizens.
The previous chapters have covered the history and recent development of higher education in Malaysia and its connection to economic development, including details on various types of tertiary education institutions and the issues associated with them. The purpose of this chapter is to summarize the key findings from the previous chapters, as well as drawing major conclusions from the whole case study on Malaysian tertiary education.

18.1 A mix of economic and social objectives

Malaysia is a nation that has a diverse population made up of many ethnic groups, religions, cultures and languages. Its ethnic diversity has given rise to different forms of conflict when there has been a substantial gap between different ethnic groups mainly in income and educational attainment levels. Of the three major ethnic groups, the majority Bumiputeras (the Malays and indigenous peoples) are historically the most disadvantaged groups in the country and they still lag behind the Chinese and Indians on the socio-economic indicator scale. As discussed in Chapter 9, the median household income for Malays in 2009 was RM2,531 (RM299 below the national average) compared to RM3,631 for the Chinese and RM2,836 for Indians. In addition to ethnic issues, economic gaps still exist between different communities and states in the country. Those people living in rural areas are poor income earners. In 2009, the median household income for rural communities was RM1,829 (RM1,001 below the national average) compared to RM3,426 for people in urban areas (Malaysia, 2011). Moreover, certain states such as Kelantan, Terengganu, Sabah and Sarawak remain behind other states in economic development, and Sabah, which accounts for 19.2 percent of the total population, had the highest poverty rate in the country in 2009 (Malaysia, 2011).

The Malaysian government has acknowledged that the issues of poverty and disparities in wealth are more likely to hinder the country’s economic development and social progress as well as threaten its political stability. Progress towards becoming a high income and fully developed country by 2020 will move more
slowly if a small elite dominates the economy and lives in luxury while those at the bottom are struggling to survive due to poverty. For that reason, economic growth with equity has been one of the main objectives in every Malaysian Plan. As well as emphasizing economic growth and job creation, the government has also focused on closing the inequality gap so that everyone is treated fairly, regardless of their backgrounds.

There is nothing more important than encouraging access to tertiary education in order to close the poverty gap in Malaysia. The provision of alternative routes to tertiary education for the disadvantaged groups can lead to substantial improvement in their quality of life and contribute towards the improvement of Malaysian society. Arokiasamy and Nagappan (2011, p. 143) pointed out that tertiary education is a tool “to promote unity, improve poverty and bridge the social disparity gaps”. The expansion of the tertiary education sector has therefore become a key driver of both social and economic development. The k-economy requires the deployment of well-trained and highly educated workers to encourage creativity and innovation in the workplace and these requirements can only be fulfilled by those with tertiary level qualifications. Thomson (2008, p. 28) also supports the idea that tertiary education is becoming more important. He states that “higher education is increasingly recognised as playing a central role in human, social and economic development. Moreover, in contemporary ‘knowledge societies’ and in the face of pressures and changes from globalisation, this role is increasingly important, yet ever more complex.”

18.2 The strategy for achieving the economic and social objectives

Moving forward, Malaysia is striving to achieve a more appropriate balance between economic growth and social development. The pathway to a knowledge economy requires a massive expansion of tertiary education so that Malaysia is equipped with qualified, skilled workers to serve various industries and keep the economy growing. This expansion, however, must not jeopardize the quality of tertiary education and it
has to be combined with equity. Good strategic planning is essential to ensure that those people in the weakest economic position can improve their social standing. The government knows that the only way to deal with these huge challenges involves supporting the rights of all citizens to have education, including tertiary education, and working towards a social inclusion approach. The barriers to higher education must be removed so that the disadvantaged groups have the opportunity to stay in education from the primary through to the tertiary level.

With the continued growth of public spending on tertiary education and the need for a balanced budget, the strategy is to restructure the publicly funded tertiary institutions in order to optimize their performance and to support a further expansion of private providers so as to maximize the benefits and minimize the costs to the economy. Looking at the present system of the tertiary education, as shown in Figure 18.1, the government seems determined to create a multi-tiered system that offers a place to all students, though the places differ in access and impact.

Figure 18.1  Malaysia: Tertiary education structure by local student enrolment and number of institutions, 2010

Source: Ministry of Higher Education (2011a)
Note that the information in red refers to the number of institutions and the blue refers to the enrolment

The Malaysian tertiary education system has multiple tiers and is divided between public and private providers. The left hand side of the graph shows public tertiary institutions. These include public universities, polytechnics and community colleges. The right hand side represents private tertiary institutions. These consist of private local universities, private foreign universities, private university colleges and private colleges.
The public tertiary providers are non-profit organizations. They are funded by government, entry is highly competitive and Malay is used as the medium of instruction. By contrast, private tertiary providers are for-profit organizations and self-funded, including through fees and investment. They have flexible entry criteria and English is used as the medium of instruction in most institutions.

Each institution in this multi-tiered system has its own role in serving the needs of the country. The research universities are expected to provide a world-class university education and become members of the exclusive group of world-class universities. On the other hand, comprehensive and focussed universities aim at increasing participation and widening access to higher education. Polytechnics, for their part, have been entrusted to produce more skilled workers and semi-professionals mainly in technical fields. Community colleges provide skills and vocational training.

Private tertiary institutions are mixed. Some foreign and local private universities have high status, but there are many local and small colleges. These private providers attract more overseas students than their public counterparts, probably due to the foreign degree programs offered jointly with international partners and the use of English for teaching in class. The influx of international students to the private institutions is likely to keep growing and the government’s goal is for Malaysia to progress towards becoming a regional hub for educational excellence, providing world-class tertiary education in Southeast Asia.

The public and private tertiary sectors are regulated by different laws. The government-funded tertiary institutions are under the control of the Ministry of Higher Education (MOHE). The Government has corporatized public universities, beginning in 1998, which has enabled these institutions to conduct business activities, to gain more capital and to change their governance structure to a more corporate model. However, public universities are still required to refer to the Ministry before implementing any changes including funding adjustments. As far as courses offered are concerned, private tertiary providers have greater institutional autonomy with regard to human resource management, administration, student intake and tuition fees. However, they are closely monitored by the Malaysian Qualifications Agency (MQA), which comes under the MOHE. This agency is
responsible for the quality assurance of Malaysian tertiary education. As stated on its website,

“The main role of the MQA is to implement the Malaysian Qualifications Framework (MQF) as a basis for quality assurance of higher education and as the reference point for the criteria and standards for national qualifications. The MQA is responsible for monitoring and overseeing the quality assurance practices and accreditation of national higher education.” (MQA, 2012, para. 3)

The liberalization of the tertiary education market creates competition between the public and private sectors to attract more and better students. Public universities provide a comprehensive approach to university education, whereas private universities offer market-driven courses to give students the specific skills that match employer demand. The freedom allowed to private universities poses a potentially significant competitive threat, not so much to elite public universities, but rather to comprehensive and focussed institutions. Private universities are able to offer foreign degrees, which make them more attractive to students for employability reasons.

While the number of public and private universities has grown, the government has also emphasised the development of the non-university sector to promote social inclusion and its commitment to tertiary education. Non-university institutions include polytechnics, community colleges and private colleges. Polytechnics have far lower entry requirements than public universities, while community colleges maintain an open door policy which gives all citizens easy access to learn the skills required for employment. In most cases, small private colleges maintain flexibility in their selection criteria for admission. However, the entry requirements at private colleges are much less rigorous than at the private and public universities.

Although the intended plan of the government is to build a diversified mass system to make tertiary education more equitable, the multi-tiered system is in reality a hierarchically differentiated system where institutions differ according to their admission requirements, as illustrated in Figure 18.2.
This figure shows that the elite public universities (few in number) stand at the apex of the pyramid, while the large number of *non-university institutions* occupies the base. Moving down the pyramid, accessibility increases as the entry requirements of the different institutions become fewer. The research universities are placed on the top level because they have a highly selective admission process, based on academic merit. Comprehensive and focussed universities are at the second level with regard to entry requirements. Being private providers, local and foreign private universities tend to be more moderately selective, but more flexible about admission requirements than the public universities. They are positioned below comprehensive and focussed universities, but above private university colleges and private colleges. Polytechnics are located below the level of all private institutions because they have even lower entry requirements. Community colleges form the base of the pyramid since they have adopted an open-door policy (‘nil selection’).

This hierarchical structure not only indicates a ranking of tertiary institutions, but also suggests a social hierarchy. Low income students are most likely to be underrepresented in the selective tertiary institutions at the top of the pyramid. This is partly based on academic ranking of public and private providers, but is also partly based on the economic power of different families to access fee-charging institutions independently of academic merit.
Due to high demand and limited places, public universities select their students based on academic talent and achievement. In theory, this means that all high-performing students have an equal chance of getting a place in public universities regardless of their backgrounds. The ‘elite’ research universities, however, are restricted to a small set of students who have shown high academic performance in secondary school. Those qualified candidates who are rejected by research universities may get a second chance and be admitted to comprehensive or focussed universities. Not surprisingly, however, most students at public universities are more likely to come from wealthy and middle-class families because they have access to a wide range of resources and benefits at home.

The proliferation of private providers is supposed to absorb the excess students applying for places at public universities. These private institutions, however, are only suitable for those who can afford to pay the expensive tuition costs. In addition, students are normally expected to have a good command of the English language both written and verbal. This again favours students from wealthy families who can give their children more educational opportunities – access to a range of different tertiary institutions. Many wealthy parents are willing to pay expensive tuition costs for high quality and good reputation private universities or colleges, even though their children might not be high achievers. These private institutions serve as a safety net, creating options for less competent students who can pay fees so that they can stay in the education system and earn a degree.

