

**The Internationalization of Singapore Universities
In a Globalised Economy - A Documentary Analysis**

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Doctor of Education (EdD)
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**By
LEE Tong Nge
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The Internationalization of Singapore Universities in a Globalized Economy - A Documentary Analysis

LEE Tong Nge

Abstract

This study traces the internationalization of Singapore universities from a historical and developmental perspective. The main Research Question is: “*Why and how have Singapore universities internationalized since the beginning of nationhood in the early 1960’s to the globalized economy of today?*” It seeks an in-depth understanding of (a) the *meanings* of internationalization, (b) the *rationales* for it; and (c) the *approaches* to it - from the Singapore government’s and universities’ perspectives.

The study is located within the interpretative paradigm with a qualitative research approach using documentary analysis as the sole data collection method. The focus is on the three publicly-funded universities, namely NUS, NTU and SMU in Singapore. Being publicly-funded, the rationales for internationalising and the strategies used are more likely to be influenced by governmental policies and direction. Relevant sources examined include published government and university documents available from university libraries, web-sites and government archival records.

Among the key findings are - that the internationalization of Singapore universities is inevitable given 21st century globalization and knowledge-based economies; and the government’s tight instrumental interdependence between education and economic development. The term ‘*internationalization*’ of universities is interpreted as ‘*going global*’ by the government; and ‘*to be a global university*’ by the three case universities. Singapore’s universities are used as key ‘*instruments*’ to foster and attract talent, both local and foreign – to overcome a scarcity of skilled labour. Hence, the ‘internationalization’ of Singapore universities aims to – produce ‘*world ready*’ graduates, enhance ‘*global competitiveness*’, and *talent augmentation* (attracting foreign talent). Some of the Internationalization strategies adopted by the government and universities are unique. Two analytical models of internationalization of universities are developed from the study as its theoretical contribution.

Keywords: Internationalization of universities, globalization of higher education, Singapore universities. International education

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CHAPTER 1

INTRODUCTION

(1) Background & Statement of Research Problem

Internationalization of Higher Education in Perspective

The international setting and eco-system for universities and institutions of higher education is changing rapidly in an increasingly globalised economy today. Internationalization, a term used to discuss the international or intercultural dimension of higher education (Knight 1994), has become a major trend and global issue of higher education worldwide, especially during the last two decades. Literature searches also show that the international dimension of higher education has attracted increasing interest among education researchers; notably Altbach (1999, 2002, 2004 and 2006), Knight (1993, 1994, 1997, 1999, 2002, 2003, 2004, 2006, 2007), de-Wit (1995, 1999, 2002), Stier (2002), Soderqvist (2002), Wende (1997, 2001, 2002, 2007), Yang (2002) and many others since 1990s. Increased contributions are also seen from Australian researchers; such as Leask (1999, 2001, 2002, 2004), Marginson (2002, 2003, 2006), Welch (1997, 1998, 2004, 2005) in view of the internationalization drive of Australian universities.

Many universities worldwide, including those in Asia - such as China, Hong Kong, Japan, Malaysia and Singapore - are pushing ahead to create more internationalized campuses or environments to attract international students and faculty; and/or to embark on a number of programs and partnerships with other universities for student/staff exchanges, joint degrees, teaching and/or research. Recruitment of international students is also seen as a major economic motivation for internationalization in many countries, such as Australia, UK and the USA. The general declining funding for universities from most government also drives many institutions to recruit full fee paying international students (Altbach 2002, Marginson 2006). International education is a big business. The

number of international students studying abroad reached 2.1 million worldwide in 2003. IDP Education Australia (2002) estimated that the number of international students studying abroad will increase to 7.2 million in 2025 from 2.1 million in 2003. The Singapore government too sees this as an excellent opportunity to “develop Singapore into a regional educational hub by offering a diverse and distinctive mix of quality education services to the world, thus becoming an engine of economic growth, capability development and talent attraction for Singapore” (MTI 2003). The strategy of developing Singapore into a regional educational hub or global school house to attract 100,000 international students to study in both the private and publicly funded educational institutions in Singapore is effectively internationalizing its schools and universities.

From a social economic perspective, universities are now expected to train new generations of graduates to live and work successfully in a globalised world (Qiang 2003, Gacel-Avila 2005). The infusion of an international dimension and programs into the traditional roles of teaching and research and working with partner institutions seem inevitable. The rapid globalization of economies brought about by advancement in info-communication technologies and trade liberalization has further accelerated the pace of internationalization of higher education (Knight, 2004).

Governments too are increasingly looking to higher education to play a part in their wider policy objectives. Yu (1996) observes that many of these policies now have a strong international emphasis, from broader foreign-policy interests to more specific concerns of domestic economic development; all of which can be served by the expertise and resources found in higher education. Qiang (2003:249) asserts that such a response or approach to internationalization is shaped by a country's unique history, indigenous culture; resources, priorities and relationships with other countries.

Internationalization is seen as one of the ways a country and a university responds to the impact of globalization (Altbach 2004). Morris (2009: 143)

summed up succinctly that “the effort to internationalize is being driven by historical political and economic changes, changes in the academic and non-academic environment, and by the strategic imperative for universities to remain in the forefront of its teaching, research and service mission”. This will be the central theme of this research study; the internationalization of Singapore Universities in a globalised economy from a historical, policy and development perspective.

Research Statement

The government and the university sector in Singapore have responded decisively to the new challenges of a globalised economy through the process of internationalization. Significant changes and developments have been made in the university sector since Singapore achieved its independence in 1965. The pace of development accelerated especially during the last decade to meet the new challenges of a globalised and knowledge economy. While some research has focused on the developments of higher education in Singapore, such as Mok and Tan (2004); Goh and Gopinathan (2006); Goh and Tan (2008), academic research on the internationalization of Singapore universities and its linkage with the economic development of the island state is almost non-existent.

The rapid transition of Singapore from a third world economy to newly industrialized economy, to a first world economy within a span of less than four decades has been seen as something of a social and economic miracle. Higher education and training has often been cited as one of the key factors underlying Singapore’s success. The Singapore government views education and economic development as inseparable (Goh and Tan, 2008). This is consistent with Knight and de Wit (1995)’s assertion that higher education has been the centre of social, political and economic developments of countries around the world.

Research on why and how Singapore universities have internationalized in the face of economic, social and political developments in a globalised economy since its independence in 1965, should provide some interesting findings and a

new body of knowledge. This Singapore study will provide insights on the linkage between the internationalization of Singapore universities and a socio-economic developmental and policy perspective. It may also enable some comparisons to be made with other universities' internationalization elsewhere through an extensive literature review. According to De Wit (2002), for example, an understanding of the term involves looking at its meaning, the rationales and the strategy and process of internationalization; and these vary from institution to institution, from government to government, and from country to country.

(2) Research Objective, Aims and Scope

In line with the research statement, the main objective of the study is to trace the internationalization of the government or publicly funded universities in Singapore from a historical, social, and economic development perspective. More specifically, the study aims to seek an in-depth understanding of (a) the *meaning* of internationalization ('what is?'), (b) the *rationales* for it ('why has it become ubiquitous?'); and (c) the *approaches* to it ('how is it done?') of the emergent or evolutionary trends in the internationalization of Singapore universities.

The study will cover the following periods:

- ◆ 1959 to 1979 – Singapore achieved its self-governing status from the British government with an inherited predominately Anglo-Saxon higher education system. This period was marked by the beginning of nation building with a focus on an economy driven strategy led by direct foreign investment (DFI) and exports.
- ◆ 1980 to 1999 – A transition period of rapid economic growth and technological development from a newly industrialized economy (NIE) to a developed economy
- ◆ 2000 to present – Singapore achieved a developed nation status in a highly competitive globalised economy. Internationalization of universities gathers momentum and reaches maturity.

The context for the study is the economic and social transformation of Singapore since 1965 with a focus on why and how Singapore Universities internationalised during this period. The research attempts to map, understand and interpret the major historical developments and policies that explain the internationalization of Singapore universities and the education system as a whole.

(3) The Research Questions

Accordingly, the main research question is:

“Why and how have Singapore universities internationalized since the beginning of nationhood in the early 1960’s?”

Specific Research Questions

The main research question is further broken into the following four (4) specific research questions to reflect the research aims and the focus of the study as well as to guide data collection and analysis process.

1. What is Singapore universities’ and government’s interpretation of the term “internationalisation of universities or higher education”? Are there other interpretations of the internationalisation of Singapore universities?
2. When did the term “internationalisation of universities” first emerge in Singapore? Was there an equivalent term prior to this?
3. What are (or were) the rationales for the internationalisation of Singapore universities from a historical, political and social-economic development or policy perspective? Have such rationales changed over time?
4. What have been the approaches, programs and strategies adopted by the Singapore universities and/or government in their internationalization drive during the years?

The scope of the research embraces an historical socio-economic and educational perspective spanning almost 50 years. Accordingly and in view of the specific research questions a documentary analysis was considered the most appropriate form of data collection. The study entails a documentary analysis of government policies relevant to the internationalization of all the

three (3) publicly funded universities in Singapore, drawing on the diverse sources of documents and literature available on the topic. The justification for using documentary analysis as a research methodology will be explained fully in Chapter 3. In view of resource limitations and the length of the thesis, it was decided to use documentary analysis as the sole method. This is also justified in Chapter 3.

An additional outcome of the research is that it will attempt to examine whether there is any unique, new insights, knowledge, or models that may be learnt or developed from the study of the internationalization of Singapore universities in comparison with similar trends elsewhere obtained from literature or documents.

Research Delimitation

The focus of the study is on the reasons for and shape of internationalization of Singapore's three publicly funded universities. It does not intend to cover the effect of students' learning experiences and outcomes; including the roles of language, cultural influences on the internationalization of universities.

(4) Setting the Context – Singapore and its University Sector

Singapore is a small city state with an area of 683 square metres and a resident population of 5.3 millions. It is one of the world most competitive and globalized economies. The Global Competitive Report (GCR) 2011-2012 ranked Singapore the 2nd most competitive economy in the world, just behind Switzerland, and ahead of USA, UK, Germany and Japan. As at 2010, its per capita GDP was US\$49,271, ahead of the USA's US\$48,387 in the same year.

Singapore was a British colony until 1959. During the almost 150 years of colonial rule, there were few if any significant developments in the higher education sector in Singapore. Besides the setting up of Raffles College of Arts and Science in 1919, King Edward Medical College in 1921 (*both of which were merged in 1949 to form the University of Malaya – which became the predecessor of the University of Singapore and the current National University of*

Singapore), and the Singapore Polytechnic in 1954, there was hardly any significant development in tertiary education in Singapore until the late 1970s (Leo, 2006; Goh and Tan, 2008). The Nanyang University (*different from Nanyang Technological University, which will be explained in later Chapters on research findings and analysis*) was set up as a private Chinese language university in 1955 by a group of Chinese businessmen and people of all walks of life, from Singapore and elsewhere in the region (Goh and Tan 2008).

In spite of the few significant developments during the colonial days, the first Prime Minister of Singapore, Mr Lee Kuan Yew acknowledges that it is “Singapore’s good fortune that under the British, Singapore had been the regional centre for education” (Lee 2000:158). The most significant feature was the use of English, as the medium of instruction and curriculum. Hence, it might be said that the roots of internationalization of higher education started from the colonial days – with the adoption of English as the medium of instruction and communication in education. This is a significant development, which will be analysed and explained in greater detail in subsequent chapters.

At the time of writing, Singapore has three government/publicly-funded universities: The National University of Singapore (NUS) (*established in 1980 with the merger of the Singapore University and the Chinese language Nanyang University*), Nanyang Technological University (NTU) (*established in 1991 to become a second full-fledged public funded university in Singapore*), and Singapore Management University (SMU) (*established in 2000*). The three universities have a combined total student enrolment of over 55,000 undergraduates and 24,000 postgraduates (MOE-CUEP 2012). About 20% of the undergraduates and 70% of postgraduates are foreign or international students (MOE 2009)

In addition to the three publicly-funded universities, there are also privately-funded universities, such as the SIM University (UniSIM) and other off-shore foreign universities operating in Singapore either on their own or in partnerships with local organizations or professional bodies. The University of Chicago,

DigiPen Institute of Technology and University of Nevada, Las Vegas (UNLV) from USA, INSEAD from France for example, all have branch campuses in Singapore. A fourth publicly-funded university, Singapore University of Technology and Design (SUTD), established in collaboration with Massachusetts Institute of Technology (MIT) in the USA and Zhejiang University from the People's Republic of China commenced its operations in 2012 to meet the national demand for university education. This research study examines only the internationalization of the *three* publicly-funded universities.

During the more recent years, especially from the late 1980s, the Singapore Government has placed significant focus on higher education and implemented many policies and initiatives for the sector. These include the establishing of new polytechnics, reforming universities, establishing and strengthening partnerships with foreign world-class universities and learning institutions. This was a sharp contrast to the significantly few developments in higher education during the colonial days and during the first two decades after Singapore achieved its independence. The priority after independence was economic survival and nation building. Today, the National University of Singapore (NUS) and Nanyang Technological University (NTU) are among the top universities in Asia both in teaching and research and are firmly within the top 100 universities in the world, according to the 2012 Times Higher Education Ranking.

The Singapore government's intention of internationalizing and developing Singapore into a global education hub dates back to the mid-1980s, when education was identified by the Economic Review Committee in 1986 as both a catalyst of human resource development and potential contributor to the Singapore economy. Momentum picked up towards the latter part of the 1990s.

In 1997, an International Academic Advisory Panel (IAAP) was set up by the Ministry of Education (MOE) to advise the Singapore universities on major trends and directions in university education and research with a view to developing them into world class institutions of excellence. The Panel, which still meets bi-annually, comprises distinguished academics, university leaders

and prominent industry figures from USA, UK, Switzerland, Finland, Japan, China and India. Major recommendations, which have since been implemented include the setting up of a 3rd university, the Singapore Management University (SMU) as a private, but government or publicly-funded university with the University of Pennsylvania, USA, in 2000; followed by the corporatization of the two older publicly-funded Singapore universities, the NUS and NTU in 2004. The corporatization and autonomous status enables the three Singapore universities to achieve teaching and research excellence, raise their international standing and enhance their students' experience (MOE, 2005).

Since early 2000, the internationalization of Singapore universities has accelerated. In the 2001 NUS Annual Report under the heading "Internationalization", stated -

As NUS heads towards becoming a global knowledge enterprise, it gave a fresh impetus to its internationalization drive. Through the year, the University lived out its aspiration to be a confluence of local and foreign talents where minds are open and receptive to the richness of cross cultural exchanges and perspective. ... The University carried out a full program of international engagements covering international outreach, forging strategic alliances and active participation in academic network. (NUS, 2001)

NUS has since established Overseas Colleges in Silicon Valley and Bio-Valley in USA, Shanghai in China and Mumbai in India, and established significant partnerships with over 200 universities and research institutes worldwide in its pursuit of internationalization. Nanyang Technological University (NTU) too follows that of NTU.