However, high-achieving students from poor backgrounds have more limited opportunities to attend tertiary education. They struggle to achieve academic success in secondary school for the reason that they grow up in poverty and an educationally disadvantaged environment. Only a small number of them are eligible for entry to selective public higher educational institutions. Enrolment at private universities or colleges is a very costly proposition for them and it poses several dilemmas. It will be a waste of time and money if they are not able to complete their studies in the required time or they have opted to attend low quality private institutions. In addition, they are at greater risk if they do not have a good command of the English language or achieve a good academic standard. When the costs of attending private colleges or universities outweigh the benefits, the only choices available to them are...
polytechnics or community colleges. It therefore appears that students from low-income backgrounds who cannot afford fees tend to be channelled into public *non-university* institutions that have lower entry requirements, a shorter completion time and cost less. These *non-university* institutions, however, are more likely to offer a low quality of education due to their lack of qualified and experienced teaching staff and their inadequate facilities.

Poor students who are not academically successful are channeled directly into community colleges or government-owned industrial training institutes. Vocational education and training programs are the only pathway for them to learn job skills and to obtain a certificate. However, this option does not guarantee a wide range of job opportunities or a better future. As discussed in Chapter 16, the unemployment rate was highest among community college graduates in 2011 (35.4 percent) and only a small number of them (10.9 percent) progressed to further education after completing their studies.

In brief, the multi-tiered system is supposed to make tertiary education more efficient and more equitable. The presence of an ‘invisible’ hierarchical structure behind this system, however, is of major concern because as we move down the pyramid structure, the opportunity for tertiary education increases, but the quality of that education decreases. In this system, students from poor families are not getting maximum access to higher educational institutions even if they are academically talented. They do not have money to spend on private education and public institutions become the only option. For that reason, they are underrepresented in selective public universities and many of them attend the lower quality public, *non-university* institutions. In contrast, rich students who are not academically gifted have many options in both the private and the public sector. There have been, of course, a growing number of educated Malaysians, but largely among the wealthier. There is therefore a risk of wealth and power being concentrated in the hands of a relatively small group who have benefitted from the way the Malaysia tertiary education is organised.
The hierarchical structure also corresponds to the division of labour in the Malaysian economy with institutions taking on different roles to produce specific skilled human resources to drive growth. As illustrated in Figure 18.3, the pyramid can be divided into four groups based on the role of each institution in meeting Malaysia’s human development needs. The research universities occupy the top of the pyramid. Comprehensive and focussed universities, private local and foreign universities as well as private university colleges are those in the second level. The third level contains polytechnics, community colleges and private colleges. The base of the pyramid is comprised of upper secondary schools but may remain invisible to most citizens.

Figure 18.3 Malaysia: Division of labour based on academic ranking

The research universities (highlighted in red) are at the top of the pyramid and are undoubtedly the key drivers of economic growth through their research and development activities. They are making important scientific discoveries and technological innovations to promote economic development and successful transformation towards the knowledge economy. In addition, collaborative projects with external organisations such as a number of leading industries are an effective form of knowledge transfer from university to industry in order to encourage
technological innovation and development. These institutions strive to contribute directly to Malaysia’s human development goals via their postgraduate programs. The programs are designed to produce graduates (master or doctorate level) who are well equipped with the knowledge and skills required by industry. These people will become the country's leading thinkers in various fields and make significant contributions to labour productivity. They typically hold higher education degrees, earn high salaries and are the leaders of the organisations in which they work.

The institutions at the second level (highlighted in green) take on a greater role in the interplay between economic growth and social inclusion. Their responsibilities are more focused on teaching undergraduates rather than conducting research, and their graduates have the potential to be middle level managers involved in planning, execution and coordination of organisational activities. As professionals, they have some decision making and tend to enjoy job security.

On the third level of the pyramid, polytechnics and community colleges (highlighted in purple) attract many students from low income families. The lower entry requirements at polytechnics and open entry policy at community colleges have been developed specifically to widen participation in tertiary education. Private colleges also provide access to tertiary education for students from economically disadvantaged families, given that they have less restrictive entry requirements and charge lower tuition fees than those of private universities. Under their diploma and certificate programs, these institutions are expected to produce skilled and semi-skilled workers for various industries.

The educational institutions at the bottom of the pyramid are upper secondary schools that offer general education for 16 to 17 years old students. Those students who join the labour force after finishing upper secondary education are going to become either blue-collar workers in the labour-intensive sectors or low-level white-collar employees. They receive lower pay with few or no benefits and little job security.

Overall, the findings of this study suggest that academic ranking influences the division of labour. The opportunity to attend a highly ranked university or college, however, is strongly affected by the socioeconomic status, as shown in Figure 18.4.
The chart above shows three levels of socioeconomic hierarchy with the wealthy students at the top and low income students at the bottom. The few students at the top of the pyramid enjoy a full range of educational opportunities since they have a wide variety of resources and facilities at home and also strong support from well-educated parents. Students at the centre of the pyramid come from middle class families and mostly live in the big cities. The lowest level consists of poor students generally living in rural areas. Their parents are low-paid workers with low or no qualifications. These students usually cannot afford to pay for tertiary education and they need to seek financial assistance from the government. Most of them attend polytechnics, community colleges or least selective, low budget, private colleges. Only a small number of them decided to further their education within three to four months after completing their studies in 2011 – nearly 19 percent in polytechnics and 11 percent in community colleges. Although the progression rate to higher level study is small, it demonstrates that tertiary education is a vehicle for some upward social mobility. Those at the bottom can move up the hierarchy. Thus, it is of great significance when first member of the family graduates from a tertiary institution.
The Malaysian government has set itself the goal of increasing participation rates in tertiary education. The aim is to achieve 40 percent participation among the 17 to 23 age cohort by the end of 2010, 45 percent by the end of 2015 and 50 percent by the end of 2020 (National Higher Education Strategic Plan 2007-2010). A broad range of tertiary education reforms have been implemented to achieve the first target and efforts are ongoing towards the next targets. Figure 18.5 shows the target that has been set for the period between 2010 and 2020 and the achievements made thus far.

Figure 18.5 Malaysia: Participation rates in tertiary education: 2005, 2009 and targets for 2010, 2015 and 2020

Source: Ministry of Higher Education (2007a) & Malaysia (2011)

Although the participation for 17 to 23 year olds climbed from 27 percent in 2005 to 31 percent in 2009, the 2010 target was too ambitious to achieve by 2010. In addition, there is still a big gulf between the current and predicted participation rates and the 2020 target. It can thus be suggested that the current educational model is not achieving desired participation rate which will positively impact on Malaysia’s
development and its goal of becoming a high income, developed nation by 2020. There are three suggested explanations of this.

Firstly, the challenges facing the school system affect student access to the tertiary level. The growing number of students attending primary and secondary education come from a much more diverse cross section of Malaysian society and should deliver more students to tertiary education institutions. However, this is not the case. There are a significant number of students who do not attend secondary schools. The participation rate at lower secondary was 87 percent in 2010 and 77 percent at upper secondary during the same year. Moreover, the quality of primary and secondary education is uneven across Malaysia, with better schools tending to be located in urban areas and in more developed states, therefore leading to achievement differences between rural and urban students. The gap gets even wider in secondary schools, particularly in English language. Due to these challenges, there are cases of early leavers who never complete their secondary schooling and graduates who may not qualify for entry into the country’s leading research universities.

Secondly, the current tertiary structure is not inclusive enough to ensure equal opportunities for all students. Access to tertiary education, although improved, is still limited to certain groups of people. High achieving, low-income students may strive to get into top public universities, but end up attending low cost, two-year programs at public non-university institutions (polytechnics and community colleges). In this case, the objective of increasing participation in tertiary education among people from low socio-economic backgrounds may be achieved, but they tend to be channelled to low cost, low quality institutions instead of the high quality ones. These students are not paying for access to tertiary education with money (fees), but with low quality education they receive. Consequently, they are more likely to have low aspirations because there is not much opportunity to maximise their academic potential. Students from high income families, on the other hand, aspire to enter tertiary education even though they do not necessarily have good academic performance.

Thirdly, the public provision of non-university education is not enough to encourage disadvantaged students to attend tertiary education, particularly in underdeveloped states. In 2010, there were only two polytechnics and two community colleges in
Sabah; Sarawak was more fortunate to have two polytechnics and five community colleges. Consequently, low achievers and low income students in both states do not have choices in their access to tertiary education. The number of existing polytechnics and community colleges is not enough to provide places to all these students.

The issue of quality is also a major concern. The growing demand for tertiary education is simply met by the expansion of private sector. This expansion, however, is not increasing the participation rate of disadvantaged students nor is it improving the quality of tertiary education. Although the number of private tertiary institutions is much larger than public ones, some of the best private colleges and universities are not accessible to low income students due to their high cost. The growth in the private sector is found to be at the lower end in terms of prestige. The private sector as a whole is suffering from an excess of low quality institutions rather than having an abundance of the good ones. Moreover, the findings of this study have shown that the effort to increase participation in tertiary education has largely focused on the down-market institutions, specifically, polytechnics, community colleges and private colleges. The affordable tuition fees, lower entry requirements and greater availability have made these non-university institutions accessible to all, particularly to students from economically disadvantaged backgrounds and those living in rural areas. As a result, there has been a large increase in the number of certificate and diploma holders, rather than bachelor degree holders, since these institutions offer mainly non-degree programs. The main question now is, are these achievements good enough? The key component of the knowledge economy and the goal to achieve a developed nation status by 2020 require more than increasing the number of certificate and diploma holders.

As the tertiary sector expands, Malaysia therefore needs to find a good balance between quality and quantity. In addition, social equity also needs to be considered. Lack of equity could threaten the continuous growth in tertiary education enrolments if some groups are unable to make a contribution. Many public and private tertiary institutions in the country are mainly populated by students from middle and high income families. The low-income groups, from rural areas in particular, represent a significant proportion of the population and could significantly increase the
participation rate in Malaysian tertiary education. The population breakdown by income is shown in Figure 18.6.

Figure 18.6 Malaysia: Percentage distribution of households by income, 2009

In 2009, 7.3 percent of Malaysian families had a monthly household income of less than RM1,000. This group would therefore be required to spend one-tenth to one-fifth of their monthly income on tuition fees at a public university such as University Malaya (refer to Figure 16.8) and half or more of their income on fees at a private college. Those households who earn less than RM2,000 would need to spend one-tenth of their monthly income on public university education and more than one-fourth on private college education. The next 19.3 percent of the population who receive less than RM3,000 a month would use almost seven percent of their income sending their child to a public university and more than 16 percent for a private college. These three groups of Malaysian families are most likely to face financial barriers to participation in tertiary education as compared to the middle and high income households. The problem is even greater in rural areas: 74 percent of rural families receive household incomes of less than RM3,000, compared with 43 percent of urban families.
The above findings prove that low income students are facing financial difficulties which affect their entry into tertiary education. Only the best and brightest students can get an academic scholarship (merit-based financial aid) to pay for their education at private or public universities. Although public universities charge modest tuition fees, the chances of getting accepted are small since these selective institutions have more rigorous and competitive admission requirements than any other institution. Attending private universities or colleges, on the other hand, is a dream that can never become a reality for low income families. Private institutions cost more than public institutions and attending a private university is considerably more expensive than a private college. It is possible to obtain a PTPTN government loan, but a decision to take financial aid means debt upon graduation. Aspirations for higher education can be dampened by debt aversion. Consequently, these students face a dilemma between incurring direct and indirect costs of higher education, and sustaining the opportunity cost of not participating. In addition, the loan is not enough to cover the entire costs of education. In the end, low income students tend to go to a polytechnic or a community college, in which case, economic and academic factors merge. These factors are represented in a matrix form, as shown in Figure 18.7.
Achievement level and family economic background are the two major factors which affect the entry to different types of tertiary educational institutions. Low income students are under pressure to participate more, but they are blocked by financial and academic factors. Students from high income families with excellent academic performance have more opportunities as compared to their counterparts. They can afford and choose to attend either public or privately owned institutions as listed in Box 1. Those wealthy students with lower grades, on the other hand, are more likely to choose the three institutions in Box 2. Their first choice from those three would be the private colleges. Many of these private colleges are owned and staffed by non-Bumiputeras and they have close collaborations with many foreign universities and colleges. Due to financial barriers, outstanding students from low income families tend to go to the institutions listed in Box 3, preferring public institutions over
private ones because of the low tuition costs. Only a very small number of them qualify for public universities because they are unable to meet the high entry requirements. The rest of these students go either to polytechnics or to community colleges. There are also a small number of them who attend low budget, less selective private colleges. These colleges are completely owned by Bumiputera companies and have franchising arrangements with public universities. Low performing students from low income families have very limited choices compared with their higher achieving peers. They can only attend the institutions listed in Box 4.

18.5 Conclusion

Although institutional diversification in Malaysian higher education supports and promotes the equality of opportunity in tertiary education, not all members of the society have the same rights and access to attend high-quality tertiary education institutions. There is still an inequitable distribution of tertiary education opportunities between the rich and the poor. Diversification is multiplying options for students from wealthy families, but does little to assist the less fortunate groups. Students from wealthy families still have a far greater advantage over their poorer peers. More money means better educational outcomes for these students.

Poor students, on the other hand, continue to struggle to enter middle or high ranking institutions. The provision of educational assistance to the disadvantaged students at school level and financial assistance for tertiary education is not always enough and they may still remain in a lower-status position. Widening access to tertiary education in Malaysia must be accompanied by policies that ensure the right of all students to receive the same high quality education at all levels of education. Free primary and secondary education must be of high quality because good public schools can produce outstanding students and allowing a greater number of students a fair chance to attend high quality tertiary education.
CHAPTER NINETEEN

CONCLUSION: LEARNING FROM THE US EXPERIENCE

Developing countries tend to view developed countries as supplying ‘role models’ or at least policy options. Rich nations are seen as offering a guide to a potentially wealthy future, especially in education. Creating mass systems of higher education is a case in point. But there is a tension between what countries borrow and how well the borrowed policy actually works. While a policy such as privatisation might enjoy the prestige of having been applied in the developed world, applying it in the developing world may be very problematic. There is a need for local adaptation and contextualisation of policies if these are to suit the particular needs of people in a very diverse country like Malaysia where there are important differences in ethnic backgrounds, socioeconomic status and cultural values.

This thesis is intended to contribute to the body of research which enables developing countries to learn from the experience of more developed countries instead of repeating the same mistakes. As a source of policy ideas, the USA has become the benchmark for Malaysia as the country stands amongst the world's best higher education providers. By learning from the experience of the USA, this study seeks to draw out valuable lessons for Malaysia in moving toward expanding higher education systems and increasing participation with greater equity.

The USA and Malaysia are two countries which differ greatly. The USA is a highly developed nation – (the wealthiest, the biggest, the most influential and one of the world's most successful countries) – with the largest proportion of highly qualified workers in its labour force. It has been able to sustain strong economic growth and has for many years been the world's largest economy. For that reason, developing countries look to the USA as a potential model of success and they regard it as a leading global benchmark in the industrial sector and also in education. By contrast, Malaysia is still a developing country that is forging ahead to become a fully
developed nation by 2020. It could be argued that the differences between Malaysia and the USA are so great as to make comparison between these countries of very limited value, but it is also possible that a less-developed nation can learn from the experiences of a much more developed nation.

Malaysia has realized the important role of higher education in contributing to the development of the country. The relationship between economic growth and higher education has encouraged the government to expand the higher education sector. As this sector undergoes rapid expansion and diversification to increase university participation among young people, the country must ensure that it sets the right direction for higher education policy. This is to ensure growth is accompanied by equity, while quality is maintained and improved. A look at the US higher education sector can bring greater insight into past and present challenges facing higher education in a developed country, and these insights can help steer the direction of the higher education journey in Malaysia. The USA was the first country to pursue and achieve mass secondary education and mass higher education. It has a strong higher education system and is renowned for having many world class universities. In addition, this country is also a large and increasingly multiracial society – with various ethnicities comprising the white Americans and non-whites (or more specifically, African Americans, American Indians, Hispanics, and Asians).

Comparison of two contrasting nations, is a way of testing whether there can be a fruitful exchange of experience in the development of higher education policy, and whether a transition can be made from policy borrowing—an uncritical adoption of policies—to policy learning which involves a discriminating approach in which policies are shaped from foreign experience rather than simply adopted without regard to the different context. Policy learning can take the form of learning from mistakes as much as learning from what is evidently successful.

Malaysian higher education should be equally accessible across class, race, and gender in order to achieve both economic and social development. How to ensure the expansion of higher education meets its objective to promote equality of opportunities? As discussed in Chapter 2 (section 2.3), there is very little research that has been done on equity and growth of Malaysian higher education. In the little research that has been done on access and participation patterns, too little attention
has been paid to differences in access to different levels of higher education and
different types of institutions. Thus, there is no reliable evidence to prove that the
expansion of higher education has improved equity and access in Malaysia. In
addition, Malaysian higher education has not been viewed in the context of how well
the school system works. This is important to making sure all students complete their
primary and secondary education, and they are academically prepared for higher
education. To address these gaps, this study attempts to explore a wide range of
perspectives in both schooling and higher education.

Furthermore, few studies have addressed the issue of how policy has evolved with
reference to models in OECD countries, especially the United States. Policies such as
institutional differentiation and privatization of higher education have been
uncritically borrowed and applied in Malaysia without an adequate understanding of
the issues faced by the country of origin. This has motivated the researcher to explore
in detail the strengths and weaknesses of these policies in the Malaysian context.
This study then seeks to extract lessons learned for Malaysia which can provide
valuable insights to identify major steps that should be taken in order to make higher
education more effective and equitable. The findings of this study can assist policy
makers at all levels of government to understand the challenges facing the higher
education sector and to determine the right policy strategies for Malaysia.