The third university, Singapore Management University (SMU) - set up in collaboration with the University of Pennsylvania, USA follows the American curriculum structure and has been 'internationalized' since its inception. It is also interesting to note that the President/Vice-Chancellor of two out of the three publicly-funded Singapore universities is an expatriate, reflecting the international dimension of the universities even at senior leadership level. The founding President of the fourth university – Singapore University of Technology

and Design is also an expatriate from the USA and a former Dean of Engineering at Massachusetts Institute of Technology. Attracting and recruiting the best talents regardless of nationality is one of the Singapore government's developmental strategies in a knowledge-based economy.

(5) Rationales Underlying the Study

Bridging the Research and Knowledge Gap

As Wong, Ho and Singh (2007) point out; Singapore's case is of particular interest because of its unique status as a relatively small city state, where the presence of globalization and the pace of shifting toward a knowledge-based economy to sustain economic survival are particularly intense. So too can the internationalization of Singapore universities in a globalized-economy be seen as intense and aggressive, as this study will confirm.

Apart from being highly relevant to economic development, university education in Singapore is also characterized by the dominance of government in the policy making and planning of the university sector in the city state (Tan, 2004). However, research on the roles the government or the rationales for the internationalization of Singapore universities is almost non-existent. Hence, bridging the knowledge gap is a significant reason for this researcher to embark on a research study of "*The Internationalization of Singapore Universities in a Globalized Economy*" from an historical and developmental perspective".

Literature searches reveal that although cursory reference had been made by researchers, such as Altbach (2002) and Mok (2006) on some aspects of university development in Singapore, there is no dedicated research on the internationalization of Singapore universities. On the other hand, academic research on the internationalization of universities in USA, Canada, Europe and Australia has been quite profuse. Altbach (2004) lamented that the voices discussing internationalization are largely Western.

The absence of academic research and the resultant knowledge gap created, especially in Singapore and Asia as a whole, provide opportunity for research to

be conducted on how Singaporean universities are internationalizing in a globalised economy. Given the rich literature available on the internationalization of universities in the Western world, it also gives an opportunity to compare and contrast the policies and practices of Singapore universities with similar trends elsewhere. Deem, Mok and Lucas (2008) contend that universities should avoid *policy copying*, but instead adapt a *policy learning* approach when embarking on an internationalization strategy.

Nature of the Problem - Emerging Nature of the Phenomenon

A further rationale for the study is the emerging and evolving nature of the internationalization phenomenon. Although the term '*internationalization*' is not new from an economic or political science perspective, it is an evolving term in the education sector. As a result, research opportunity on the topic is potentially rich.

The internationalization of higher education is still an evolving concept and a dynamic process. According to de Wit (2002) and Knight (2004) the approaches along which a country and institution address internationalization are also varied and different because of differing priorities, cultures, histories, and resources. This is likely to be the case for Singapore too. Given the emerging nature of the internationalization phenomenon, it is likely that new knowledge, insights or theory on the internationalization of Singapore universities may emerge from the study.

(6) Researcher's Personal Interest, Reflexivity and Stance

Researcher's Personal Interest and Motivation

This researcher's personal interest in the topic is also a significant motivation for the proposed research. This researcher has been involved as a senior academic and administrator in the internationalization strategies and programs in a polytechnic (*not the universities that form the focus of this study*) at which the researcher is currently working. With such professional experiences and knowledge, this researcher should have the theoretical sensitivity and the ability

to see the 'subtleties of meaning of data', and to 'give meaning to data' as advocated by Strauss and Corbin (1990).

Reflexivity and Researcher's Stance

The Internationalization of higher education is both a topic of consensus and controversy. Some researchers accept this as a reality of a globalized world today. While others, such as Slaughter & Leslie (1997), Deem (2001), Altbach (2004) and Mok (2006) view the trend as academic capitalism or a new form of managerialism, or even a form of neo-colonization.

This researcher takes the premise that the internationalization of higher education has to be accepted as a reality; and no longer a choice of either the Singapore government or the universities. This is especially so given the fact that Singapore is one of the world's most competitive and globalized economies, as evident from the annual Global Competitive Report (GCR) which consistently ranked Singapore as one of the most competitive economies in the world. This researcher is also fully aware that the findings of an interpretive qualitative research study, such as the present one, are subject to the positioning of the researcher within the study and the personal experiences that the person brings to the research context (Strauss & Corbin, 1990). This researcher will endeavour to maintain as impartial a stance as possible during the data collection process and reporting of findings and follow the research procedure closely to ensure the rigour and quality of the study.

(7) Significance and Outcomes of the Study

The most significant feature is that according to the present researcher's knowledge, this will be the first study on the internationalization of Singapore universities from a historical and developmental perspective. This researcher is confident that new knowledge and insights will emerge from this research study. The new knowledge and research findings may be useful not only to other educational researchers interested in this contemporary global issue, but also to

policy and decision makers and practitioners involved in the internationalization strategies, processes and/or programs themselves.

The study is significant too in that it may also be the first attempt by a researcher to embark on a study on the internationalization of universities relying solely on a documentary analysis methodology. Such an approach is made possible through an abundance of documentary records, including original sources and archival materials which this researcher has collected during the course of this study. This enables the researcher to analyse them as a collective record and to put a historical perspective on a longitudinal and changing landscape of higher education development in Singapore since its independence in 1965.

This research study should also shed some light on (a) whether the three publicly funded universities in Singapore internationalize in the same ways and for the same reasons or differently; and (b) whether the rationales and approaches or policies adopted by the Singapore government in the internationalization of universities in a globalised economy are different from those elsewhere, especially those with similar settings.

Internationalization is seen as one of the ways a country responds to the impact of globalization (Altbach 2004). An effective response or approach to internationalization should be shaped by a country's unique history, indigenous culture; resources, priorities and relationships with other countries (Qiang 2003). However, Pratt & Poole (2000) and Deem, Mok, Luca (2008) observed that although many countries, Australia for example, profess a desire to see their universities internationalised, internationalization of many institutions inevitably reflects the imitative "me-tooism"; that is, there is very little or no difference between the approaches, programs or strategies adopted by one university from another university or from one country to another.

Mok (2006) suggests Asian universities should critically reflect whether the standards and practices commonly available in the Western economies could be coherently adapted to the Asian traditions and culture. Deem, Mok, Lucas (2008)

also advocate that universities should avoid *policy copying*, but instead adapt a *policy learning* approach when embarking on an internationalization strategy or program. Chan's (2006) thesis proved that not all Asian universities adopt "me-tooism" or "policy copying" approach. The Singapore government is well known for its pragmatism and its ability to adapt its policies to meet the needs of the country and the changing global environment. The Singapore's experience in the internationalization of its universities and international education policies or strategies as a whole from a historical and developmental perspective should provide some useful insights and *policy learning* for others embarking on an internationalization program.

(8) Structure of the Thesis

This thesis consists of six chapters, including this Chapter. The literature review in Chapter 2 begins with an exploration on the concept of internationalization and the impact of globalization in higher education. It is followed by discussions of the rationales or motivation for internationalization; the approaches and strategies adopted by universities in their internationalization process. The objective is to review and analyse from published literature and document sources the current state-of-the-art and development on the internationalization of universities or higher education. More specifically, the review aims to address the four research questions; and to identify and develop a conceptual framework for the proposed research study on "*The Internationalization of Singapore Universities in a Globalised Economy – 'Why' and 'How' they do it?*" It ends with the conclusion and discusses on the implications of the review and its relevance to the proposed research.

Chapter 3 on research methodologies explains the rationale for the research methods adopted for this study. The objective of this chapter is to locate and justify an appropriate research paradigm and an approach or methodology within which the research study or investigation can best be carried out.

Chapter 4 and Chapter 5 discuss the findings and analysis of the data collected. More specifically, Chapter 4 sets the perspective on the historical, economic and

university education development in Singapore. It will answer the specific research questions on (1) the 'interpretation' and (2) the 'emergence' of the term 'internationalization of universities' respectively from the Singapore government and universities' perspective, as well as specific research question (3) on the rationales for the internationalization of Singapore universities. Chapter 5 focuses on specific research question (4) on the approaches, strategies and programs adopted by the Singapore government and the universities.

Discussion & Conclusion in Chapter 6 concludes the study. It will also explore areas for future research, and how the new knowledge and research findings may be useful to other educational researchers interested in this contemporary global issue, as well as policy decision makers and practitioners involved in the internationalization strategies, processes and/or programs. Internationalization of higher education is an unavoidable global trend today. It is a growing interest among education leaders, policy makers and researchers.

CHAPTER 2

LITERATURE REVIEW

Introduction: Objectives and Theme of the Review

As articulated in Chapter 1, the main objective of the study is to trace the emergent and evolutionary trends in the internationalization of Singapore universities from a historical, social-economic and policy development perspective. The main research question is:

“Why and how have Singapore universities internationalized during the period from the beginning of nationhood in the early 1960’s to the globalised economy of today?”

More specifically, the study seeks an in-depth understanding of the *meanings* or *interpretations* of the term ‘internationalization’, the *rationales* for it, and the *approaches* and *program strategies* adopted by the Singapore government and universities in their internationalization drive as guided by the four specific research questions articulated in Section (3) Chapter 1.

The objective of this Chapter is to review published literature and documentary sources on the rapidly evolving phenomenon of the internationalization of universities or higher education, as well as to identify and develop a conceptual framework for the proposed research study.

A historical and developmental analysis makes clear that at certain moments different answers have been given to the *why* (rationales), and *what* (meaning and approaches) and *how* (strategies and models) of the internationalization of universities in Singapore. Accordingly, the literature review begins with (1) an exploration on the concept, its meanings and/or definitions and changing trend of internationalization of universities from a historical development perspective. This is followed by discussions on (2) the impact of globalization, and (3) the rationales or driving forces and motivation for internationalization; and (4) the approaches and strategies adopted by universities in their internationalization

process. It ends with the conclusion and discusses on the implications of the review and its relevance to the research study.

Current State of Literature, Selection and Delimitation

The review covers scholarly and professional journal articles, conference proceedings and research theses relevant to the themes of this research. It also includes relevant policy papers, speeches and annual reports of government ministries and universities. Accordingly to Knight and de Wit (1995) in policy documents and statements, a great diversity of arguments, social, economic and educational, are deployed to support the internationalization of higher education. These documents are useful to understand how international development and national policies influence internationalization strategies and processes at institutional and governmental level.

During the last two decades, the internationalization of higher education has attracted significant interest among educational researchers and writers. However, Knight and de Wit (1995) and De Wit (2002) observe that little research has taken place on the historical roots of the present wave of internationalization of higher education in reaction to the globalization of our societies. This is still true today as evident from this literature review. Academic research on the internationalization of higher education in Asia is even less. Research dedicated to the internationalization of Singapore universities is almost non-existent. This has led Altbach (2004) to lament that the voices discussing internationalization are largely Western. Harman (2005:121) also observes that:

One notable feature of the world-wide literature on internationalization is that scholarly contributions and debate tend to be influenced by the geographic location of contributors and by local circumstances and issues. Thus, in many continental European countries, there is considerable interest in debates in internationalization of higher education on the impact of the European Union (EU) on higher education and its effects on the role of the nation state, especially in terms of higher education policy and provision.

In contrast, in countries such as Australia and New Zealand much of the literature is related to the export of education services, education markets and marketing, and the characteristics and learning styles of international students, particularly those from Asian countries. Still again in other parts of the world the internationalization debate is primarily about international power and dominion, and new forms of neo-colonialism and western cultural domination.

Furthermore, Huisman (2007) observes that the literature on internationalisation in higher education research is scattered and it may be difficult for a novice to come to term with the existing body of knowledge. Given the current state of the literature on the internationalization of higher education, careful selection of the literature to be reviewed and its relevancy to this study is important.

Notwithstanding the above observations on the vacuum in the literature on the internationalization of Asian universities, there is an abundance of published work on internationalization in general. It is noteworthy that during the course of this literature search and review, this researcher has collected over 500 articles and publications, equivalent to 40 arch files, on this research topic. The research aims and the questions help to draw the boundary and guide the selection of the relevant articles and publications to review. Literature relating to the debates on the potential risks and drawback of internationalization, quality assurance issues, students' experiences and learning outcomes; including the roles of language and cultures or its impact, are outside the scope of this research study, and thus excluded from this review.

(1) The Concepts and Meanings of Internationalization of Higher Education

This section relates to the *first* and *second* specific research questions on the evolving concepts and meanings of the term "internationalization" from a historical development, trend and conceptual perspective. More specifically, the review aims to develop a conceptual or theoretical framework for the subsequent analysis of the Singapore universities' and government's interpretation(s) of the term "internationalization of universities or higher education" in relation to the literature or interpretations elsewhere. However, the

aim is not to delve into the complex and fascinating study of the meaning attached to the myriad of other terms, such as international education, global education, multicultural education, comparative education et al related to internationalization. Instead, the intent is to acknowledge the richness, but also the importance of having some clarity on the meaning or concept and process of internationalization, its historical roots and its present role, as expressed by the different stakeholders or researchers in higher education.

(1.1) Historical Development and Evolutionary Concept of Internationalization

It may be argued that historically, universities have been international institutions from their medieval European origins (Lowbeer, 1978; Huebner, 1994; Schuster, 1994; Svensson, 1994, Knight and de Wit, 1999, Altbach, 1998, and de Wit, 2002). More recently, Maringe (2010) explains that the word “university” itself subsumes the notion of universe; a kind of international space for the development of universal knowledge by individuals and groups of staff working locally and internationally with students and resources from different part of the world. Oxford and Cambridge, both established in the 12th century or over 800 years ago are examples of the universities with medieval European origins.

Although the term ‘*internationalization*’ is not new in economic or political science, it is an evolving term in the higher education sector. Levin (2008) concurs with the notion that the internationalization of a university is an *evolutionary* development and cites Yale University which has drawn students from outside the United States for nearly two hundred years; and international issues have been represented in its curriculum for more than a century as an example. Levin (2008) further asserts that internationalizing the university is also a *revolutionary* development – signaling the need for transformational changes in the curriculum of the modern university, the flow of students across borders, the scope and breadth of international collaborations in research, and with the engagement of the university with new audiences. It is reasonable to conclude from literature that internationalization is also a change process necessitated by the changing global environment and its effects on the higher

education landscape. The extent to which the internationalization of Singapore universities follows both evolutionary and revolutionary developments is a subject of interest and focus in this study.

According to Knight and de Wit (1995) and de Wit (2002), the history of higher education from an international perspective may be classified into three stages: (1) universities in the Middle-Ages and Renaissance; (2) the nationalist period between 1800s and World War II; and (3) the post war period to the present day.

(1.1.1) Universities in the Middle-Ages and Renaissance Period

Knight and de Wit (1995) and de Wit (2002) observe that most publications on present day internationalization of higher education in Europe make reference to the days of the Middle Ages and on up to the end of the 17th century. This was characterized by the mobility (or pilgrimage) of students and scholars on higher education and society on that period. In a way, it reminds us of the similar arguments used to promote student and faculty staff mobility across international boundaries and among universities in the present day internationalization of higher education.