In this final chapter, therefore, the question is posed, “What policy lessons can
Malaysia draw from higher education in the USA?” This chapter not only highlights
policy lessons, but in addition offers some suggestions and recommendations to
strengthen higher education in Malaysia. Several ways to improve equity in higher
education are suggested for Malaysia and a series of possible policy options is
recommended to achieve objectives both of access and quality in the Malaysian
higher education sector.
19.1 Drawing lessons from the US experience

The great expansion of higher education from an elite to a mass system (as discussed in Chapter 3, section 3.3), as well as its prestige and reputation has been a major policy success story for the USA. The US higher education system is among the best in the world. With over 4,000 public and private accredited institutions (as discussed in Chapter 3, section 3.4), the higher education system in the USA offers a great range of schools and programs (graduate and undergraduate) to suit a wide variety of student needs and interests. Many US public and private colleges and universities are known throughout the world for their high quality academic programs. In the 2014 Times Higher Education (THE) rankings, the USA dominates the list with more than 46 institutions in the top 100 (The Times Higher Education, 2014, http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking). In addition, the percentage of the U.S. population who have a tertiary education is quite high. This positive impact of mass higher education has been elaborated and detailed in Chapter 10, section 10.1.

While success stories are more likely to be emphasized, signs of failure are often ignored by policy makers. In a policy learning approach, however, policy failure is the most important area of lesson-drawing which can offer valuable knowledge since what works in one country may not work in another. Summarized below are findings from this study which suggest that American higher education has lost its focus.

a) The impressive growth and high rate of participation in US higher education remains inequitable. While benefits have flowed to much of the population, there has been inadequate progress in ensuring fairer access to higher education (as discussed in Chapter 7).

b) Students from advantaged groups have made tremendous progress over the decades, whereas poor students from minority groups continue to lag behind at all education levels, particularly higher education (as discussed in Chapter 8 and 9)
c) The expansion of the system in favour of already advantaged groups is very likely to have slowed down social mobility on the part of less advantaged groups and is contributing to the persistence of economic inequality in the USA over generations (as discussed in Chapter 10)

As shown above, these findings suggest that US higher education has developed as a mass system purporting to offer opportunity, but falling short on equity. Malaysia needs to take a critical view of its policy borrowings if it is to avoid repeating America’s mistakes. There appear to be five main lessons which can be drawn from this mixed pattern of mass opportunity and persistent inequality of access and outcomes.

1) The public school system must be fixed in order to achieve equity in higher education

A strong higher education sector that delivers benefits widely has to build from a strong academic base at the school level that is inclusive and supports high aspirations for every learner. Improving equity in higher education depends upon getting school education right. All students must have access to quality education early in their lives and they must be supported to stay in the system, completing high school and earning a diploma. In addition, the system must focus on low-performing schools to make sure that their students are getting the support that they need to progress. Having a good quality education at school level is more likely to create equal access to higher education for all students based on merit.

2) Institutional diversity in higher education does not ensure that all students are equally well served

The diversification of higher education is supposed to broaden access for all students. However, successful diversity strategies are of limited value in the absence of equity. The findings from the USA case study reveal that diversification does not support democratization of higher education since access to higher education is still highly
concentrated among white young people from high and middle income groups. In addition, the diversification of US higher education is regarded as a vehicle that creates complex hierarchical structures. Achieving growth through diversity by establishing two and four-year colleges and universities is supposed to provide pathways for everyone. However, it has exposed the system to selection based on income and ethnicity. Four-year institutions recruit more white students, while African Americans, Hispanics, Native Americans, and students from low-income families more often attend community colleges. This suggests that inequality is built into American higher education which enrols and retains many young people, but in institutions and courses that vary widely in their educational value.

3) The private sector has not been efficient enough to improve access and equity

Higher education in the USA is increasingly considered a private commodity with access to it is based on wealth and income. Access to the private sector and for-profit education providers may remove barriers to higher education for higher income individuals, but it does not contribute to closing the equity gap if it is only these individuals whose access is improved or if there remains a major barrier to provision. Privatisation is barring poorer students from the system and rocketing tuition fees have prevented bright students from low income backgrounds from entering university. Private higher education needs to be sustainable either through philanthropy or earnings from fees – but reliance on this diverse sector to deliver equity appears, in the case of the American experience, to be counter-productive.

4) Economic inequality remains a major barrier to higher education

Family income is strongly associated with students' choice of college. This result agrees with the findings of other studies by Gorard et al., (2006), O'Mahony and Sillitoe (2001), and Brezovsky and Silvernail (2000), in which economic constraint is the biggest barrier to higher education low SES groups. These students who grow up
in poverty are most likely to be excluded from participating in higher education. For these students, pursuing higher education requires a financial outlay they cannot afford. With the rapid rise in tuition costs, it is very likely that they may experience an even tougher road to higher education. Does this mean that low income students are gradually being eliminated silently from the system?

5) The need to have a better-integrated higher education system

There is a lack of progression from two-year institutions (liberal and vocational education) to four-year institutions (higher education). Consequently, many low income students gain an associate degree, but advance no further. This limits their competitiveness in the labour market. Improving progression along the higher educational pipeline is important to increase university enrolment, particularly among those students from under-represented groups. Universities and community colleges have to work together more closely to improve the process by reducing administrative barriers to academic mobility and establishing consistent, transparent and fair transfer mechanisms.

19.2 Malaysia higher education: Policy borrowing and its consequences

It should be stressed that in drawing policy lessons from the United States experience, the intention is not to take Malaysia back in time or to reverse the policies that have already been implemented. It is useful, however, to assess the range of policies that have been adopted so as to assist in setting future directions. The possibility of uncritically implementing ‘best practice’ without modification or adaptation to national context to achieve ‘better’ outcomes may result in a loss of opportunity and frustrated aspirations as well as the financial costs.

Malaysia has already taken the road to mass higher education. A massive expansion of private and public sectors indicates that these two sectors share equal
responsibility for the provision of higher education in Malaysia. Through this initiative, the government has committed to foster greater participation in higher education and making sure that everyone has an equal chance of attending a wide range of tertiary educational institutions across the country. This aim is not only to cater for the needs of Malaysian students, but also to attract more international students. For that reason, many public and private higher education institutions have embarked on rebranding strategies to boost their academic reputations and to enhance the quality of their services.

The shift to mass higher education has evolved with remarkable results. The number of students enrolled at tertiary institutions has increased rapidly and international student numbers on campus, particularly at private tertiary institutions, have also grown. Most importantly, higher educational institutions are now offering places to students from a wide range of backgrounds. Students of a lower socio-economic status have greater access to higher education and are getting the support they need.

However, disparities in access to Malaysian higher education still exist, even though successive Malaysian governments since independence have stressed the importance of inclusiveness and equity in education within the context of a multiracial society which has wide variation in income and occupational status. These access disparities suggest that the existing policy choices have not yet worked well enough to eliminate the barriers to access and improve educational outcomes. And the question is, why not? Based on the findings of this study, it can be suggested that the expansionary policies pursued in Malaysian higher education have tended to follow uncritically the American examples. The adoption of US higher education policies, however, fails to yield positive results as listed below:

1) **Hierarchy means social inequality**

The USA has built mass higher education on the basis of a mass system of public schooling that is very unequal with regard to school completion and student
achievement. These school inequalities translate into social inequalities in higher education where minority ethnic groups have more limited opportunities to achieve higher education. Although large-scale expansion has resulted in rising levels of overall participation in higher education, including for the minority groups, it has not led to greater equity. Instead, the expansion has caused further differentiation of opportunities through a diversified, but complex and hierarchical system of higher education that tends to mirror the social structure. Malaysia is at risk of going down the same path. The country has created a comprehensive and mass system of secondary schooling where not all children complete lower secondary education, many do not enter upper secondary education, and there are achievement issues amongst students in different demographic groups. The path of diversification in Malaysian higher education has also brought about few improvements in equity since its structures are highly differentiated (university level and non-university level) with a mix of public and private providers. Although the intended plan of the government is to make tertiary education more equitable, the multi-tiered system of higher education is in reality a hierarchical formation. This suggests that Malaysia has not really learnt from the US experience that while diversification of higher education produces growth, the hierarchical structure leads to greater social inequality. The diversity approach, therefore, should not be seen as a substitute for equitable participation in higher education.

A good higher education plan should aim to improve access to higher education among under-represented groups. In the Malaysian context, these are poor and low-income households residing in rural areas, as well as the cities, and most of them are from the majority Bumiputera. Although they have made significant progress in education, they still lag far behind in comparison with other ethnic groups. The goal of having more students from poorer families in higher education, however, cannot be met if they do not have a strong foundation of primary and secondary education. The government, therefore, needs to ensure that these students gain access to a high quality school education. Once Malaysia manages to provide equal standards of school education for all, inequality issues in higher education can be progressively reduced or even eliminated since every student will have a chance to attend university or college.
2) Privatization does not necessarily improve equity

The Malaysian government’s attempt to rely on the private sector to expand its provision of higher education has resonance with the US model. There are more private higher institutions than public in Malaysia. This trend towards greater reliance on the private sector may represent a more efficient and cost effective strategy, but it has failed to achieve equitable access to higher education. It also raises questions about the quality of education delivered by the private institutions, particularly those at the lower end of the market. As has been highlighted in previous chapters, some private institutions with university status have been recognized for their high quality academic programs, whereas private non-university institutions tend to provide unregulated education services. There is a very strong possibility that Malaysia will replicate the elite environment of the United States where eight of their private institutions, known as Ivy League universities, are ranked amongst the world's most prestigious universities. These institutions have high academic standards, stringent admission requirements and high tuition fees. This approach might not be a good move for Malaysia as inequalities in opportunity, access, and quality of higher education may be further exacerbated. (The finding is consistent with findings by Ali (2012) in Pakistan and Joshi (2007) in the Philippines). Instead, public sector universities need to be further developed and should be regarded as the main 'engine' driving Malaysia’s economic future. All universities must be able to provide quality higher education and work together to become world-class universities. The five research universities should take the lead in research and innovation, and they should be available to offer support and guidance to the newly established universities.
3)  **Greater expansion at the lower end of the institutional hierarchy**

The expansion of Malaysian public institutions at the lower end of the academic spectrum also points to a worrying trend. This expansion not only increases inequality, but also creates issues of quality within the higher education sector itself (This finding confirms the study by Agarwal (2006) in India). At present, there are more than three times as many non-university tertiary institutions (polytechnics and community colleges) as universities. More and more polytechnics and community colleges will be built under the Tenth Malaysia Plan. This sends a clear signal that the government is taking ‘shortcuts’ to achieve its participation targets in a shorter timeframe, but it may also only lead to market dissatisfaction as low level courses fail to generate returns in the form of higher salaries for the graduates. And most of them are unlikely to move up the higher education ladder. A similar situation applies in the USA when low-performing students – who are typically from minority groups – ‘cool out’ at the unselective public and private institutions, particularly two-year community colleges. Too many of them simply drop out before completing their studies, while those who do graduate are far less likely to transfer to four-year colleges. Will what has happened in the United States simply be repeated in Malaysia – in a case of policy borrowing as distinct from policy learning? Expanding the college community transfer option is, therefore, necessary to increase access to higher education for under-represented students. Community colleges and university institutions must align their academic programs and promote flexible curricula to enable mobility of students. Most importantly, graduates from community colleges must have the same right to attend public or private universities. They should not be viewed as ‘reserve students’ to fill empty seats when enrolment targets need to be met.
4) **Income inequality leads to unequal opportunity in education**

Economic factors have been found to play a major role in maintaining unequal access and the persistence of social class inequalities in higher education. In Malaysia, the majority *Bumiputera* face economic and educational disadvantage due to the long-term impact of British colonialism in the country and this persists today, despite gains. Although *Bumiputera* groups have experienced improvement in their economic position, they stay very much behind the non-*Bumiputera*. In the USA, non-white Americans have continued to fall behind their white and Asian counterparts in economic terms. Due to the high income inequality between these two groups, non-white groups tend to remain behind in education as well. The pattern clearly shows that the economic imbalance in both countries is a major barrier holding back equity of participation in higher education since it has a significant impact on access when opportunity costs are considered in the decision making. But does the education system have to reinforce this instead of tending to reverse it?

5) **More attention has been given to quantitative growth rather than social growth**

Malaysia has set its policies to increase participation in higher education through quantitative expansion. This involves short and long-term targets over the ten-year period from 2010. The projected numbers, however, turn out to be too ambitious. The government aims at achieving general participation without specifying targets for particular groups. Thus, it is highly likely that the same groups will be over-represented in higher education, as is the case currently. Just like the USA, Malaysia may be able to achieve its target by 2020, but social differences in higher education institutions are more likely to grow as social mobility slows.
In summary, the findings presented in this section have shown that the challenge for Malaysia is not to become like the USA, but to learn from the US experience and to develop its own strategic plans for higher education that fit with the social and economic needs of the country. A rapid, inequitable growth of higher education in the long run may cause a slowdown in the economy as the divide between the richest and the poorest grows larger.

19.3 Opening the door wide to equitable access and quality higher education in Malaysia

Malaysia is going down the path of the USA. Just like the USA, the investigation of Malaysian higher education system demonstrates that the expansion does not lead to greater equity. This finding supports the idea of Rose (1991) that a successful program in another place does not guarantee that it can be transferred effectively. Barriers to achieve equity of access in Malaysian higher education sector have long existed and continue to exist particularly for many students from underrepresented backgrounds. These barriers can be summarized in the table below.
The official goal of a 45 per cent participation rate in higher education by 2015 is at risk of not being achieved thanks to these barriers. So what is the way forward for Malaysia?

Malaysia has made much progress in 55 years, but the country needs to take progressive steps toward achieving equity in higher education. A direct copying of policy strategies is not the solution, but adjustments or adaptations, as suggested by Rose (2005), are necessary for the Malaysian context. There are three steps that can be taken to reduce the barriers mentioned above and ensuring fairness and equity in Malaysia higher education system.

**Step 1: To strengthen and improve education in government schools**

Malaysia has made notable progress in expanding access and improving public schooling since 1957. Heavy national investment has been made by building more
schools to increase capacity, recruiting more teaching staff to accommodate larger enrolments and undertaking educational reform and curriculum change to improve instruction. Primary and secondary school fees have been abolished in government schools so that all children, regardless of economic status, are able to have 11 years of formal education. However, the greatest challenge facing the current public school system is the quality of school education.

A key to making higher education more effective and equitable is to strengthen and improve Malaysia’s public schools. First, Malaysia needs to focus on improving access to secondary education. This is because school participation rates decline, the higher the stage of schooling. Although primary education has almost achieved universal enrolment (approximately 94 percent in 2010), secondary school attendance is still a concern, given that it is not compulsory in Malaysia at present for school students to attend secondary school. While enrolments at government secondary schools are growing, not all students proceed to lower secondary level. There is a significant number of students leaving the formal education system after completing primary education. In 2010, about 14 per cent of children aged 13 to 15 in the lower secondary age group were not attending school. It gets worse among the upper secondary age group (16 and 17 years old) for whom the participation rate is much lower. This statistic shows that students who do complete lower secondary education are opting out at the last stage of school education. Given that the demand for secondary education is greatest in urban areas – leading to overcrowding in urban schools – greater efforts need to be made to expand access to secondary education and to reduce the secondary school dropout rate among rural students from low-income families.

Second, Malaysia needs to improve quality and equity in school education. High priority should be given to reducing the rural-urban education gap in terms of academic performance, infrastructure, teaching and learning facilities, and also qualified teaching staff. Many rural schools need more funds for the average student, who mostly comes from a low-income family, in order to raise achievement. Rural, low-income students need experienced and qualified teachers, school counsellors and school leaders, and these professionals in turn deserve to be paid at a higher rate due to additional responsibilities. Building a solid foundation is essential, but the main
focus should be on secondary school students because the evidence shows that achievement gaps grow even larger at this level.

Third, the government has to ensure that all rural schools are fully equipped with basic amenities (such as water and electricity supply) and educational facilities like libraries, science laboratories and computer rooms. These schools must have the same standard as the ones in the urban areas since school facilities have an important impact on student achievement. If there is a good study environment, students are better motivated and become more active in their learning.

Fourth, highest priority should be given to those urban public schools with high concentrations of low income students. These students also have a high chance of dropping out of school for reasons similar to those students in rural areas. The school environment itself, such as school size, attitudes of teachers and others students, does not promote active learning, and this can lead to more serious problems when other related factors, namely family and personal, are also present.

Fifth, the government must consider a call for reducing class sizes in public schools. A number of studies have shown that overcrowded classes have a negative impact on student achievement. Double-session schools in urban areas are not the best solution to overcome this problem. More money should be invested to build more classrooms and also to increase the supply of teachers.

Finally, improving teacher quality is the most strategic way to increase academic performance. All schools must be provided with well qualified teachers in all subjects. In order to get the right people into teaching, the Ministry of Education needs to set higher entry requirements. Teachers at all school levels must be provided with adequate training and gain plenty of pre-service classroom experience to enhance their skills and knowledge before graduation. This will ensure that all new teachers are meeting a high standard and are committed to delivering excellent teaching for their students. Re-training of teachers is also required to keep their skills and knowledge up to date with the latest teaching techniques. Primary school teachers should be encouraged to get a university education and teachers at secondary schools to obtain a post-graduate degree. By ensuring that all schools are
able to provide a high standard of education to their students, the issue of unequal access to higher education will be tackled at its roots.

**Step 2: To enhance the accessibility and quality of higher education**

The government must commit to enhancing the quality of higher education. Enrolments at this level are growing, but the overall percentage of attendance is still low. A range of evidence clearly shows that higher education is geared towards producing a large number of graduates rather than necessarily high quality graduates. Should Malaysia sacrifice the quality of its higher education to increase its quantity? Adding more institutions should no longer be the top priority. Strengthening existing institutions, mainly the public universities, is more likely to result in Malaysian universities producing well-educated graduates and for them to be listed among the top universities in the world. The strategies to achieve these goals are: to address the shortage of qualified faculty staff; to provide funds for upgrading the physical infrastructure of universities (especially the newly-established public universities); to make the curriculum content relevant and up-to-date; and to remove boundaries between educational institutions and sectors in order to promote successful transition to higher levels.

Another objective should be improving the reputation of non-university institutions, particularly community colleges which are currently regarded as less competitive and far less likely to contribute significantly to the growth of the Malaysian economy. However, community colleges in rural and remote areas play an important role in providing skills training for local communities and a pathway to better educational opportunities, mainly for students from financially disadvantaged backgrounds. Government has to make serious efforts to ensure that these students receive lower cost, quality education and training from experienced and qualified teaching staff. It is also very important for the community colleges to have sufficient resources to assist these students, through financial aid, mentoring programs, counselling and
academic support. With these types of supports, students are more likely to graduate and be able to pursue a degree in higher education.