De Ridder-Symoens (1995 as cited in Knight and De-Wit 1995) attributes the use of *Latin* as a common language, and a uniform programme of study and system of examinations that enabled itinerant students to continue their studies in one 'stadium' after another, and ensured recognition of their degrees throughout Christendom - all of which allowed them to take home a host of new experiences, cultural exposures, ideas, opinions and political principles. This again reflects a similarity with the current internationalization phenomenon of higher education, except that *English* (instead of Latin) is used as the common language in the globalised world of today, including even non-English speaking Asian countries, such as China, Japan and South Korea. This has led to criticisms by some scholars, such as Altbach (2004), Mok (2006) et al, that the present day internationalization has a flavour of neo-colonialization.

However, this is not a concern of the Singapore government, which has since independence taken a conscious effort and pragmatic approach to use English as the main medium of instruction in schools and universities in order to reach out to the global market and to remain competitive. Such a pragmatic approach resulted in the closing down of the Nanyang University (or '*Nantah*' as it was called in Chinese), which used Mandarin as the predominant medium of instruction, and its merging with the English medium Singapore University to form the National University of Singapore in 1980. This may arguably be the most significant milestone and the first step in the internationalization of Singapore universities and deserves more analysis in subsequent chapters.

(1.1.2) Universities in the period between 18th Century and World War II

The extent of 'internationalization', if any, appears more limited during the period between 18th century and World War II. The historical development of this period is one of predominantly *nationally oriented* higher education (Knight and de Wit, 1995). The most important element of higher education during this period was probably the export system of higher education. Two other international elements of note concerning higher education during this period were in the areas of research and international mobility of a small group of well-to-do and academically qualified students to the top centres of learning in the world, and limited cooperation and exchange in academic research.

The 'export system' took the form of *export* from the colonial powers to their colonies, and later to the newly independent states (Knight and de-Wit, 1995, and de Wit, 2002). Higher education in India and other Asian, African, and North American countries belonging to the British Empire was modeled on British higher education, values and system. The original academic model in Singapore, a British colony from 1819 to 1959, was British and the norms and values of the British system are still evident today, although it has also adopted the best practices of the American and Continental European university systems toward the end of the 20th century. This combination makes it a distinct feature in the internationalization of Singapore universities.

(1.1.3) Universities in the Post War period from late 1940s to Present

According to Knight and de Wit (1995), the trend of international educational exchange continued to expand gradually after the World War II, at first primarily in the USA and in the Soviet Union, the two new superpowers that emerged from the war. Knight and de Wit (1995) and de Wit (2002) attribute the motivation as the desire to gain a better understanding of the rest of the world and to maintain and even expand their spheres of influence as the main political regimes dominating the world political scene at the time. International educational exchange and cooperation were fostered by the Soviet Union and America. The immediate post war period was heavily influenced by the war and the move to promote international exchange has a strong idealistic connotation of peace and mutual understanding. Europe, on the other hand, was still heavily focused on recovering from the severity of the two world wars and on reconstruction, and was not able to invest in international exchange and cooperation (Knight and de Wit 1995).

De Wit (2002) categorises the historical development of international elements of higher education during the post war era up to the end of 20th century into three different periods: (a) the period after the World War II between mid-1940s to 1950s, (b) the period from 1960s to 1970s and (c) the period 1980s to late 1990s. Although the categorization by De Wit (2002) ends in late 1990s, internationalization of universities continued and accelerated in the 21st century. Knight (2008) observes that there is no doubt that in the last two decades, internationalization has evolved into a central feature of the higher education sector as evidenced in the increasing development of more cooperation and greater mobility of students and faculty staff among universities in the form of consortia, joint degree programmes, research et al. The periods from 1960s to 2010s are particularly relevant for this research study on the internationalization of Singapore universities. These periods also coincide with the different phases of economic and educational development in Singapore, thus enabling some comparative study to be made on the extent to which the internationalization of Singapore universities is similar or different from historical and global development.

Internationalization from 1960s to end 1970s

According to de Wit (2002), internationalization of higher education was nearly non-existent during the mid-1940s to 1950s. During the 1960s to 1970s, it was a period of decolonization and contraction for the developed world. Almost all the former British and French colonies were granted independent status. Singapore too achieved its self-governing status from the British in 1959 and independence in 1965, after its separation from the Federation of Malaysia. The universities in these newly independent nations become *generators of human resources* in addition to their traditional role as centres of scholarly study. There was a growing one-way mobility of students from the “South to the North” usually in the forms of grants or scholarships funded by the host countries or foundations, such as the Colombo Plan Scholarship Foundation. Singapore was a significant beneficiary of these grants and scholarships. Many of these scholars returned to their home countries after their studies and became political leaders or top civil servants, although in some cases a negative brain-drain resulted as some of these scholars did not return to their countries after their studies.

Internationalization from 1980s to late 1990s

Major changes in internationalization of higher education took place in the 1980s. The context was different from the prevailing period after World War II and in the period from the 1960s to 1970s. The collapse of communism at the end of the 1980s, the strengthening of the European Community, and the rise of Japan as a world economic power, as well as the advancement of info-communication technologies are significant driving forces towards a more globalised world (de Wit, 2002). The emphasis was on the economic argument to promote greater international co-operation, trade and exchange in international education.

A dominant concern through the 1990s was with internationalization as a process of strategic transformation of institutions Callan (2000). De Wit (2002) attributes the move from aid to trade in Australia and United Kingdom, the

development of the European programme for research and development, the development of transnational education, and the presence of internationalization in mission statements, policy statements and strategic plans of institute of higher education as clear manifestation of these changes. Globalization and the related knowledge society based on technological developments, as well as the end of the Cold War and the creation of regional structure (in particular the EU) influenced these changes. Internationalization processes began to take shape in Asia too towards the late 1990s. Scott (2000) asserts that internationalization took place in the context of globalization, and could no longer be seen as a reiteration of the old *internationalism*, still dysfunctionally dominated by the West.

As a result, internationalization of higher education became a key issue in the debates and policies in the 1990s (Teichler, 2009). The need for an organized response by higher education to these external developments resulted in an internationalization strategy that was based more on explicit choices (*rationales*) and more integrated strategy (*process approach*). Teichler (2009) describes the development as a “qualitative leap forward” of internationalization in the 1990s. The processes were intensified by the new information and communication technologies. Competitiveness in the international market became a key rationale. Internationalization as a strategic process became more central in higher education (Teicher 1999 and De Wit 2002). The findings of the global surveys on the internationalization of higher education conducted by the International Association of Universities in 2005 and 2009 confirm such observations. Indeed 87% of institutions surveyed in 2009 include mention of internationalization in their overall strategic plan, and 78% see internationalization as having increased or substantially increased in importance within their institution over the past three years (IAU 2010). As observed earlier by Knight (2008), the international dimension of higher education has been steadily increasing in importance, scope and complexity during the last two decades. The period beginning in year 2000 may be dubbed as the “*fourth period*” of the post war internationalization of universities. Internationalization has become a reality and desire of most universities and students alike for the 21st century. It is no longer just for the elite few.

The overview of the historical roots and development of international education provides the context in which the present phenomenon and strategies for the internationalization of higher education in general and that of the Singapore universities could be analyzed. It must, however, be noted that the history of Singapore as a nation started only in 1965 after its failed merger and separation from Malaysia, although the history of its higher education, including the present National University of Singapore is much longer, dating back to 1905, during the colonial era.

(1.2) Conceptualization and Meanings of “Internationalization”

The definition and concept of internationalization has been a subject of much discourse. As Knight (1999:13) has observed, “it is clear that internationalization means different things to different people and as a result, there is a great diversity of interpretations attributed to the concept”. The range of related terms is also a fundamental problem to be faced when considering internationalization of higher education. Terms frequently used, both in the literature and in practice are: *international education*, *international studies*, *internationalism*, *transnational education*, *internationalization* and *globalization of higher education*. Such a wide range of terms can be confusing. This leads De Wit (2002) to comment that the internationalization of higher education is still a phenomenon with a lot of question marks, regarding its historical dimension; its meaning, concept, and strategic aspects; its relationship to developments in society and higher education in general, in particular the globalization and regionalization; and regarding its status as an area of study and analysis.

Internationalization of higher education is a dynamic, multi-dimensional and complex process (Knight, 1999, 2003; Frolich and Vega, 2005; Chan 2006). The ways in which it is described, defined and implemented through policies, procedures, activities, and partnerships developed by the higher education institutes on the one hand, and by policy makers on the other hand, vary considerably between countries, between stakeholders and even within institutions (Middlehurst and Woodfield, 2007). Maringe (2010) also observes

that there is a growing base of literature on internationalization in higher education, which explores a wide variety of conceptualizations of internationalization. Such conceptualizations include sectoral, national and institutional strategies and activities designed to incorporate international education into existing curricula. Other conceptualizations focus on enhancement of education quality, growth of enterprises or entrepreneurship education and the associated managerialism higher education, a focus on recruiting international students, and the development of partnership education and research in higher education.

(1.2.1) Activities-based Definition

As reviewed earlier, as historical development, the term “internationalization” of higher education did not exist prior to the 1980s. The most common term used then was “international education” (Knight 2006). Towards the late 1980s and early 1990s, internationalization was commonly used to define a *set of activities* at the institutional level. The activities involved mainly the mobility of scholars, students and staff. Arum & van de Water (1992) defines internationalization as *“the multiple activities, programs, and services that falls within international studies, international educational exchange and technical cooperation”*.

However, such a definition soon became incomplete. Altbach and Knight (2006) observe that the focus on international education today ranges from traditional study abroad programs, which allow students to learn about other cultures, to providing access to higher education in countries where local institutions cannot meet the demand. Other activities stress the upgrading of international perspective and skills of students, enhancing foreign language programs, and providing cross-cultural understanding. The latter activities are particularly relevant to non-English speaking countries, such as Japan and China in Asia, which in recent years have begun to integrate the international and intercultural dimension into the curricula of their universities (Qiang, 2003, Altbach 2004, Mok 2006)

(1.2.2) From Activities to Process-based Definition

Knight (1993:21) defines internationalization of higher education at the institutional level as *“the process of integrating an international and intercultural dimension into the teaching, research and service functions of the institutions”*. Knight (1993)’s definition is significant as it shifts from an activities-based perspective to a *process* view. However, Knight’s definition has been criticized by Wende (1997) as incomplete as the definition does not include the *goal or expected outcomes* of the process of internationalization. It was argued that Knight’s definition might suggest that internationalization is an end in itself; while in many countries or institutions, internationalization is a means to achieve a wider goal; such as improving quality or learning outcomes, increasing revenue, and restructuring and upgrading the reputation of the university.

Wende (1997) thus defines internationalization as: *“any systematic, sustained effort aimed at making higher education (more) responsive to the requirements and challenges related to the globalisation of societies, economy and labour markets”*. While ‘systematic and sustained effort’ is undeniably a process, the definition is more closely linked to the rationales or driving forces for the internationalization than the concept or meaning of the phenomenon. There seem to be a confusion between the meaning of (the ‘*what*’?) and rationale (the ‘*why*’?) for internationalization. Ellingboe (1998:199) expands Knight’s definition to:

Internationalization is the process of integrating an international perspective into a college or university system. It is an on-going, future oriented, multidimensional, interdisciplinary, leadership driven vision that involves many stakeholders working to change the internal dynamics of an institution to respond and adapt appropriately to an increasingly diverse, globally focused, ever changing external environment.

While this definition is more comprehensive and encompassing, it is cumbersome. Nonetheless, it is worthy to note that Ellingboe (1998) recognizes the complexity of the internationalization process and the involvement or influence of many stakeholders in the process. Such complexity is evident in subsequent studies by researchers, such as de Wit (2002), Chan (2006) et al.

In 2002, Soderqvist (2002:29) attempted to incorporate the outcomes by defining internationalization of higher education as “a *change process from a national higher education institution to an international higher education leading to the inclusion of an international dimension in all aspects of its holistic management in order to enhance the quality of teaching and learning and to achieve the desired competencies*”. While Soderqvist’s attempt is noble, it has its drawback. This researcher is of the view that any attempt to specify the outcomes of an internationalization process; such as “to *enhance the quality of teaching and learning and to achieve the desired competencies*”, may be too presumptuous. Given the complexity of the internationalization process and uniqueness of each country and institution, the goals and expected outcomes may differ among institutions, nations and cultural identities.

Van Damme (2001) also observes that increasing focus on international education raises the quality of higher education, the global labour market, but equally raises issues about how to measure the quality. There is no guarantee that internationalization will enhance quality of teaching and learning or achieve the desired competencies, although internationalization may be a source of revenue generation for most if not all universities, which will be discussed later under the theme of rationale in this review. The deterioration in quality standards is in fact a major concern in the internationalization of higher education.

Soderqvist (2002)’s definition may also give an impression that all internationalization of higher education will change “a *national higher education institution*” to “an *international higher education*”. This is obviously not so, nor the intention of internationalization. As Deem (2001) has argued convincingly, the local dimension remains important despite internationalization efforts. Many universities remain home-based national universities with an *international character* after having embarked on an internationalization strategy.

Table 2.1 summarizes the range of definitions and conceptualization of the term “internationalization” offered and discussed.

Table 2.1: Conceptualization of Internationalization in Higher Education

View of Internationalization	Definition / Perspective of Internationalisation	Source(s) / Researchers
<u>Activities based</u> international Programs	..... the multiple activities, programs, and services that falls within international studies, international educational exchange and technical cooperation	Arum & van de Water (1992)
<u>Integration</u> of the international dimension	..... the process of integrating an international and intercultural dimension into the teaching, research and service functions of the institutions	Knight (1993)
<u>Change Process</u> responding to challenges of globalization	..... any systematic, sustained effort aimed at making higher education (more) responsive to the requirements and challenges related to the globalisation of societies, economy and labour markets	Wende (1997)
<u>Integration</u> of international dimension as an <u>on-going Change Process</u>	..... integrating an international perspective into a college or university system. It is an on-going, future oriented, multidimensional, interdisciplinary, leadership driven vision that involves many stakeholders working to change the internal dynamics of an institution to respond and adapt appropriately to an increasingly diverse, globally focused, ever changing external environment	Ellingboe (1998)
<u>Change Process</u> (from a national to an international institution)	..... a change process from a national higher education institution to an international higher education leading to the inclusion of an international dimension in all aspects of its holistic management in order to enhance the quality of teaching and learning and to achieve the desired competencies	Soderqvist (2002)
<u>Integration of the international dimensions</u> – <i>updated version</i>	..... internationalization at the national, sector, and institutional levels is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education	Knight (2004)

Source: Compiled by Author

Internationalization is a complex process. Recognizing this, the Organization of Economic Cooperation & Development (OECD) defines internationalization as “the complex of processes whose combined effect, whether planned or not is to

enhance the international dimension of experiences of higher education in universities and similar educational institutions”.

Internationalization is also an evolutionary process. Knight (2003:3) updated the definition of internationalization of higher education at the *national, sector, and institutional levels* as “*the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education*”. The inclusion of *national* and *sector*, in addition to *institution*, as stakeholders in Knight’s (2003) updated definition makes the concept more complete, which is likely to be demonstrated in the Singapore case.

Section conclusion

Internationalization of higher education is still an evolving term. De Wit (2010) observes that in the literature and in the practice of internationalization of higher education, it is still quite common to use terms which only address a small part of internationalization and/or emphasize a specific rationale for internationalization.