In addition to the above, the private higher education sector should be more tightly regulated. The emergence of private providers has reduced government spending on higher education and has resulted in more places for students in higher education institutions. However, the proliferation of private providers has led to lower quality in higher education. There are too many small private colleges operating with inadequate infrastructure and academic staff who are under-qualified and less experienced. The colleges are therefore hindered from delivering good educational services. Some private providers are ‘doing business’ by admitting under-qualified students who are able to pay the high tuition fees. A monitoring system is therefore recommended to check the standards of all private higher institutions. Those institutions that do not meet the standards must be shut down. By doing this, government can help make the private sector more viable, while still maintaining the high end of the market in order to strengthen the Malaysian higher education system.

As well as improving quality, the higher education sector in Malaysia should find a balance between economic and social development. The policy emphasis in the higher education sector has been on promoting economic growth by producing highly skilled workers. Research and innovation in universities have made a significant contribution toward the development of the knowledge economy. The Malaysian higher education structure, however, is far less likely to stimulate social mobility. The sign of this failure is most apparent when the education structure takes the form of a social pyramid, with narrowing access at the higher levels for a relatively small group of people.

**Step 3: Assist students from disadvantaged families**

Special attention should be given to help under-represented youth at secondary schools. This is because socio-economic background has been identified as a major
factor explaining the achievement gap between low and high income students. Low income parents, in their struggle to provide for their children's basic needs, such as clothing, food and shelter, give education a lower priority. University outreach and education programs at secondary schools are, therefore, an excellent way to identify high-achieving, low-income students and to ensure that they finish secondary school with academic success. It is also about making sure they gain access to all levels of the higher education hierarchy and not just the levels in which they are already over-represented, for example, the community colleges. These students are in need of academic support (like tutoring, counselling and mentoring) and social motivation to plan and prepare for higher education.

Although the percentage of young people entering higher education is increasing, those from low income families are still under-represented in both public and private sectors. For that reason, government should launch a more aggressive effort to attract and recruit many bright students from low income families by providing them with the support appropriate to their needs. As public and private providers of higher education are operating like businesses these days, the costs of university education become more expensive and may not be worth the money invested in their products (qualifications). In other words, the poor, but bright student is at risk of being priced out of the market, while the price itself may not represent value for money. Although scholarships funded by government or private organizations are available to all students, the selection process is highly competitive since it is based primarily on academic achievement and participation in co-curriculum activities. Needs-based financial support programs, therefore, should be designed to boost the number of low income students in higher education instead of assuming that they have an equal academic chance of gaining a scholarship (when the odds are stacked against them from the beginning of their schooling). High achieving students from low income families should automatically gain access to full scholarships that cover all costs, including tuition fees, living expenses, books and travel, whereas the moderate academic achievers should be offered needs-based government loans that are interest-free. Other financial assistance options include fee concession and work-study programs. As well as financial aid packages, all higher institutions, particularly top public universities, should be required to reserve some of their places for bright, low income students in order to create a fair chance for all. A quota system is more
likely to raise the proportion of low income students in the public and private universities leading to a wider range of social backgrounds at the higher education level. To increase the proportion of these students, both public and private higher institutions could admit them through a process which has slightly lower entry requirements.

While so many external supports, in term of student aid programs, have been implemented by government to assist students from disadvantaged families, an intervention program which engenders motivation may have been missed. It is essential to focus on raising aspirations of young people from low income communities in order to improve their participation in higher education. The support and involvement of their parents at home are less likely to inspire them to pursue higher because most of their parents do not have experience of higher education (or even of completing secondary education), lack expertise and social connections, and are not able to guide their children towards higher education. Yet along with other factors, aspiration plays an important role in the decision to participate in higher education. High aspirations may lead to better outcomes as students are more focused and will work hard for the grades necessary to go to university.

To sum up, the challenges faced by the Malaysian higher education sector clearly indicate that immediate attention and action are required to overcome the ongoing issues of quality and equity. These issues are not going to be solved unless necessary actions are taken to tackle the root causes in an integrated way. Firstly, to achieve its high target of participation in higher education, Malaysia should focus on building a strong bridge to higher education. All primary and secondary public schools must be able to provide the highest quality education for all students so that they get the best school education and achieve consistently high academic standards. Only in this way will all students have equal chances to access higher education and do well once they get there. In other words, high quality school education will lead to better academic achievement among students and increase their opportunities to go on to university. Most importantly, higher institutions are more likely to take on students from a wide range of geographic locations, social classes and ethnic backgrounds.

The growth of mass higher education in Malaysia, however, has been oriented mainly to economic growth. The quality of service provision has been falling in
order to meet the projected participation rates to 2020. Although there are limits to achieving both quantity and quality, a minimum standard must be maintained and the balance shifted to prioritize quality over quantity. At the same time, it is also important to ensure fairness for all.

19.4 Conclusion

Malaysia is moving from an elite to a mass higher education system, but insufficient emphasis has been placed on issues of equity and quality. While the right to higher education for all citizens has existed since independence, the quality of Malaysian higher institutions is at risk of being compromised in the process of increasing access to higher education. Building the knowledge economy requires a greater proportion of educated people and skilled professionals, and as such, the quality of public and private higher institutions needs to be maintained at a high level with equitable access to higher education. A balance should be established between quantity, quality and equity to bring the Malaysian higher institutions up to the world-class standards. This raises a difficult question: Is there a real commitment on the part of government to transform the system of higher education and make it appropriate for mass enrolment?
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APPENDIX A

NO CHILD LEFT BEHIND (NCLB)

In this section, we discuss ‘No Child Left Behind’ (NCLB), the US national policy which was implemented by the Federal government in 2002 to improve academic achievement for all students and narrow the achievement gap between advantaged and disadvantaged students at primary and secondary levels. This policy calls for early intervention as a means to improve the academic performance of all students. The discussion will consider the NCLB claims to achieve educational equity for all students, looking in detail at the performance of students before and after its implementation. In addition, it will address the problems and issues since the act was implemented.

Promises of NCLB

“NCLB has set the goal of having every child make the grade on state-defined education standards by the end of the 2013–14 school year” (US Department of Education, 2004, http://www2.ed.gov/nclb/overview/intro/4pillars.html). In order to achieve this goal, each state is required to have annual standardized tests in reading and mathematics for students in Year 3 through 8 and once during high school Years 10 to 12 (Rosenkvist, 2010). This is to ensure that every student is learning and the use of standardized testing is to indicate the progress they are making towards achieving the proficiency standards. The assessments also aim to assist schools in identifying areas for improvement in teaching and learning (US Department of Education, 2004). The goal is for disadvantaged students who continually achieve lower test scores than their more advantaged peers to reach a similar level as the rest of the students by 2014. This accountability system is a tool to make sure that all
American students reach the expected standard in education regardless of school location, student demographic or student ability level (Lagana-Riordan & Aguilar, 2009). According to Hursh (2007), all students in US states and schools must demonstrate ‘proficiency’ growth each year in reading and mathematics until 2014. The results of the assessments must be reported to parents so that they know about their children's progress at school and the school's performance at a state-wide level. “The states must develop a system of sanctions and rewards to hold districts and schools accountable for improving academic achievement,” President Bush declared (2001).

Narrowing the achievement gaps between students is a national priority of NCLB. Under this legislation, each state is required to set high standards in reading and mathematics for its students, and schools are responsible for making sure that all students achieve these standards including those from minority groups, economically disadvantaged backgrounds, students with disabilities and those with limited proficiency in English (Cleary, 2004). They have to focus their attention on these underserved groups in order to boost achievement levels and ensure continuous improvement toward meeting the standards. The difference in standardized test results indicates the achievement gap between minority and non-minority students and between disadvantaged students and their more affluent classmates. For that reason, schools must report test scores according to ethnicity, SES, disability, and English proficiency so as to guarantee that no one is left behind (US Department of Education, 2004). These reports are analysed by the federal government which determines the level of funding required to improve the quality of each school. Young (2008) remarked that the reports exposed the dark corners of underperformance. These reports serve as a diagnostic tool for improving school performance with underserved students benefiting from the additional resources and promises of greater equity.

NCLB makes an attempt to improve the academic performance of public schools. Each state sets ‘adequate yearly progress’ (AYP) targets which schools must meet every year. This minimum level of improvement in student achievement must be accomplished within the specified time frame to ensure that schools are making progress toward the 2014 deadline (AAUW, 2009). State Academic Achievement
Awards are given to schools that meet AYP targets or eliminate the achievement gaps. Any school that does not achieve AYP is subject to "in need of improvement" corrective measures such as replacing staff or implementing a new curriculum and restructuring plan in order to assist them in achieving the state standards (Mathis, 2006). Students are given the option to transfer to better performing public schools if their school fails to make AYP for three consecutive years. This directive aims to achieve better educational opportunities for disadvantaged groups in underperforming schools (Young, 2008 and Bush, 2001). In addition, free school tutoring in reading, languages arts, and mathematics is also available to those students who are enrolled in a school that has been labelled ‘in need of improvement’ for two or more years in a row (Massachusetts Parent Information & Resource Center, 2008).

NCLB requires all teachers to be highly qualified. They must have a bachelors degree, full state certification and demonstrate competency in each of the core subjects being taught. States receiving Title II funding were required to develop plans which achieved the goal of utilising highly qualified teachers in core academic subjects by the end of the 2005-06 school year (US Department of Education, 2004). The aim was for underperforming schools in poor neighbourhoods serving disadvantaged students to be staffed by highly qualified teachers in order to raise student achievement.

Assessing NCLB

NCLB was designed with the intention of improving schooling in the USA through a testing system. It aims to close the achievement gap by getting rid of low performing schools and teachers. However, the debate is ongoing as to whether NCLB is fulfilling its goal since its implementation in 2002.

(Northwest Evaluation Association) test data from over 320,000 3rd through 8th grade students in more than 200 school districts located in 23 states, the study found there was significant progress in mathematics compared with a very slight improvement in reading. The cumulative difference in reading gains across all grades was less than one point. Although there were small changes, they were not large enough to raise improvement in reading to proficiency levels.

In a similar study, Lee (2006) analysed the performance of 4th and 8th grade students in reading and mathematics over the period 1990 to 2005. He used data sources from NAEP and produced different results from Cronin et al., concluding that NCLB did not have a significant impact on raising reading and mathematics achievements. He reported that students in grade four showed modest improvement before 2002 and inadequate progress after NCLB was implemented. He found that the reading scores among 8th graders showed only a slight gain before NCLB and a declining trend after NCLB. In contrast, he found an increase in mathematics scores for both grades before and after NCLB was implemented, but found no difference in the achievement growth pattern when comparing the periods both before and after NCLB.

The study by Chudowsky et al. (2007), which was based on state reading and mathematics tests across all 50 states, focused on test score trends between 2002 and 2006. According to Chudowsky et al., NCLB led to increased student scores in reading and mathematics in most states that had at least three years of comparable test data. In addition, Chudowsky et al. presented evidence that the achievement gap between groups of students narrowed after the implementation of NCLB. A second look at the period from 1999 to 2006 showed that in 9 out of 13 states the average annual gains in test scores were greater after the passage of NCLB than before it.

Duffett et al. (2008) conducted a study on trends in national achievement by comparing the gains made by students in 10th and 90th percentiles from the early 1990s to 2007. He analysed data from NAEP reading and mathematics at 4th and 8th grades. Duffett et al. found that the lowest achieving students made rapid gains between 2002 and 2007. The low-achieving 4th graders made more than a 15-point increase in reading and mathematics, while the 8th graders made a 13-point gain in mathematics. By contrast, the performance of high achievers in the same subjects and grades remained essentially flat. However, no progress was detected in 8th grade
reading scores for high and low achievers. When comparing the improvements before and after NCLB, Duffett et al. concluded that the overall achievement gap between the low and high achieving students narrowed between 2000 and 2007, whereas progress had been slower before this period. Interestingly, the narrowing gap after NCLB implementation was due to significant gains made by the lower rather than high achievers.

Dee and Jacob (2009) examined the impact of NCLB using a comparative interrupted time series design analysis which compared the test-score changes in states that had already adopted NCLB school-accountability policies prior to 2002 with those in states that had not. They found that NCLB generated significant gains in the average mathematics achievement of 4th graders at the lower and top percentiles. The same positive effect was also discovered in 8th grade mathematics achievement, but only for those at the lower percentile. On the other hand, no significant changes were identified in reading achievement for either grade.

Recent research by Plucker et al. (2010) evaluated the differences between subgroups of students scoring at the advanced level on the NAEP. In reviewing NAEP reading and mathematics assessments at grades four and eight from 1996 to 2007, they noted that the achievement gaps of high ability students widened among different demographic groups, namely racial, socio-economic and English language proficiency level. Between 2003 and 2007, the top achieving students from advantaged groups improved substantially in mathematics, while the others remained fairly flat. Moreover, there was little improvement in reading performance among the top achieving groups, despite the low performance by eighth grade student across all subgroups. Excellence gaps in mathematics were wider in the upper grade levels, whereas the results were reversed in reading. They concluded that under NCLB little progress had been made in narrowing excellence gaps, particularly in reading.

Several studies have criticised NCLB and whether it has achieved its aim of improving quality and equity in schools. Karp (2003) in his article entitled, ‘The No Child Left Behind Hoax’, concluded that “NCLB is now a time bomb ticking at the heart of public education and threatening massive damage from multiple directions.” Hursh (2007) also agreed that NCLB failed to achieve its promises and might in fact enhance inequality. Ravitch (2011) claimed that “my support for NCLB remained
strong until November 30, 2006. I can pinpoint the date exactly because that was the day I realized that NCLB was a failure.” In discussing these studies, the next paragraphs will focus on the trend in NAEP reading results before and after NCLB took effect.

The graph below (Figure A1) shows the national NAEP reading average scores of all grades 4, 8 and 12 students. The vertical line on the graph indicates the implementation of NCLB at the federal, state, and local levels in 2002. The left hand side of the graph shows student reading performance before NCLB was passed, while the left hand side indicates their performance post implementation.

Figure A1  Average scale scores for NAEP reading by grade, selected years: 1992 to 2009

![Figure A1](image)


The improvement in results for grade 4 and 12 between 2002 and 2009 was so small as to be insignificant, while the average scores for grade 8 showed no change in performance between those years. The most noticeable change occurred for grade 4 and 8 students between 1994 and 2002. However, the performance of grade 8 students slowed after 2002, while there was no performance gain among the grade 4 students. The performance of 12th grade students showed a general downward trend since the score in 2009 was lower than in 1992. The conclusion from this graph is
that there is not enough strong evidence to prove that NCLB is raising overall student achievement in reading.

The discussion will now focus on NAEP reading data for Grade 4. The rationale for choosing Grade 4 is because evaluating the impact of early intervention is important for successful educational outcomes. Figure A2 shows the scores of students in Grade 4 NAEP reading according to percentile between 1992 and 2009.

Figure A2  Percentile scores for NAEP Grade 4 reading, selected years: 1992 to 2009

For students in the 75th and 90th percentiles, the score increases were greater between 1992 and 2002 when the NCLB was passed, then between 2002 and 2009. For students at the 50th percentile, there was no difference. Students at 25th and 10th percentile, however, demonstrated improvement in their reading scores after NCLB, with the lowest performing students improving five points between 2002 and 2009. Thus, the intervention has led to narrowing reading achievement gap between the highest and the lowest performing students from 91 points in 2002 to 89 points in 2009 (a decrease of two points).

The next graph (Figure A3) shows the NAEP reading test score gap between low and average students across ethnic groups. Following the implementation of NCLB, there
was a substantial reading improvement by the lowest percentile White students who narrowed the graph by three points from 2002 to 2009. The Hispanic and Asian/Pacific Island students showed little improvement as their score gap narrowed by one points, while Black students did not make progress since the gap remain constant over this period. Notably, the score gap for American Indian students increased sharply by eight points from 2002 to 2009. The main thing to note is that the one-point reduction in reading score gap for Hispanic and Asian/Pacific Island students was only a minor improvement and did not have a significant impact on improving the gap between the ‘average’ and ‘lowest’ students. In contrast, Black did not make any progress in reading over the seven-year period after the implementation of NCLB, as compared to the other ethnics groups.

Figure A3  Performance gap for NAEP Grade 4 reading between ‘average’ (50th percentile and ‘lowest’ (10th percentile) within each ethnic group, selected years: 1992, 2002 and 2009


Further data will now be analysed in order to determine whether there is a real difference between racial groups at the national level. Figure A4 shows the score gaps between White and minority students at the 50th percentile before and after NCLB was implemented in 2002.
Figure A4  50\textsuperscript{th} percentile gap scores for NAEP Grade 4 reading between ethnic groups, selected years: 1992, 2002 and 2009


The above graph illustrates that the score gap between White and Black students narrowed from 33 points in 1992 to 26 points by 2009, indicating that Black students showed signs of gradual improvement in reading before and after the introduction of NCLB. In addition, the trend in White-Hispanic NAEP reading score was positive improving four points in 2009 after remaining constant in 1992 and 2002. The Asian/Pacific Island student scores saw an impressive improvement after NCLB, exceeding White scores by five points. Again, NCLB had a negative impact on American Indian students whose score gap widened in 2008 relative to White students.

To end with, Figure A5 highlights gaps in reading achievement between races at the bottom 10\textsuperscript{th} percentile. This group of lowest-achieving students is the main target group under NCLB.
As shown in this graph, White-Black and White-Hispanic score gaps narrowed marginally by three and two points respectively from 2002 to 2009. The White-Asian/Pacific Island gap largely disappeared over the same period, showing the positive impact of NCLB after it was implemented in 2002. However, the White-American Indian score gap widened to 42 points by 2009, signifying that this group lagged significantly behind all other races in NAEP reading.