Both Knight and OECD’s definitions look at internationalization of higher education as a “*process*”. From the literature review, the “*process*” approach, especially that of Knight (2003)’s updated definition appears to be the most widely accepted concept in the definition of internationalization of higher education. The term “*process*” denotes an evolutionary or developmental nature of the concept, which is responsive to the changes of the environment and adaptable to the needs of stakeholders as embedded within the definitions by Knight (1993, 2003), Wende (1997), Ellingboe (1998), and Soderqvist (2002). This researcher views Knight’s (2003) definition as a pragmatic and practical approach to such a complex and evolutionary phenomenon – though it is bland and tends to avoid specificity. The inclusion of the concept of (a) ‘*integration*’ to denote internationalization as ‘*the process of infusing the international and intercultural dimension into policies and programs*’ and (b) ‘*purpose*’ in Knight’s (2003) definition to remind policy-makers to consider the mission of the university when designing an internationalization strategy made the process

approach and Knight's definition an even more attractive conceptual framework for any research relating to the internationalization of higher education, including the current study. As explained by Knight (2004), the updated definition also recognizes the fact that internationalization at institutional level may be affected by national policies, and responses of the sector. Singapore is a case in point, as evident from the preliminary documentary review from policy statements and speeches of Ministers and University Vice-Chancellors to be analyzed and discussed in details at the Findings and Analysis chapters.

(2) Globalization – its relationship and Impact on the Internationalization of Higher Education

Inevitably the term '*globalization*' surfaces in any discussion on the internationalization of higher education. The term is also relevant to the first research question on the interpretation of the term "internationalization of universities", and the research topic on the "internationalization of Singapore universities in a *globalised* economy"

(2.1) Globalization versus Internationalization

De Wit (2010) observes that over the past 10 years, a new group of terms, such as borderless education, global education, twinning programmes or off-shore education, which are more related to the cross border delivery of education, are emerging as a direct consequence of the impact of globalization. It has also been observed from the literature review that the two terms, internationalization and globalization, are often used interchangeably.

However, Knight (1997) and Yang (2002) argue that globalization is not the same as internationalization. Gacel-Avila (2005:124) asserts that '*the concept of internationalization differs dialectically from that of globalization because it refers to the relationship between nation states, which promotes recognition of and respect for their own differences and traditions*'.

By contrast; the phenomenon of globalization does not respect differences and borders. It is a complex, unprecedented social process that affects most if not

all nations in terms of their functions and their economic, social and cultural development. In short, “internationalization” may be generally defined as increasing cross-border activities with the persistence of borders, while “globalization” refers to similar activities concurrent to an erosion of borders (Teichler, 2010). Yang (2002) asserts that whereas globalisation is an extension of historical imbalances linked to Western colonisation and dominance, internationalisation has the potential to create more equitable relations. Globalization is the economic, political and societal forces pushing the 21st century higher education towards international involvement (Altbach & Knight, 2004). It may be argued that globalization and the emergence of new educational technologies have accelerated the process of internationalisation.

Yang (2002) also argues that globalization involves the influencing of universities worldwide through market competition and radically changing the face of the university as an institution. Qiang (2003) and Gacel-Avila (2005) support such an argument and observe that universities are now expected to train new generations of graduates to live and work successfully in a globalised world. This is in fact a significant reason or rationale for the internationalization of publicly funded universities in Singapore. Mr Teo Chee Hean, then Minister for Education announced publicly in a 2000 Lecture to members of Alumni International Singapore titled “*Education towards the 21st Century – Singapore Universities of Tomorrow*”, that the role of Singapore universities is to “*educate Singaporeans to be global workers and to continue with their quest for excellence as global institutions*” (MOE, 2000) This message was subsequently reiterated at various forums at both government and institutional levels, and has become a mission of the universities.

At a more recent speech by Professor Shih Choon Fong, then President, National University of Singapore at a university event on 31 January 2008, Prof Shih said “*as a university aspiring to global excellence in education, NUS has a responsibility to prepare our graduates for life and work in a fast changing, globalizing world of increasing cultural complexity. More importantly, they must*

be able to seize opportunities and take on challenges amidst a rising Asia.”
(Shih, 2008)

Knight (2006) succinctly describes the relationships between globalization and internationalization as: *“globalization is transforming the world and internationalization is changing the world of higher education”*. However, Scott (2006) cautions that both internationalization and globalization are complex phenomena with specific strands, and that the distinction between internationalization and globalization, although suggestive, cannot be regarded as categorical. They overlap, and are inter-twined in all kinds of ways.

(2.2) Implication for this study

It is not the intention of this researcher to distinguish categorically the differences between the two terms internationalization and globalization for the purpose of this study. To do so may result in some important literatures being missed during this research. Instead, a more liberal and broader interpretation of the two terms will be used at the findings and analysis stage, although a conceptual understanding of globalization and internationalization is needed to make sense of the varied and complex ways they are affecting higher education. Globalization is a significant rationale for both government and universities to internationalise (De Wit 2002). Singapore is a significant case example. As revealed by IAU (2010) survey the pace of globalization and consequently the process of internationalization has accelerated and changed rapidly over the last few years.

(3) Rationales for Internationalization

Rationales are the motivation or driving force behind integrating an international/intercultural or global dimension into higher education. When internationalization is discussed, it is important to distinguish the question of why universities are internationalizing from what we mean by internationalization.

Rationales address the purpose or ‘*why*’ aspects of internationalization; which is the *third* specific research question. The review should provide a clearer

theoretical framework for the analysis of this specific research question on the rationales for the internationalization of Singapore universities from a historical, political and social-economic development or policy perspective, and whether these rationales have changed over time. Rationales in turn determine the approaches and strategies adopted for internationalization at the national, sector or institutional levels.

Knight (1994) observes that there is no single motivation for internationalising. Instead, there are a variety of imperatives, which are not necessarily mutually exclusive. Welch & Denman (1997) concur that rationales for the world-wide expanding programmes of internationalisation are not uni-dimensional. According to Cuthbert (2002), the motivation to internationalize is contingent upon the national context and the environment in which an institution operates.

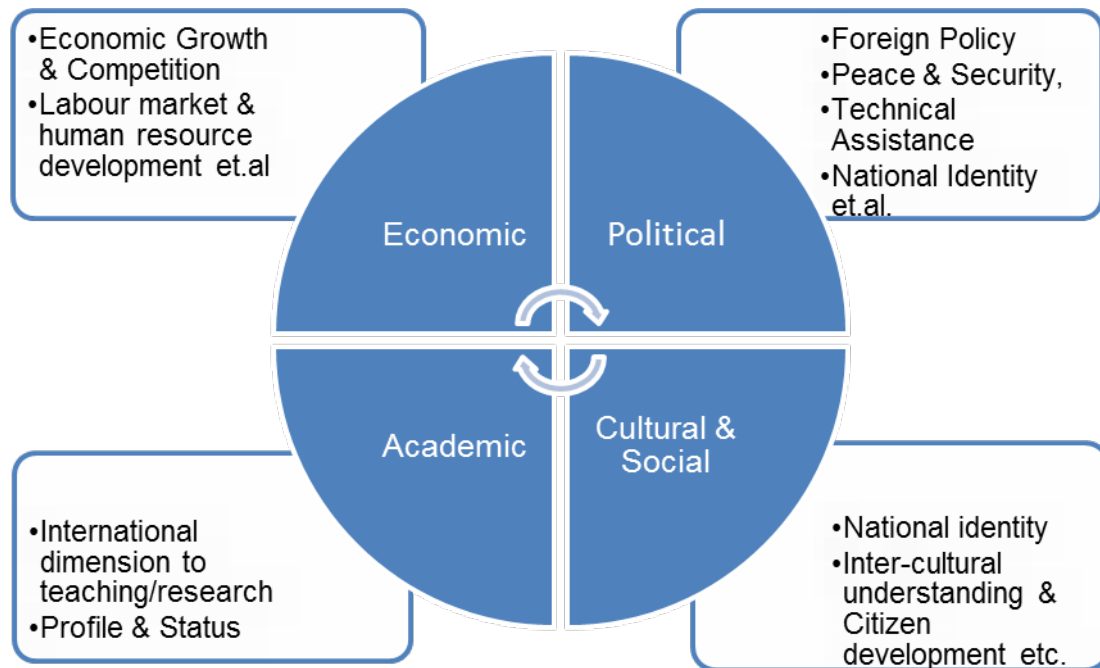
De Wit (2002:14) asserts that *“as the international dimension of higher education gains more attention and recognition, people tend to use it in the way that best suits their purpose”*. In a comparative study of two universities, one in the United Kingdom and one in Hong Kong, which revealed major differences in the internationalization processes of the two universities, Chan and Dimmock (2008:190) conclude that *“the differences were partly a direct result of national and cultural contexts and partly internal to the universities themselves. Consequently, each was internationalizing according to its respective strengths and positions of advantage, its assets and resources, and in the way that it could best achieve its goals”*.

This research study will examine the extent to which the rationales for the internationalization of Singapore universities concur or differ from previous findings. The works of Knight and de-Wit (1999), de-Wit (2002, 2009) and the findings from the International Association of Universities (IAU) which conducted three global surveys on the internationalization of universities in 2003, 2005 and 2009 should also provide a good basis for comparative analysis on the changing rationales of internationalization of Singapore universities over the years.

(3.1) Traditional Rationales Driving Internationalization

Traditionally, the rationales driving internationalization may be presented in four groups, as shown in Figure 2.1: *political*, *academic*, *social/cultural*, and *economic* (de Wit, 1995, 2002), Knight & de Wit, (1997, 1999), Yang (2002) and Knight (1997, 2004)

Figure 2.1: Rationales Driving Internationalization



Source: Adapted from de Wit (2002) and Knight (2004)

(3.1.1) *Political Rationale*

The political rationale relates to issues connecting the country's position and role as a nation in the world, such as foreign policy, security, stability and peace among nations, and ideological influences. Educational cooperation can be considered as a form of diplomatic investment in future political relations (De Wit 2002). Knight (1997) contends that while political rationale is still a consideration today, it does not have the same importance it once did. This is confirmed in the IAU (2003, 2006 and 2010) reports which show that political rationale does not appear within the top 10 rationales within the studies. However, Knight (1997) also admits that the granting of scholarships as a form of diplomatic investment for foreign students, who are seen as promising future

leaders are considered to be effective ways of developing an understanding and affinity for the sponsoring country. This is in fact a significant motivation of the Singapore government, many of whose members were once recipients of such scholarship grants during the early 1960s to late 1970s, and who are now granting substantial post-graduate scholarships and tuition-fee grants at undergraduate level for foreign students to study in Singapore, a point later discussed in Chapters 4 and 5.

According to United States Advisory Commission on Public Diplomacy (1995 as cited by Knight and de Wit 1995), student and staff exchange and training have direct and multiplier effects that make them among the most valuable instruments of America's foreign relations. The twin arguments of economic and diplomatic investment were the traditional rationale in the United Kingdom for welcoming foreign students and educating them in generous terms, in the years before fee revenue became the dominant incentive (Knight and de Wit 1995).

(3.1.2) Academic Rationale

The academic rationale includes objectives related to the aims and functions of higher education. One of the often cited reasons for internationalization of universities is the achievement of international academic standards for teaching and research, as well as enhancing the universities' standing, profiles and reputation. As observed by Knight and de Wit (1995), the pursuit of knowledge in the modern and globalized world today requires vast resources which are not all available in any one university. International cooperation between higher education institutions, in many cases, then becomes a necessity. Internationalization efforts are intended to enable the academic communities to have the ability to understand, appreciate, and articulate the reality of interdependence among nations (environmental, economic, cultural and social), and to prepare faculty, staff and students to function in an international and cultural context (De Wit, 2002).

More recently, higher education systems in both Europe and Asia are going through significant restructuring processes to enhance their competitiveness and

hierarchical positioning within their own countries and in the global marketplace (Deem, Mok and Lucas, 2008). Both the National University of Singapore (NUS) and Nanyang Technological University (NTU) in Singapore are moving towards this direction, and positioning themselves as '*global universities*' by actively promoting their international branding and engaging in numerous internationalization programs and academic cooperation projects aimed at upgrading their perceived quality. Hence their partnerships and links with overseas universities are geared to those with very high world status and ranking. The ultimate goal would be to have NUS and NTU dubbed respectively the Harvard University and Massachusetts Institute Technology (MIT) of the East (Goh, 1996). This will again be discussed and analyzed in greater details at Chapters 4 and/or 5 under "Findings and Analysis".

(3.1.3) Cultural & Social Rationale

The cultural/social rationale concentrates on the role and place of the country's own culture and language and on the importance of inter-cultural understanding in a globalised world. The preparation of graduates who have a strong knowledge and skill base in intercultural relations and inter-communication is considered by many academics as one of the strongest rationales for internationalizing the teaching/learning experience of students (Knight, 1997:11). It is also argued that international academic exchange is more important for the individual's development than for academic reasons. Kallen (1991 as cited in Knight and de Wit, 1995), calls this as '*social learning*' and stresses the importance of the individual development of the student and the academic through a confrontation with other cultures. In the words of the Singapore Education Minister, it is preparing the graduates to be '*world ready*' (MOE, 2008).

Improving students' preparedness to work in a culturally diverse and highly competitive global economy today is ranked as the top rationale as revealed in the latest or 3rd International Association of Universities' Global Survey on the Internationalization of Higher Education (IAU, 2010). It is to be noted that '*improve students' preparedness*' is both an academic and cultural rationale. There is an overlap. De Wit (2002) has cautioned about such overlapping

rationale. Whether it is classified as an academic or cultural rationale will depend on the perception or viewpoint of the relevant stakeholder. To others, it may be argued as an economic rationale.

(3.1.4) Economic Rationale

The economic rationale refers to objectives related *firstly*, to the long term economic effects and contribution to the skilled human resources need for nation building and international competitiveness. *Secondly* it may be the direct economic benefits of income generation from foreign students to the university. This has become a major rationale of late, especially in Anglo-Saxon developed economies which have experienced financial problems, slow or negative economic growth, and consequent cut-backs in government funding to universities. In other words, universities must rely less and less on government funding and increasingly on self-funding. But governments, too, benefit from foreign students bringing income into the economy. It is this second objective which seems to dominate in literature and debates relating to the rationale or benefits on the internationalization of higher education.

De Wit (2002) asserts that higher education as an export commodity is becoming a dominant rationale for national governments, but also for institutions and the private sector. The globalization of economies and liberation of trades are seen as a significant contributing factor (Knight 2006). As Slaughter and Leslie (1997) argue, university entrepreneurialism is becoming more dominant these days as a consequence of globalization. Terms, or concepts, such as 'marketization', 'new managerialism', 'academic capitalism', 'commoditization', 'corporatization', and 'McDonaldization' have been used by researchers and commentators, such as Slaughter & Leslie (1997), Clark (1998) and Altbach (2002) to describe the approaches by some in the internationalization drive strategies.

Recruitment of international students is a major economic motivation for internationalization, although few may readily admit it. The general decline in funding for universities from most governments also drives many institutions to

recruit full fee paying international students (Altbach 2002, Marginson 2007 et al). De Wit (2002) asserts that the internationalization of higher education in the UK has mainly concentrated on attracting high-tuition-paying foreign degree students. In 2006, Tony Blair, the former Prime Minister of UK, announced an ambitious plan to bring 100,000 extra international students to the UK by 2011, when he launched the 2nd phase of an earlier similar successful recruitment drive (*Source: British Council, 2006, or The Guardian, 18 April 2006*). In Australia, the value of education exports grew by 21% in 2007 to replace tourism as the top services export and become the country's third largest export overall (IDP, Australia, 2008)

International education is a big business. The number of international students studying abroad reached 2.1 million worldwide in 2003. In 2002, IDP Education Australia estimates that the number will increase to 7.2 million in 2025. The Atlas of Student Mobility (2007) UNESCO Report on International Student Educational Exchange reveals an estimated figure of 2.7 million students studying in eight top global destinations for international students. USA has the highest share of 22%, followed by 13% in UK, 10% in France, 9% in Germany, 4% in Australia, and 3% in Canada. Asian countries, China and Japan captured 6% and 4% share respectively of the total international students.

Table 2.2: Percentage of International Students in relation to University Enrolment

Country	Total University Enrolment	International Student	% of international Students
USA	15,023,346 (2007)	582,984	3.8%
United Kingdom	2,387,535 (2007)	376,190	15.8%
France	2,160,300 (2004)	237,587	11.0%
Germany	1,985,765	248,357	12.2%
Australia	984,146 (2006)	167,954	17.1%
China	25,000,000+ (2006)	162,695	0.65%
Japan	4,031,604 (2004)	117,927 (2006)	2.9%
Singapore	50,000 (2007)	10,000	20+%

Sources: Project Atlas 2007 data from partner organizations, UNESCO/OECD 2005 data and *Open Doors 2007: Report on International Educational Exchange*.

However, as seen from Table 2.2, the percentage of international students to the total enrolment in the universities in China and Japan is still small in relation to its large domestic student base. This is still a very much “South to North” phenomenon of (from developing to developed countries) student mobility and a clear indication of the growing interest and importance of Asian countries now embarking in the international education scene.

(3.1.5) Is Income generation really a dominant Economic Rationale?

Not every country is, however, motivated by the economic rationale of income generation. Singapore is an example of a country, which is not motivated as strongly by the economic rationale of income generation. Singapore universities do not require international students to supplement their income. Foreign students studying in any of the three publicly-funded universities in Singapore are given a substantial tuition-fee grant regardless of their affordability. In a parliamentary reply to a question raised by a Member of Parliament on the same subject on 19 April 2005, the Singapore Minister of Education said:

The tuition-fee policy for foreign students is linked to our objective of attracting bright foreign students to study in our universities, which will increase our talent pool. We need to recognise that we are competing for top students with other universities in the region and beyond. Any fee which is higher, coupled with a high cost of living in Singapore, would make it unattractive and financially difficult for foreign students to study in Singapore. Our universities need to ensure that they provide quality education at competitive rates vis-à-vis those of other foreign universities.

The Minister added:

Such a move has its benefits. Foreign students add to the vibrancy of the universities’ learning environment by providing diversity and alternative perspectives, given their different cultural and social backgrounds. This enriches the university education and experience of our local undergraduates, and ultimately adds to the international standing of our universities. Foreign students who receive subsidy from the Government will have to serve a 3-year bond upon graduation by working in Singapore and hence supplement our labour force. (MOE2005)

This is also an example of the rationales for the internationalization of universities from a national policy, human capital and economic development perspective, which will be analyzed further in the “Findings & Analysis” chapter.

Singapore presents an antithesis of the USA and UK examples: the former is less interested in revenue generation and more in attracting high quality labour to offset the shortfall in skilled manpower, while the latter is exactly the opposite.

While higher education as an export 'commodity' is a big business, higher education institutions surveyed typically understate it as a dominant rationale for internationalization, as is evident in the IAU (2003, 2006 and 2010) Global Survey Reports. The latest IAU (2010) worldwide survey report on internationalization of higher education conducted in 2009 shows that only 2% of the 745 institutions in 115 countries cited income generation or diversifying sources of income as a significant rationale for internationalization. It is ranked in 8th position in terms of importance compared to 4% in a similar survey conducted in 2005. The reason for such understatement may be gauged by the elevation of monetary factors in relation to academic quality and the lowering of status that would follow from such an admission.

(3.2) New Emerging Rationales

Although the generic rationales are still relevant and remain a useful framework for analysis, new rationales are emerging at both national and international levels. Studies of the IAU Global Survey Reports conducted in 2003, 2005 and 2009 confirm that the rationales for the internationalization of higher education are shifting and new rationales are emerging.

The IAU Global Surveys represent the most geographically comprehensive collection and analysis of data on the internationalization of higher education ever taken. The 2009 survey, published in 2010 under IAU (2010), for example, covers responses from 745 institutions in 115 countries from all regions of the world. IAU (2010) shows that at the national level, improved students' preparedness for a globalised world through internationalized curriculum and innovation; and enhancing international and institutional profile and competitiveness through strategic alliances and international cooperation - are ranked ahead of income generation (see Table 2.3 next page).

Table 2.3: Changing Rationales for Internationalization over the Years

Ranking	2003 IAU Report	2005 IAU Report	2010 IAU Report
1	Mobility and Exchanges for students and teachers	Increase student / faculty international knowledge	Improved student preparedness
2	Teaching & Research Collaboration	Strengthen research capacity	Internationalize curriculum
3	Academic standards and Quality	International Profile	Enhance institutional profile
4	Research Projects	Academic Quality	Strengthen research & knowledge
5	Co-operation and Development Assistance	Diversity of faculty/students	Diversify sources of students
6	Curriculum Development	Curriculum Innovation	Diversify sources of faculty/staff
7	International/Intercultural Understanding	Diversify Income generation	Increase faculty's international knowledge
8	Promotion & Profile of Institution	(Only 7 were listed)	Diversify sources of income

Sources: IAU Global Survey Reports on Internationalization of Higher Education

Indeed in reviewing the overall results, IAU (2010:62) concludes that “*the focus on students is of utmost importance. Internationalization is viewed as a process that brings great benefits to students. It is a way to prepare them for an internationalized world, to improve the teaching and learning process and to improve the academic offering for students*”. This is consistent with Gacel-Avila’s (2005) observation that universities are now expected to train new generations of graduates to live and work successfully in a globalised world; and the aspiration of the Singapore government for the Singapore universities to produce graduates who are ‘*world-ready*’ to be a “*global worker*” (MOE 2008).

The IAU (2006 and 2010) reports show that financial rationales continue to be ranked very low. This is particularly so for traditional non-profit oriented and publicly-funded universities, such as those in Singapore. Traditional internationalization is rarely a profit making activity, though it may enhance the competitiveness, prestige, and strategic alliances of the universities or institutions as observed by Altbach and Knight (2006).

As shown in Table 2.4, IAU (2010) survey results also show that the most important rationales for internationalization in the Asia Pacific region, where Singapore is, are similar to the world average.

Table 2.4: Ranking of Most Important Rationales for internationalization

Ranking	Rationales for Internationalization	2009 Survey	
		World	Asia Pacific
1	Improved student preparedness (<i>academic and cultural awareness – ‘world ready’</i>)	30%	31%
2	Internationalize curriculum (<i>academic</i>)	17%	17%
3	Enhance institutional profile (<i>academic – status, institutional building and competitiveness</i>)	15%	14%
4	Strengthen research & knowledge (<i>academic</i>)	14%	15%
5	Diversify sources of students (<i>economic</i>)	9%	7%
6	Diversify sources of faculty/staff (<i>academic</i>)	4%	6%
7	Increase faculty’s international knowledge (<i>academic – institutional standing</i>)	3%	4%
8	Diversify sources of income (<i>economic</i>)	2%	2%
9	Respond to public policies (<i>political – national policy</i>)	1%	1%
10	None / No Reply	4%	3%

Source: IAU (2010)

On the other hand, IAU (2010:204) results also indicate that lack of funding from government and other sources is the most important internal and external obstacle to internationalization in all regions of the world. At the same time, there is much evidence that at least some aspects of internationalization, especially the hosting of international students, are a revenue generating activity. IAU (2010) also observes that given international students’ financial contribution to higher education institutions and to the national economy – especially in those countries where differential tuition fees are charged – it is surprising that revenue generation and recruitment of fee paying students are not listed high among the rationales or priority actions by universities surveyed. While universities in countries with high economic growth; such as Singapore and other BRIC (Brazil, Russia, India and China) economies, may not see internationalization as a mean of revenue generating activity, universities from

developed economies, such as the USA, UK and other European countries experiencing lower or even negative economic growth, but with good reputation for their university education systems are attracting international students to supplement their income to maintain their level of academic excellence. This is especially so in countries, such as Australia and the UK, where there is a significant cut back in government funding as evidenced from literature or document sources discussed earlier. The difference between rhetoric and reality is a possible explanation for the discrepancy in the survey results and observation. In many cases, governments and universities may feel obliged and 'politically correct' to emphasize more noble rationales of global workforce, raising quality and status of universities instead of income generation as the motivation or driving forces for internationalization

(3.3) Conceptual Implication and Influence of Stakeholders

The categorization of rationales for internationalization presents a useful conceptual framework for the analysis of internationalization of universities at both national and institutional levels. However, as Knight (2004) has argued, while the rationales give a basic understanding of internationalization, they fail to capture either increasing importance assigned to internationalization recognition and reputation of universities, be it for academic, economic or political purpose.

Agreeing on a common definition of internationalisation is difficult; as is the assessment of the rationale for internationalisation. As stated earlier, Knight (1994) also cautions that there is no single motivation for internationalising. Instead, there are a variety of imperatives, which are not necessarily mutually exclusive and these occur at national, local and institutional levels. The rationales for the world-wide expanding programmes of internationalisation are not uni-dimensional (Welch & Denman, 1997). Ideologically, it is also argued that any discussion on internationalisation cannot avoid discussion of the nature of a university, and its role in the transmission and creation of forms of *culture* and knowledge (Pennycock, 1996 and Yang, 2002), and also the possible difference between rhetoric and reality. These research findings are important observations to be noted and considered during the findings and analysis stage

of the proposed research on the internationalization of Singapore universities. This researcher will add that government policy directions on higher education in relation to the role of a nation's economic development are equally important considerations too. Government is a significant stakeholder in this respect.

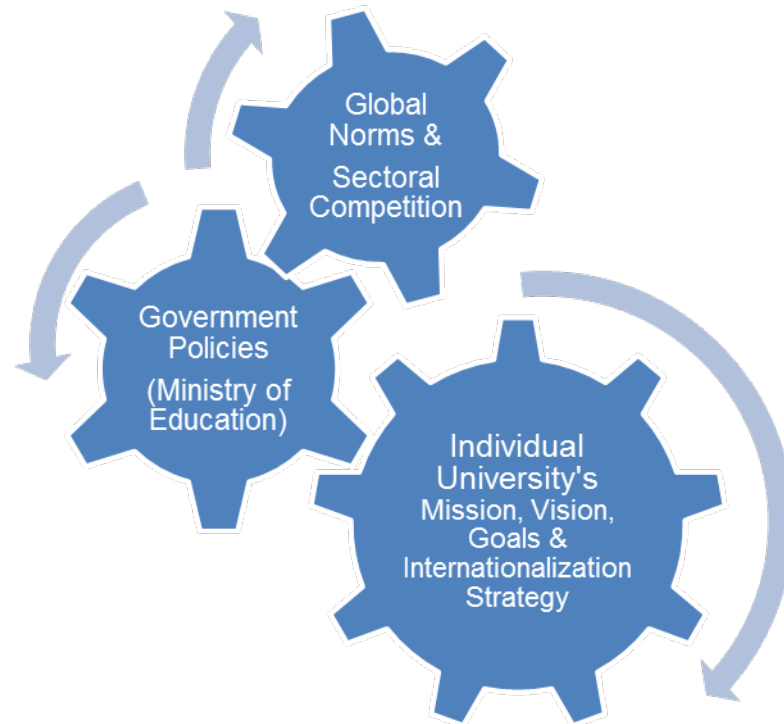
Overall, the rationales driving internationalization vary from institution to institution, from government to government, from country to country and from stakeholder to stakeholder and even from university to university within the same country and system of higher education. De Wit (2002) finds that rationales are more implicit than explicit motives for internationalization. This may explain why most institutions or countries surveyed by the International Association of Universities (IAU) place income generation low in the priority as the rationales for internationalization. Rationales may also differ between stakeholders' groups and within stakeholders' groups; and priorities in rationales may change over time (Altbach & Knight, 2006).

De Wit (2002) advocates that when analyzing rationales, there is a need to consider the diversity of stakeholders' in higher education: the government sector, the private sector and the educational sector studied. And within the last group, to distinguish between the three sub-groups: the institutional level, the academics and their departments, and the students.

This researcher intends to use the theoretical framework in [Figure 2.2](#), adapted from De Wit (2002) to analyse the extent to which the internationalization of Singapore universities is influenced by the various stakeholders, including government policies, norms and competition within the education sector both globally and in Singapore, as well as the mission, vision, and goals of the universities.

Understanding the rationales behind an institution's internationalization drive is important since underlying rationales will have a direct influence on the institution's internationalization approaches and strategies.

Figure 2.2: Analyzing Rationales Driving Internationalization [adapted from de Wit (2002)]



(4) Approaches and Strategies to Internationalization

The approaches and strategies to the internationalization of universities refer to the initiatives, measures and programs adopted by them to integrate an international/intercultural and global dimension into the purpose, functions and delivery of the university (Knight 2004). The literature on this subject matter is of direct relevant to the *fourth research question* on the approaches and strategies adopted by Singapore universities and/or government in their internationalization drive over the period under study. They address the “*how*” aspects of internationalization.

Strategy includes both the setting of direction and designing of concrete programs for internationalisation. Rudzki (1995) identifies *four* key dimensions of internationalization: student mobility, staff development, curriculum innovation

and organizational change and development within any internationalization process. More recently, Kehm and Teichler (2007) provides six, albeit expanded strategic themes: mobility of students and academic staff; mutual influences of higher education systems on each other; internationalisation of the substance of teaching, learning and research; institutional strategies of internationalisation; knowledge transfer; cooperation and competition; and national and supranational policies regarding the international dimension of higher education. Any one or a combination of these models might provide a useful framework for assessing the levels of international activities and relative performance within institutions.

(4.1) Typology of Approaches to Internationalization

The approaches to internationalization of universities have changed over time. From an activities based approach in the 1990s and before, it has evolved into a strategic and process approach. Just like the definition and rationales for internationalization, the approaches adopted by both country and institution to address the implementation of internationalization are varied and different because of differing priorities, cultures, histories, and resources, as well as ideological perspectives at both national and institutional levels (Knight 2004).

Stier (2002) identifies three different levels of the internationalization discourses: ideological, pedagogical and administrative. At the ideological level, Stier (2002) argues that the internationalization of higher education can contribute to a more democratic, fair and equal world. Internationalization can be used as a vehicle to share knowledge and financial resources, such as student/staff exchange and scholarships, between the higher education institutions of the developed and developing worlds. Altbach (2002) disagrees and asserts the reverse that deep inequalities exist as a result of the globalization and internationalization of higher education in an unequal world.