The achievement gap between races remains significant for 50th and 10th percentile groups even after the implementation of NCLB. The rate of progress toward closing the achievement gap between White and minorities students was slow both before and after NCLB. Nevertheless, students at the 50th percentile gained more than those at the 10th percentile because the achievement gap for the former group of students narrowed more after 2002, although at a modest rate. The wide gap between White and American Indian students at the 10th percentile during the NCLB era is the biggest challenge for the policy makers.
Key findings from the evidence of improvement in grade 4 NAEP reading

a) Overall, there has been a slight improvement in NAEP reading for 4th and 12th graders, while scores for 8th graders varied marginally between 2002 and 2009. In 2009, all graders scored higher than in 2005 by an average of one to two points, an improvement which is not sufficient to raise academic performance and retain students through to graduation. As a result, students do not have adequate academic preparation for post-secondary education and they might have a much lower probability of success.

b) The 4th graders’ percentile reading score indicates that ‘average’ and ‘above-average’ students were not making sufficient progress. The almost horizontal trend lines indicate that their scores remained largely static during the period before and after the implementation of NCLB. Low performing students on the other hand, improved their scores after NCLB implementation indicating that they were catching up to their peers at or above the 50th percentile. However, the marginal gains in test score were not large enough to move at least to the 25th percentile and far away from average achievers (at the 50th percentile).

c) The achievement gaps also persisted within racial groups. Although the score gaps between the 10th and the median percentile narrowed for White, Hispanic and Asian Pacific Island students, the one-point improvement in seven years (from 2002 to 2009) was not substantial enough, despite the national and state-wide efforts to improve middle school reading performance. Furthermore, the gap between the 50th and the 10th percentile for Black students in 2009 was the same as in 2002, while the percentile gap for American Indian students widened further by 2009. The 10th percentile American Indian students fell further behind compared to all other races. This data clearly reveals that NCLB has produced zero or minimal gains in closing the achievement gap within racial groups.

d) There were achievement differences in reading between racial groups. The gap scores between White and most minority students persisted at all achievement levels, the largest being at the 10th percentile. From 2002 to 2009, the gap at the 50th and 10th percentile between three races, namely White, Black, and
Hispanic students, began to narrow but not to any significant extent. The rate of achievement growth for these three groups is not rapid enough to close the existing minority-majority gap. The racial gap between White and American Indian students widened by 2009, particularly at 10th percentile. If this gap continues to grow over the coming years, the goal of greater equity in education is unlikely to be achieved. In conclusion, the main goal of NCLB to improve educational outcomes for disadvantaged students has not yet been achieved since Asia/Pacific Island students are the only group to show any real improvement in reading performance.

Four issues

a) Over emphasis on test scores

The requirement for standardised annual testing, introduced under NCLB, is meant to improve American public school performance. Students from grade three have to sit for reading and mathematics tests and then to take these two tests each year until they reach grade eight. Many tests and many schools have begun to put a strong emphasis on test scores causing students to become overwhelmed by the number of tests and the pressure to perform well. Cleary (2004) found that when ‘teaching to the test’ became the teaching pattern at schools, test scores turned into an educational obsession. Teachers were instructed to drill students, particularly low performing students on example tests. Many schools invested heavily in test-preparation materials and allocated large amounts of time and effort to practice tests and drills (Ravitch, 2011 and Ellis, 2007). Instead of their regular lesson time, students were taught to develop their test-taking skills and strategies on how to fill in multiple-choice answer sheets correctly (Ravitch, 2011, Rothstein, 2007 and Ellis, 2007). The acquisition of these skills meant that students were developing lower order thinking skills that simply required the recall of factual information rather than being encouraged to develop and exercise higher order skills such as critical thinking, analysis and problem solving (Symth, 2008).
NCLB has the effect of shrinking the curriculum by focusing learning on two tested subjects, mathematics and reading. As a result, there is much less time spent on non-tested subjects such as social studies, science, art and music (Ravitch, 2011, Rothstein, 2007 and Ellis, 2007). According to Dillion (2006, http://www.nytimes.com/2006/03/26/education/26child.html?pagewanted=all&_r=0), CEP found that “since the passage of the federal law, 71 percent of the nation’s 15,000 school districts had reduced the hours of instructional time spent on history, music and other subjects to open up more time for reading and math.” In relation to that, there have been cases where the schools have forgone out-of-class activities such as field trips, assemblies and student performance in order to prepare students for the standardized tests (Clearly, 2004). It shows that students’ learning about the real world has been restricted as they focus on alphabetic and numeric literacy.

b) Ignoring issues of social context

NCLB assumes that all students learn at the same pace to reach the same standard. By 2014, all students are expected to be 100 percent proficient in reading and mathematics. Teachers are pressured to push every student to a higher level. However, this goal may be too high for some students from disadvantaged backgrounds. Although many studies have found positive correlations between the home environment and the level of educational achievement, NCLB seems to deny this evidence (Lagana-Riordan and Aguilar, 2009). Students from socially disadvantaged groups living in slums or remote rural areas are more likely to have uneducated parents and poor home learning environments. They are also at increased risk of health problems and experience of crime (Rothstein, 2007). All these barriers often prevent and limit their opportunities for high achievement because they do not have the same access to better education as their richer peers. Wealthier parents, on the other hand, tend to invest more money in ensuring their children have good education such as providing extra educational resources and facilities at home (Lagana-Riordan and Aguilar, 2009 and Smyth, 2008). As a result of NCLB, low-performing students have been excluded from assessment days or forced to drop out of school in order to raise school test scores (Ellis, 2007). The achievement scores of these less effective performers are then excluded from the AYP calculations. This
practice leads to poorer outcomes since these students may feel socially rejected and isolated, and have low self-esteem which can cause them to give up school.

NCLB seeks to improve student achievement by focusing on a results-based accountability system at the cost of improving school quality. The policy has not adequately addressed those school factors which may significantly affect students' academic achievement and test scores. Penalising schools for poor test scores and rewarding schools for progress may not raise all students to a high proficiency level. For instance, schools in low SES areas are likely to have inadequate facilities, limited financial resources, a lack of qualified teachers, fewer educational materials, over-sized classes and serve high number of poor and minority students (Lagana-Riordan and Aguilar, 2009 and Darling-Hammond, 2007). With these disadvantages, such schools struggle to make AYP requirements and meet state performance targets. For this reason, these under-served schools are being labelled as failures under NCLB. This is an unfair practice and may have a negative impact on student education. The situation is getting more complicated when the majority of students in these schools are more likely to come from low income and minority families. Doyle (2010) conducted a four-year study in a number of schools and school districts that did not make AYP and found that the percentage of schools not making AYP increased from 29 percent in 2005-06 to 35 percent in 2007-08, decreasing 2 percent to 33 percent in 2008-09. In contrast, the proportion of districts making AYP grew at a modest rate each year from 2005-06, reaching 36 percent by the end of 2008-09 school year. States in which more than 80 percent districts failed to make AYP were: Florida, Maryland, Mississippi, North Carolina, South Carolina and West Virginia. The 2005-2009 American Community Survey by the U.S. Census Bureau (2010) reported that Florida, North Carolina and South Carolina were ranked third highest in terms of poverty rates, while Mississippi and West Virginia were ranked highest.

Even though NCLB offers school choice and free after-school tutoring for poor and minority students in failing schools, these two approaches are not necessarily seen as benefits. Some disadvantaged parents do not want to send their children to a ‘better’ school further away from home, and a longer school day does not guarantee that low performing students will improve their scores (Ravitch, 2011). As a consequence of the ‘school choice’ initiative, the best schools were at risk of receiving students with
poor test scores and school attendance, bringing down their scores and resulting in facing sanctions under NCLB (Darling-Hammond, 2007). Schools were under pressure to accept too many low-performing students, making it more difficult for them to achieve their AYP target.

c) Lack of uniformity in the assessment system

NCLB requires each state to set its own annual progress goals. Consequently, there are mixes of assessments across states to satisfy local, state, and national requirements. This has resulted in the lack of a national accountability system (Lagana-Riordan and Aguilar, 2009). Without national standards and guidelines, every state can adjust the examination pass rate by lowering the cut-off score to ensure that more students pass the test and earn good grades (Hursh, 2007). Ravitch (2011, p. 107) commented that “a student in Colorado might pass the state tests but might be in academic difficulty if the family moved to other states.” In several cases, states had an incentive to lower their proficiency standards in order to meet the annual targets (PEN, 2004). Such tactics may result in weaker academic foundations among students and poorer preparation for higher education.

d) Lack of funding

The testing requirements under NCLB are costing state governments more money. As state assessment tests have become a key element in public education, every state is investing more money in the development and implementation of the tests. In fact, NCLB has led to more testing every year from grades 3 through 8. Costrell and Peyser (2004, p. 25) reported that “in total, NCLB will require 17 tests per year, while the previous federal law required only six.” There were cases of states cutting their budgets on science, social studies, and other non-tested subjects to ensure that enough funding was allocated into tested-subjects, namely mathematics and reading (Goertz and Duffy, 2003). States also need to invest funds to ensure compliance with all the requirements of NCLB and avoid the risk of losing federal educational funds.
NCLB has placed a huge financial burden on some school districts. Since standardized testing is used to determine federal funding, successful schools will receive more educational funds than schools that are struggling to make AYP. In reality, these are the schools that are most in need of funding to improve teaching quality and school facilities, as well as to provide more educational materials for their students. Research by Dawoody (2008. p. 4) described how NCLB sets up a circle blue of failure. He explained that:

“When a school district is performing low due to lack of funding, teaching and technical capacities or curriculum (Stage One), NCLB will penalize this district for such a failure and federal funding will be withheld (Stage Two). This continues until performance is improved. To meet this challenge, however, school districts will have to rely on local funding to improve their performance (Stage Three), but when local funding is not capable of meeting the demands of improving public education or NCLB requirements, performance will further deteriorate (Stage Four), a condition that will lead to further decrease in federal funding (Stage Five), up to shutting down the targeted low performing school.”

In brief, NCLB began as a promising federal initiative, aiming to achieve equity in education by raising the academic performance of disadvantaged students and reducing achievement gaps between races. However, the attempt to correct the problems in the public educational system may have failed to improve educational standards as a whole. Much more work needs to be done and social disparities need to be considered in order to turn all the promises into reality.

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