Qiang (2003) reviews the literature of major authors of internationalization; such as Aigner (1992), Arum & Van de Water (1992), de Wit (1995, 2002), and Knight

(1994, 1997) and identifies a *typology of 'approaches'* - *activity*, *competency*, *ethos*, and *process* to describe how institutions of higher education implement their internationalization programs and strategies. These approaches reflect the differing strategies, organizational commitment and stages of development in the internationalization of higher education. They are not mutually exclusive. The *process approach* has the potential for encompassing all the three other approaches.

The *activity approach* promotes activities, such as curriculum, student/staff exchange, joint projects, technical assistance, and international student recruitment... This is the most prevalent approach as most institutions describe the international dimension of higher education in terms of specific activities and programs. Hence, this is often described in literature as “*Stage 1*” of internationalization (Soderqvist, 2002; Middlehurst & Woodfield, 2007). De Wit (1995) highlights that “the ‘activity approach’ may not pay sufficient attention to the organizational issues needed to develop and sustain the activities. Commitment to internationalization calls for organizational measures which facilitate the coordination and mutual leveraging of different categories of international activities. Without appropriate organizational structures and strategies, activities can absorb enormous amounts of staff time and resources while only marginally advancing the internationalization of the institution. Qiang (2003) also cautions that by looking at the international dimension as a series of activities or programs one may get a rather fragmented and uncoordinated approach to internationalization.

The Competency approach looks at the outcomes of internationalization in terms of developing new skills, knowledge, attitudes and values of students, and faculty to become more internationally knowledgeable and inter-culturally skilled (Qiang, 2003). In this approach, the development of international curricula and programs is not an end in itself, but a means towards developing the appropriate competencies or outcomes of the students, staff and faculty (Knight 2004).

The *ethos approach*, deriving from organizational development theories, emphasizes the creation of a culture or climate that values and supports international/intercultural perspectives and initiatives at the institutional level. This approach acknowledges that an international dimension is fundamental to the definition of a university, and believes that without a strong belief system and support culture, the international dimension of an institution will never be realized (Qiang, 2003).

The *process approach* stresses internationalization as a process, which integrates or infuses an international/intercultural dimension into the major functions of the institution, has been discussed extensively in the earlier section. In this approach, Knight and de Wit (1997) advocate that many different activities, programs or initiatives identified as key components of internationalization be divided into 2 major categories: “*Program Strategies*” and “*Organization Strategies*”. These two strategies are complementary to enhance and sustain the internationalization of a university's functions.

(4.2) Internationalization Program Strategies in Perspective

Program strategies refer to those academic programs, activities and services, which integrate an international dimension into the main functions of a higher education institution. Knight (2004) further classifies internationalization strategies or programs at institutional level into two streams of activities - *Internationalization “Abroad”*, and *Internationalization at “Home”*.

‘*Internationalization Abroad*’ includes cross border internationalization activities that happen abroad, including mobility of students, faculty staff, programs, off-shore campuses et al. The other stream “*Internationalization at Home*” is internationalization that occurs on the home campus. It refers to the international and intercultural dimension of curriculum, the teaching/learning process, research and a host of activities which help students develop international understanding and intercultural skills without ever leaving the campus (Nilsson, 1999 as cited by Wachter, 2003)

Tables 2.5 and 2.6 provide a complete list or categories of programs or activities under the two streams of internationalization as classified by Knight (2004)

Table 2.5: Internationalization “Abroad”

	Categories Types of Programs / Activities
Mobility of People	<ul style="list-style-type: none"> ◆ Recruitment of International Students ◆ Strategic Alliances ◆ Mobility of Staff and Students through Exchange Programs ◆ Alumni Networks ◆ International Work Placement/Internship ◆ International Volunteering ◆ Joint Appointments
International Projects or Collaboration	<ul style="list-style-type: none"> ◆ Academic & Research Partnerships ◆ Joint Publications ◆ Business Partnerships & development of Companies
Mobility of Programs	<ul style="list-style-type: none"> ◆ Joint Degrees Programs (both ways) ◆ Franchises, or Twinning ◆ Quality Assurance & validation
Mobility of Providers	<ul style="list-style-type: none"> ◆ Off Shore or Branch Campus/Centre ◆ New Institutions ◆ Regional Offices

Table 2.6: Internationalization “at Home”

	Categories / Types of Programs / Activities
Curricula, Programmes, Research	<ul style="list-style-type: none"> ◆ Curricula with International focus, content or relevance ◆ Internationalization of Research ◆ Staff Exposure through Overseas Study Visits/Courses etc ◆ Foreign Language skills / study ◆ International Foundation Programs ◆ Area or regional studies ◆ Joint or double degrees
Teaching & Learning Process	<ul style="list-style-type: none"> ◆ Active involvement or recruitment of international students to create cultural diversity of classes ◆ International Recruitment of Faculty Staff ◆ Different Pedagogical Culture ◆ Staff Development & Intercultural Awareness ◆ Integration of international, intercultural case studies, role plays and reference materials
Services & Extra-curricular Activities	<ul style="list-style-type: none"> ◆ International Student Office ◆ Improvement of Facilities & Diversity of Provisions ◆ Participation in Social & Cultural life of Campus ◆ International and intercultural campus events
Research & Scholarly Activities	<ul style="list-style-type: none"> ◆ Joint research projects / centres ◆ International Conferences and Seminars in home campus or country ◆ International research partners or agreements

Sources: Adapted from Knight (2004) and IAU (2006)

According to Knight (2006), the emergence of the concept “internationalization at home” and “internationalization abroad” coincides with, or perhaps counteracts, the increased emphasis on student mobility as expressed in new national and regional mobility programs and also the growing interest in cross border education. Knight (2006) further explains cross border is starting to be used as a synonym for internationalization, which neglects the ‘at home’ components, and secondly, cross border is frequently used to describe trade in education. Both of these interpretations are too narrow and that is why it is important to have clarity on the two streams of internationalization. However, Knight (2006) also asserts that these two streams should be seen as interdependent rather than independent. Internationalization ‘abroad’ has significant implications for internationalization ‘at home’ or vice versa.

It would appear that internationalization ‘at home’ is an easier program to implement, especially for institutions with resource or financial constraints. However, the IAU (2010) research report shows that only 15% of the higher educational institutes surveyed give internationalization ‘at home’ the highest priority in their institutional internationalization policy (see [Table 2.7](#)).

Table 2.7: Top 10 Priority Internationalization Programs (Source: IAU, 2010)

Internationalization Activities or Programs	% of HEIs surveyed	
	Global	Asia Pacific
Outgoing mobility opportunities for students (study, internships)	44%	40%
International Student exchanges	43%	50%
International research collaboration	40%	52%
Strengthening international/intercultural content of curriculum	31%	33%
Developing joint and double/dual degree programmes	30%	27%
Outgoing mobility opportunities for faculty/staff	29%	24%
International development and capacity building projects	17%	14%
Hosting international scholars	17%	18%
Internationalization at ‘home’	15%	15%
Foreign language teaching as part of the curriculum	14%	6%

Internationalization ‘abroad’ activities or programs, such as outgoing mobility opportunities for students, international student exchanges, international research collaboration are the three top priorities in the internationalization policy cited by 44%, 43% and 40% of the institutions responded to the global

survey. The results are similar for Asia Pacific universities, although international research collaboration appears to be ahead of mobility of students.

(4.3) Organisation Strategies

Programme strategies, no matter how they are defined and whatever content they entail, cannot be sustained without articulated institutional commitment and the proper support of organizational strategies (Callan 2000, Knight 1997, Knight & de Wit 1995, and Schoorman, 2000). *Organization strategies* include those initiatives that help to ensure an international dimension is institutionalized through appropriate policies and administrative systems (de Wit 2002). It encompasses elements of the ethos approach, which include governance, operations, human resources and support services.

Internationalization, viewed as an organizational adaptation or response to globalization, requires its articulation by *university leaders* while simultaneously institutionalizing a strategic planning process that is representative and participative in that it recognises and utilises the power of the culture within which it occurs (Bartell, 2003). This is consistent with the IAU (2010) survey, which reveals that presidents and vice chancellors of universities are the most important internal driver for increased internationalization of the universities surveyed. With the exception of North America, Latin America and the Middle East, government or political leadership too is viewed to play a significant role in the internationalization of universities. Singapore is an example. Singapore's experience in internationalizing university education shows that government can play a significant and constructive role in human capital development to meet the country's economic development needs as well as developing Singapore into a regional education hub. The role of the Singapore government and the institutional commitment to the internationalization of Singapore universities will be analysed in the subsequent chapters on findings and analysis. The degree to which the government controls education policy and practice in Singapore is greater than in many other countries, it being noted for its strong centralisation,

although more recently universities in Singapore are given more autonomy through corporatisation. Public universities in Singapore are well funded too.

At the institutional level, there is also a significant development in the types of different internationalization programs and increased cooperation among institutions (Paige, 2005 and Knight, 2006). Teichler (2009) observes a shift from a predominantly “vertical” pattern of cooperation and mobility towards a major role of “horizontal” international relationships, i.e. links “on equal terms”, and from casuistic action towards systematic policies and related activities of internationalization. Cooperation and competition is a reality of a globalized economy. A university may compete with another university across the globe for international students, yet these two universities may also cooperate in joint degrees, research or student/staff exchange programs through strategic alliances, partnerships or consortia.

These differing and competing rationales and strategies result in both the complexity and the contributions that internationalization makes to higher education and the roles it plays in society. Beerkens and Derwende (2007:75) observe that “in the case of Asean, in which Singapore is a member, the formation of regional institutions is still an earlier stage compared to Europe, but aspirations like joint accreditation and joint credit transfer systems give the impression that this region is going in a similar direction, albeit not necessarily at the same speed”.

In general, closer co-operation and tighter integration requires more complex coping mechanisms that are aimed at the exploitation of complimentary resources or strengths. A consortium exists only with members that possess resources that are strategically valuable for the other members. This could explain why Singapore universities only look towards more established universities in the West and China in the East for their strategic co-operations and internationalization programmes. This will be examined and discussed further in subsequent chapters on findings and analysis.

(4.4) Strategic Management Approach to Internationalization

The process approach to internationalization involves management and organizational commitment and resources. The application of strategic management concepts in the internationalization of universities is not new as evident from the literature review. Contributors to this body of knowledge include: Rudzki (1995, 1998), Neave (1992), Davies (1995), Wende (1997), Knight and de Wit (1995) and more recently Ayoubi (2006), Elkin, Farnsworth and Templer (2008).

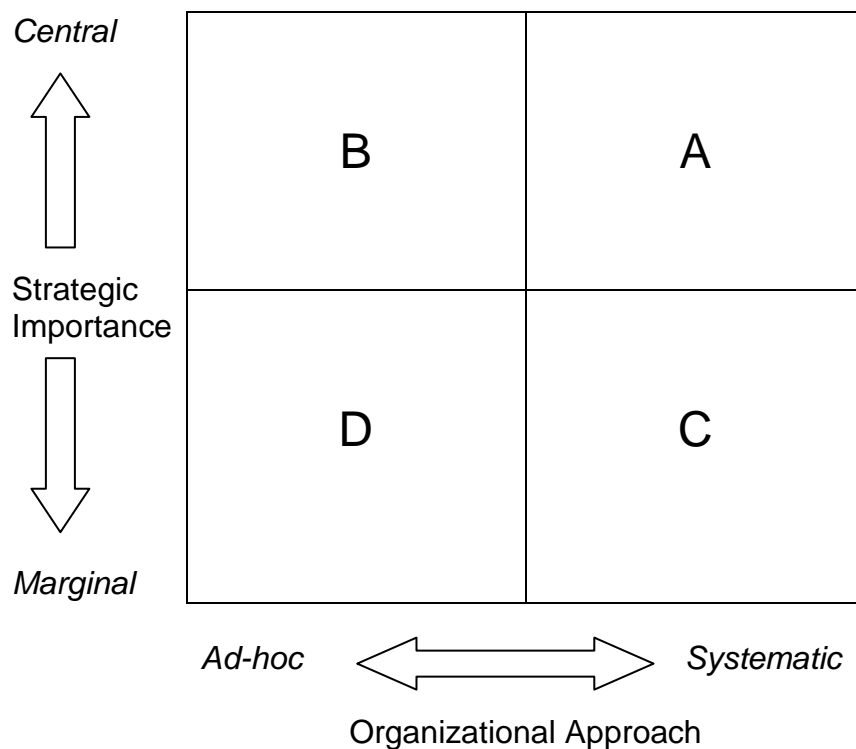
Inevitably, all models involve the generic elements of planning, implementation and review. Rudzki (1995) finds that internationalization activities within higher education institutions takes place in a number of different ways ranging from the *ad hoc* (reactive) to the *strategic* (proactive). Davies (1995) further categorises a university's commitment to internationalization along two dimensions, from “*ad-hoc*” to the “highly systematic” in term of *organizational approach*, and from “marginal” to “central” in term of *strategic importance* to the university.

Davies (1995) bases his model on the need for universities to develop a framework for their international activities in response to changes in the external environment. Two sets of factors are identified, internal and external to the university, and six elements; three related to the internal and three related to the external. The *internal* elements include: (1) University Mission, Traditions and Self-image; (2) Assessment of Strengths and Weaknesses in Programs, personnel and finance, and (3) Organizational Leadership Structure. The *external* elements are: (1) external perceptions of image and identity, (2) evaluation of trends and opportunities in the international marketplace, and (3) assessment of competitive situation.

According to Davies (1995), an institution can have the following internationalization strategies (see [Figure 2.3](#))

- (A) A *central-systematic strategy*, which means there is a large volume of international work in many categories, which reinforce each other and have intellect coherence. The international mission is explicit and followed through with specific policies and supporting procedures. It is the pinnacle or most well-developed of any international strategy.
- (B) An *ad-hoc-central strategy*, where a high level of activity may take place throughout the institution, but it is not based on clear concepts and has an ad-hoc character.
- (C) A *systematic-marginal strategy*, which implies that the activities are limited, but well organized and based on clear decision
- (D) An *ad-hoc-marginal strategy*, where little activity takes place and is not based on clear decisions. This may be termed as “Stage 1” of any internationalization strategy.

Figure 2.3: Institutional Internationalization Strategies (source: Davies 1995)



(4.5) Internationalization Strategies – Concept and Reality

The successful implementation of internationalization strategies is not without challenge. Knight and de Wit (1995), who developed an internationalization cycle, advocate that international activities should not be ad-hoc, fragmented

and marginal. Instead, different international activities and programmes should reinforce each other and become central to the mission of the university. As Wende (2001) has pointed out, internationalization can no longer be considered as a marginal, add-on activity focusing mainly on the international mobility of students and teachers. Rather, internationalization is becoming an important dimension on higher education policy as developed at the institutional and national level, related to the challenges of globalization.

In contrast, Rudzki (1995) who conducted an empirical study of UK Business Schools concludes that the growth of international activities within higher education institutions takes place in a number of different ways ranging from the ad hoc (reactive) to the strategic (proactive). Chan (2006) who conducted a comparative study of a British university and a Hong Kong university concludes that the origin of the present emphasis on internationalisation at the two case universities is anything but planned. However, Chan (2006) also observes that having begun the process, internationalisation has become an entrenched and integral part in the institutional life of both universities.

Bartell (2003) contends that the orientation and strength of the university culture and the functioning structure can be inhibiting or facilitating of the strategies employed to advance internationalization. Elkin, Farnsworth and Templer (2008) observe that those institutions with complete strategic focus had higher levels of current internationalization and greater aspirations for even higher levels of internationalization than institutions without a complete strategic focus.

To be successful in internationalization, institutes need to develop a complete strategic focus. A good strategic plan is an indispensable guide to internationalization as it gives a strong sense of purpose and focus to the people involved in the internationalization programs (Paige 2003). The IAU (2010) report of the Global Internationalization Survey shows that 87% of the respondents include mention of internationalization in their overall strategic plan. However, only 67% indicate having an internationalization policy in place. Gacel-Avila (2005), observes that the conceptualization of comprehensive

internationalization strategies is still unfamiliar and unknown by the majority of policy decision makers.

To achieve success in the internationalization strategy, internationalization literature suggests that institutions should:

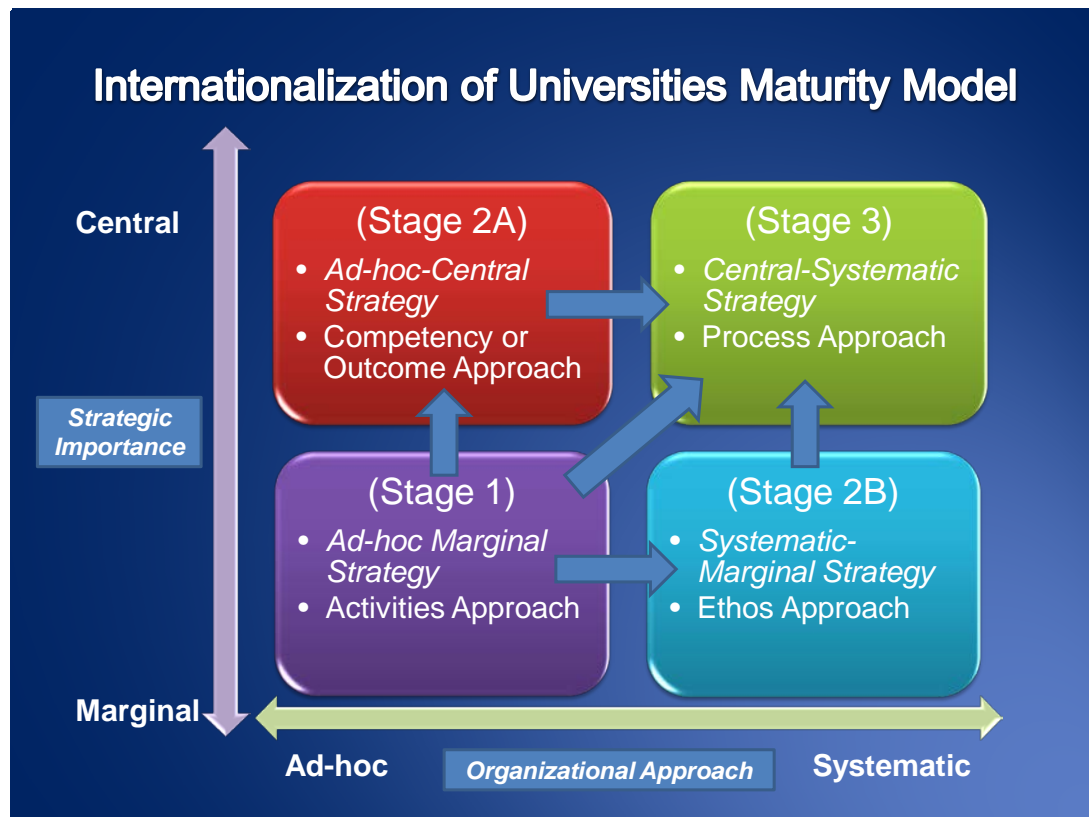
- (a) articulate clearly the strategic goals, which integrate internationalization efforts into the institution's mission, vision, and developmental policies and culture (Green and Olson, 2003, Gacel-Avila, 2005, Ayoubi (2006), Elkin, Farnsworth and Templer, 2008)
- (b) build consensus on the priorities within an institution or department (Green and Olson, 2003)
- (c) possess strong organizational culture and leadership (Mestenhauser and Ellingboe, 1998, Bartell, 2003 and Paige, 2003).

(4.6) Internationalization Maturity Model - A Model for Analysis

The outcomes of this literature review are highly relevant and useful for the analysis in this research on the internationalization of Singapore universities. Both Davies (1995)'s two-dimensional model of an institution's level of strategic commitment to internationalization and Qiang (2003)'s 'typology of approaches' to internationalization discussed earlier are useful theoretical frameworks for the analysis of the approaches an institution may adopt and the level of commitment or '*maturity*' in its internationalization drive.

By integrating these two models this researcher has developed a "Typology of Internationalization Strategies & Approaches" (see [Figure 2.4](#)), which will serve as a theoretical framework to determine the maturity state of the internationalization of a university. This researcher terms it the "*Internationalization of Universities Maturity Model*".

Figure 2.4: “Typology of Internationalization Strategies & Approaches (adapted and developed by author)



Stage 1 denotes the most basic or fundamental level of internationalization in a university, where internationalization is activities based, and takes place in an ad-hoc or opportunistic manner without any strategic direction. From Stage 1, a university's internationalization strategy may move towards Stage 2A or Stage 2B.

At Stage 2A, the number of internationalization activities or programmes is growing rapidly throughout the universities. Internationalization is central to the university with clear objectives or outcomes. However, the implementation approach is still ad-hoc and may be opportunistic. At Stage 2B, the organizational approach to internationalization is more systematic and becomes an ethos of the university. However, while the numbers of internationalization programmes or activities are growing, these remain fairly limited; or may be confined to a number of faculties only.

At Stage 3, internationalization has reached a maturity stage at the university. It is well entrenched or clearly articulated as a strategic goal and mission of the university. The organization approach is highly systematic; and impressive number of internationalization programmes with clear output indicators across the various faculties in the universities.

This theoretical framework will be used to trace or the evolutionary stages in the organizational approaches and level of success or otherwise on the internationalization of Singapore universities during the last 20 years or more.

(5) Internationalization of Singapore Universities – An Indicative Review

An understanding of the place and roles of the Singapore university sector, and the roles of the government and economic development of Singapore will help to address the various research questions in the proposed study. As articulated in Chapter One, Singapore is one of the world's most competitive and globalized economies. It has been acknowledged in various world economic forums and competitiveness reports that the Singapore education system, including the university sector, has played a significant role in its phenomenal economic development from a third world country in the 1960s to the first world economy of today. Over the years, the Government has implemented many policies and initiatives to reform the universities, establishing and strengthening partnerships with foreign world-class universities.

The Singapore government's intention of internationalizing and developing Singapore into a 'global education hub' dates back to 1986, when education was identified as a catalyst for human resource development and a potential contributor to the Singapore economy. The Singapore government adopts a 3-tiered system of universities (see Figure 2.5) to provide a vibrant and diverse array of undergraduate and postgraduate courses for local and international students.

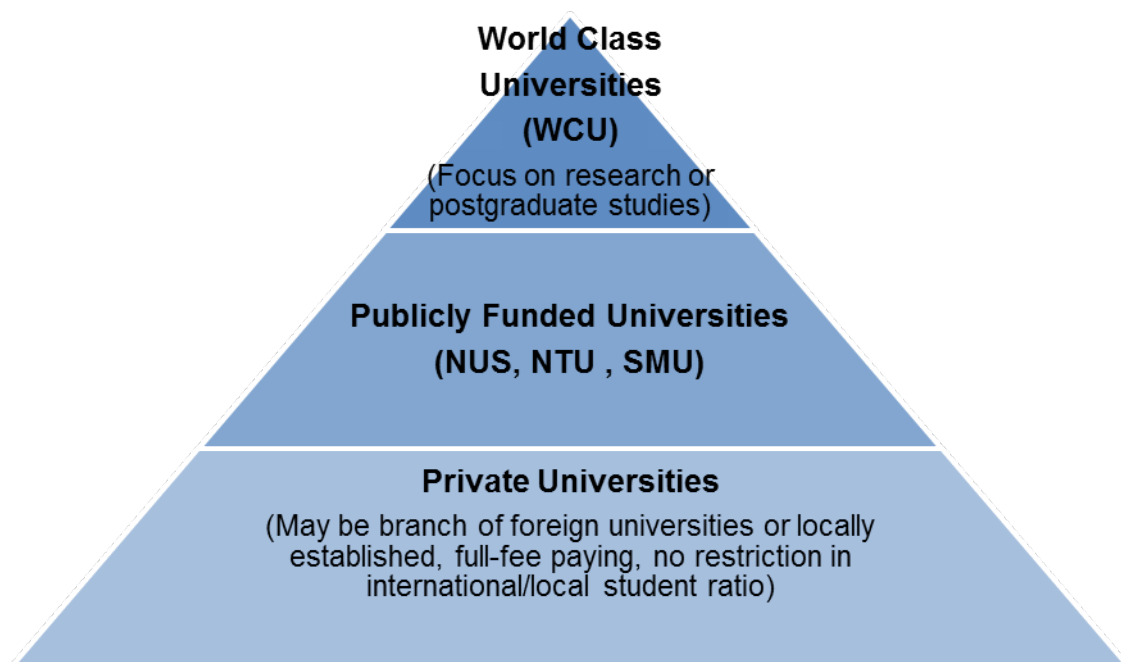


Figure 2.5: Singapore Universities Sector (Source: Economic Committee Report, 1986)

These are: (a) *World Class Universities (WCU)*, targeted to attract top world universities, such as INSEAD, University of Chicago which set up a branch campus in Singapore (b) National University of Singapore (*NUS*), Nanyang Technological University (*NTU*) and Singapore Management University (*SMU*), which form the bedrock of the university sector to meet Singapore's core manpower and talent needs. (c) *Private universities*, which may be branches of foreign universities; or locally established ones. Today, NUS, NTU are 'world class' universities too in their own right. They also form collaborative partnership projects to offer joint degree programmes and joint research as part of their internationalization drive, which will be discussed and analysed in subsequent chapters.

Since early 2000, the internationalization of Singapore universities has been in high gear. In its 2001 Annual Report under the heading "Internationalization", NUS reports that "*The University carried out a full program of international engagements covering international outreach, forging strategic alliances and active participation in academic networks*" (NUS, 2001:42). The university sector in Singapore is diverse and competitive. Competition comes from both

within and outside the country and region. The internationalization of Singapore universities will be researched and analysed in greater detail against this environmental background together with the literature review and documentary sources in subsequent chapters.

(6) Chapter Conclusion & Implications

This literature review demonstrates the considerable recent interest of researchers in the area of internationalization of higher education. There is now a fast developing body of literature that can provide considerable value to academics and other professionals and policy decision makers involved (or being affected) in the internationalization of higher education. It is observed that much of the research on the internationalisation of higher education follow closely the developments in policy and practices from a global, national and stakeholder perspective. It has also been observed that the research literature on the internationalisation of higher education is 'light on theory' (Huisman, 2007), and consists of 'overlapping communities of practice' (Tight, 2004). Indeed, theoretical studies lag behind practice.

This chapter has reviewed the literature relating to the internationalization of universities. More specifically, it has addressed in sequence the *four specific research questions* covering the historical development, concepts and meaning of internationalization of higher education; the impact of globalization on higher education; the rationales or motivation for internationalization; and the approaches, programs, strategies and policies a university may deploy in its internationalization process. A number of conceptual frameworks examined and/or adapted from the internationalization literature will be useful in this research study on the internationalization of Singapore universities.

While universities world-wide are internationalizing, internationalization of higher education is still an evolving concept and a dynamic process. The changing dynamics in internationalization reflects both in the meaning of internationalization and globalization, its rationales and the approaches to the internationalization by the different stakeholders. As summed up by Callan

(1998) “despite many attempts to formulate a tight definition; the core idea remains conceptually elusive”. There is no simple, unique or all-encompassing definition of internationalisation, although for all its limitations, Knight’s (2004) updated definition has become the most widely used working definition by most researchers. Chan (2006) concludes that university internationalisation as a concept, including the rationales for it, is complex, multifaceted and value-laden. In spite of the complexity of the rationales, Knight (2004) emphasises that it is fundamentally important that relevant stakeholders should clearly articulate its motivations for internationalization, as policies, programs, strategies and outcomes are all linked and guided by explicit or even implicit rationales. Gacel-Avila (2005) emphasises that internationalization is a continuous and on-going process because it grows out of a cycle of recurring events. It is comprehensive because it involves all university sectors and levels of the educational process. It is counter-hegemonic because it questions the contents, process, and basis of university change, that is, the what, how and why of the educational process.

The proposed research study on the “Internationalization of Singapore universities” will also attempt to examine the extent to which the internationalisation of the universities is similar or different from those of other universities in overseas systems and represented in the literature. Preliminary findings from the literature review show that the rationales developed by the Singapore government to internationalising its universities over the years are quite different from the traditional political, social/cultural, academic and economic rationales adopted by other developed economies. Preparing its graduates to be ‘*world ready*’ in a globalized economy; human capital development and attracting international students by offering attractive tuition-fee grants and scholarships to augment its talent pool, and achieving its global competitiveness are the main motivations for the internationalization of higher education in Singapore. Singapore’s internationalization strategies and approaches are consistent with Gacel-Avila’s (2005) concept that the international dimension of universities should constitute a key educational resource for training citizens with a critical perspective and the adequate preparation to work and live effectively and successfully in a global context.

Internationalization is seen as one of the ways a country responds to the impact of globalization (Altbach 2004). Such a response or approach to internationalization is shaped by a country's unique history, indigenous culture; resources, priorities and relationships with other countries (Qiang 2003, Chan and Dimmock, 2008). For a university, internationalisation means the awareness and operation of interactions within and between cultures through its teaching, research and service functions, with the ultimate aim of achieving mutual understanding across cultural borders (Yang 2002). De Wit (2004) concludes that strategic partnerships in research, teaching and transfer of knowledge - between universities, between universities and business and beyond national borders – will be the future for higher education, in order to manage the challenges that globalization will present. Such approaches are supported by the Singapore government widely adopted by its universities.

Pratt and Poole (2000) caution that although many countries profess a desire to see their universities internationalised, internationalization of many institutions inevitably reflect the imitative “me-too” mentality; historically prevalent within the Australian university system. Deem, Mok, Lucas (2008) advocate that universities should avoid *policy copying*, but instead adapt a *policy learning* approach when embarking on an internationalization strategy or program. Adaptation in the right context is important. Mok (2006) suggests Asian universities should critically reflect whether the standards and practices commonly available in the Western economies could be coherently adapted to the Asian traditions and culture. This provocative proposition will also be examined as part of the research from the Singapore's experience and perspective.

CHAPTER 3

RESEARCH METHODOLOGY

Chapter Introduction

Burns (1997) and Mertens (2005:2) describe educational research as a “systematic investigation” or inquiry whereby “*data are collected, analyzed and interpreted* in some way” in an effort to “understand, describe, predict or control an educational or psychological phenomenon or empower individuals in such contexts.” The choice of a research method is determined by the research objective and the research questions.

Accordingly, this chapter begins with: *firstly* a recapitulation of the research topic, its aims and the research questions, identified in Chapter 1; *secondly*, locating an appropriate research paradigm. *Thirdly*, designing of a research method or process by which the investigation can be systematically conducted, and the results be analyzed and interpreted, and *fourthly*, a fuller description and justification of the choice of documentary research as the sole research method for data collection and analysis; and *finally*, a discussion on the limitations, issues, risks and challenges of the selected research methodology, including reflexivity and positioning and stance of this researcher; and discussion on the steps taken to ensure trustworthiness.

(1) A Recapitulation of the Research Objective and Research Questions

As discussed in Chapter 1, the main objective of this research is to trace the internationalization of the three government or publicly-funded universities in Singapore since its independence to the globalised economy of today. More specifically, the study aims to seek an in-depth understanding of (a) the *meanings* of internationalization, (b) the *rationales* for it, and (c) the *approaches* to it of the emergent or evolutionary trends in the internationalization of Singapore universities from a historical and policy development perspective.

Accordingly, the main research question has been formulated as:

“Why and how have Singapore universities internationalized during the period from the beginning of nationhood in the early 1960’s to the globalized economy of today?”

The main research question is further broken into four specific research questions to reflect the research aims and the focus of the study as well as to guide data collection and analysis process.

The study is set in the context of the economic and social transformation of Singapore since it achieved its self-government from the British in 1959, and its independence in 1965 to the present day with a focus on *why* and *how* Singapore Universities internationalised during this period. The research attempts to map, understand and interpret the major historical developments and policies that explain the internationalization of Singapore universities and the education system as a whole.

(2) Choice of Research Paradigm and Rationales

‘Paradigm’ is a philosophical intent or underlying theoretical framework with regard to the research approach and methods to be adopted. The significance of paradigms is that they shape how researchers perceive the world (i.e. *the worldview*) and are reinforced by those around them, the community of practitioners. It is the choice of paradigm that sets the intent, motivation and expectations for the research. An appropriate choice of a paradigm guides the researcher, not only in the choice of method(s), but in ontologically and fundamental ways (Lincoln and Guba, 1985:105). Without locating a paradigm as the first step, there is no basis for subsequent choices regarding research methodology, methods or processes of data collection and analysis.

The interpretive paradigm is considered the most appropriate paradigm for this study, as it is rooted in the epistemological belief that *“social reality is constructed by the people who participate in it; and is constructed differently by*

different individuals” (Gall, Borg and Gall 2003:14-17). This is equally so for the internationalization of universities. As revealed in the literature review, although internationalization of higher education as a global phenomenon is not new, it is a complex and evolving process with a range of differing practices. Chan and Dimmock (2008) observed that internationalisation of universities is a complex, multifaceted and *value-laden* concept. The term “internationalization” may mean different things to different people. There is no simple, unique or all-encompassing definition of internationalisation (Knight 2004). Tight (2004) and Kehm and Teichler (2007) also observe that the theoretical approaches to internationalization of higher education are largely implicit and that the field consists of partly ‘*overlapping communities of practice*’. Huisman (2007) characterises research on the internationalisation of higher education as ‘very closely following developments in policy and practice; and *light on theory*’.

Dash (1993) suggests that a researcher can select a research paradigm and the corresponding methodology by considering the following questions:

- ◆ What is the *nature or essence of the social phenomena* being investigated?
- ◆ Is the social phenomenon *objective* in nature or created by the human mind; (i.e. *subjective* in nature)?
- ◆ What is the *relationship of an individual or participant* with the environment? Is the individual conditioned by the environment or is the environment created by the individual?
- ◆ What are the *bases of knowledge* corresponding to the *social reality*, and how knowledge can be acquired and disseminated?

Guided by the above questions, and taking into considerations the aim and the research questions as well as the nature of the internationalization phenomenon, this researcher has identified “interpretivism” as the most appropriate paradigm for this research study on the “*Internationalization of Singapore universities in a globalised economy*”, *from an historical and developmental perspective*.

'Subjectivity' of the Phenomenon

Internationalisation of universities is a complex, multifaceted and *value-laden* concept (Chan 2006, and Dimmock and Chan 2008). The approaches along which a country and institution address the implementation of internationalization are also varied and different because of differing priorities, cultures, histories, and resources (de Wit 2002, Knight 2004). Positivism is therefore not an appropriate paradigm for such a *value laden* concept and *subjective* or *socially and culturally diverse* phenomenon. Positivists believe that reality is stable and can be observed and described from an *objective* viewpoint, without interfering with the phenomena being studied, which is clearly not the case for the internationalization phenomenon of universities.

As revealed in the literature review in Chapter 2, the reality is that internationalization of universities is not stable. It is a dynamic, complex and evolving phenomenon. The interpretive research paradigm, in contrast seeks to *understand values, beliefs and meanings of social phenomena*; thereby obtaining a deep and sympathetic understanding of human cultural activities and experience as a whole (Smith and Heshusius, 1986). Interpretivism, seen as a way to gain insights of a complex phenomenon through the *discovery of meanings* and improvement of the comprehension of the whole, is therefore an appropriate paradigm to adopt for the proposed study. It should help to seek an in-depth understanding or insights on the *rationales* in terms of values and beliefs; and *approaches* as well as the (*natural*) *meanings* of internationalization in the context of Singapore universities from a historical and developmental perspective, thus addressing the “*what*”, “*why*” and “*how*” aspects of the research questions and through the process revealing the ‘*realities*’ of the phenomenon.

Table 3.1 gives a summary of the justifications on the choice of the *Interprevist paradigm* from the approach of various epistemological assumptions and theoretical foundations, and its relevance to this study.

Table 3.1: Locating the Interpretive Paradigm – An Epistemological Approach
[Adapted from Nash (1993) and Creswell (2003)]

Paradigm Framework	Interpretive Paradigm – essential philosophy	Relevancy to the Research topic, Aims and/or Questions
Ontological (<i>beliefs about nature reality</i>)	<p>The individual makes sense of their world by the way they perceive and define “external” phenomena</p> <p>Interpretivists accept the existence of “multiple social realities”, and that such realities may differ across time and place (Cohen et al, 2000).</p>	<ul style="list-style-type: none"> ❖ It is relevant to: SRQ 1 and 2 on the <i>interpretation</i> and <i>meaning</i> of the term “internationalization of universities ❖ SRQ 3 on the <i>rationales</i> for the internationalization of the Singapore universities from a historical and economic development perspective. <p>Interpretivism, is a way to gain insights of a <i>complex phenomenon</i> through the <i>discovery of meanings</i> and improvement of the comprehension of the whole,</p> <p>It should help to seek a deeper understanding or insights on the <i>rationales</i> in terms of values and beliefs; and <i>approaches</i> as well as the (<i>natural</i>) <i>meanings</i> of internationalization from the perspectives of the publicly funded Singapore universities and the government</p>
Epistemological (<i>beliefs about knowledge and how we know reality</i>)	<p>There are no absolute laws of existence, but theories that may be more or less useful, (as in the case of internationalization of higher education or universities)</p> <p>Behaviour (of phenomena and people) may be <i>interpreted</i> in context and <i>inductively</i> abstracted to provide theories that may be generalizable to similar contexts.</p> <p>Mertens (2005) asserts that the <i>theoretical framework</i>, as distinct from a <i>theory</i>, can influence the way knowledge is studied and interpreted.</p>	<p>Relevant to the aim of this research study and state of knowledge or theory of internationalization of higher education in general (as revealed in Chapter 2 – Literature Review)</p> <p>An outcome of the research is also to examine whether there is any unique, new insights, knowledge, or models that may be learnt or developed from the study of the internationalization of Singapore universities in comparison with similar trends elsewhere obtained from literature or documents. The study is built upon based on the theoretical framework revealed from the literature review.</p>

Human Nature <i>(Relating to the relationship of the participants with the environment - how we account for human behaviour)</i>	Human beings have complete autonomy: their actions are dictated by free will (which may be constrained by external forces)	Publicly-funded universities in Singapore are autonomous institutions. Key stakeholders have full autonomy, except varying degree of organizational and environmental constraints in deciding on the direction and strategies of internationalization. The interpretivism, a naturalistic paradigm, tends to rely upon the "participants' views of the situation being studied" (Creswell, 2003:8). It also recognises the impact on the researcher's background and experiences. Thus, it is another reason why it is a suitable paradigm for this research study.
Methodological <i>(beliefs about how we apply inquiry methods)</i>	<i>Inquiring:</i> Emphasises subjective, insider accounts of situations - obtained by personal involvement in the situation, <u>and</u> the presence of the 'observer effects' that which is being observed.	Documentary research obtainable from the universities' and government ministries' sources are likely to give an insiders' account or interpretation of the phenomenon on the internationalization of Singapore universities. McCulloch (2004:4) notes that documents need to be interpreted in the light of specific factors involved in their production and context; such as personal, social, political and historical relationship. The observer effect may play a part.
Theoretical <i>(beliefs about the role of theory in research)</i>	<i>Inductive:</i> theory progresses through inductive generalization, i.e. generalizes on the basis of a sample.	The research design is intended to be <i>iterative and inductive</i> with theory building, not theory testing as an aim.

The interpretive paradigm has the advantage that it allows the inquiry process to be kept open in order to allow for '*emergent meanings*', such as that of the 'internationalization' of Singapore universities in this study, to be identified through a 'non-linear' research design in the data collection stage of the study (Lincoln and Guba, 1985).

The Interpretivist paradigm, which “generates or inductively develops a theory or pattern of meanings” (Creswell 2003:9) is thus well suited to this research study on the internationalization of Singapore universities from a historical and developmental perspective. Conversely, positivism, which aims to test a theory, or describe an experience through observation and measurement, in order to predict and control the forces surrounding a phenomenon is not an appropriate choice of paradigm in view of the nature of the internationalization phenomenon and bases of knowledge.

The positivist paradigm would have a place if the research question or proposition has been phrased differently from a cause-effect perspective; an example of the latter would be: “*Globalization Results in the Internationalization of Singapore universities – An Empirical Study*”. Positivism, sometimes referred to as 'scientific method' or 'science research', “reflects a deterministic philosophy in which causes probably determine effects or outcomes” (Creswell, 2003:7), which is obviously not the case on the phenomenon of the internationalization of universities. Similarly, critical theory or science, which seeks to explain social inequalities through which individuals can take actions to change injustices (Comstock, 1982) is also not relevant to the research aim, which seeks to explain the phenomena of ‘why’ and ‘how’ Singapore universities internationalize, and thus will not be considered.

(3) Designing a Research Process for Data Collection and Analysis

Having located the proposed study within an interpretive research paradigm, the next step involves designing a research process and the selection of appropriate data collection method(s), by which the investigation can be systematically conducted and the findings be analysed and interpreted.

Although conventionally, the quantitative research method has been associated with the positivist paradigm, and qualitative research with the interpretivist paradigm, Lincoln and Guba (1985:105) contend that both qualitative and quantitative methods may be used appropriately with any research paradigm. It is both the *research aim* and *research questions*, as well as the phenomenon

being studied, which should determine whether quantitative; qualitative or even a mixed method deploying both the quantitative and qualitative approaches is the most appropriate for a study.

In this respect, a qualitative research using documentary analysis as the sole method of data collection and analysis has been identified as the chosen methodology for the study on the “*Internationalization of the Singapore universities in a globalized economy*” from a historical and developmental perspective, as articulated in Chapter 1.

Sampling Process – Case Selection for this Study

The design of a research process is also concerned with the sampling process, and the selection of the sample(s) from which data can be collected and analysed. The credibility of a research study relies on the quality of sampling techniques and procedures. A key consideration in the design of the research process for this study is the number of case universities to be included. The decision on the number of cases to select will depend on the research aim and the extent to which a range of practices or the amount of detailed information is sought, guided by the research questions.

The use of the term ‘case’ in this study is to be interpreted as “simply a way of describing the sampling procedure” for the internationalization of Singapore Universities; not a ‘case study’ or ‘case study approach’ per se, as contended by Brown and Dowling (2010:171) that “there is no such thing as a ‘case study approach’ other than as constituted by the curricularising of research methods”. The sampling procedure involves a systematic selection of the required number of or cases or case-universities (the ‘*sample*’) from the ‘*population*’ (or the university sector in Singapore) using appropriate *sampling strategies*, to provide from their perspectives, information or qualitative data on the internationalization of their universities.

Patton (1990), Gall, Borg and Gall (1996); and Silverman (2000) contend that to yield the most information about the phenomenon under study, *purposeful*

sampling is a method that is typical of case-based qualitative research approach. More specifically, the ‘*criterion sampling*’ method within the 15 purposeful sampling strategies developed by Gall, Borg and Gall (1996) is used to select the universities or participants for this study.

The university sector in Singapore consists of (a) the government or publicly-funded universities and (b) the privately-funded universities. The latter include foreign universities providing undergraduate and/or post-graduate degree courses in partnership with private education providers in Singapore. The focus of this study is on the *publicly-funded universities* in Singapore which form the bedrock of the university sector in Singapore. Purposeful sampling ensures that the ‘samples’ selected meet the purpose of the study. Criterion sampling within the purposeful sampling ensures that the selected case-universities collectively meet the predetermined requirement that the universities must be government or publicly-funded.

Being publicly-funded, the rationales for internationalising and the strategies are more likely to be influenced by governmental policies and direction. These universities have clear missions and are guided by strong governance and accountability. Both the National University of Singapore (NUS) and Nanyang Technological University (NTU) are internationalizing, and positioning themselves as ‘*global universities*’ by actively promoting their international branding and engaging in numerous international partnerships and programs. The third publicly-funded university, Singapore Management University (SMU) set up initially in collaboration with the University of Pennsylvania, USA and follows closely the American curriculum has ‘internationalized’ since its inception in 2000.

As the aim or central focus of the study is to seek an in-depth understanding through ‘thick description’ on the internationalization phenomenon of government or publicly-funded universities in Singapore from a historical and developmental perspective, *all* the three government or publicly-funded will be selected as case-universities for the study. These three universities will form the

unit of analysis for this research study; and the basis of data collection and analysis. The approach enables a comparison to be made between the three universities, and the extent to which '*typicality*' or replicability of the phenomenon can be expected from other universities within similar contextual setting. Multiple cases permit cross-case analysis, a necessary feature for widespread generalisation of theories (Dimmock and O' Donoghue, 1996). Collectively, the three universities should provide some insights or new knowledge on the internationalization of government or publicly-funded universities in Singapore.

Case University 1 – The National University of Singapore

The National University of Singapore (NUS), a comprehensive teaching and research university with an international reputation, is the first and oldest publicly-funded university in Singapore with over 100 years of history. It is also the first university in Singapore to internationalise. The selection of NUS as a first case university is an example of critical sampling technique. Patton (2001:236) defines 'critical sampling' as the process of selecting a small number of important cases that are likely to "yield the most information and have the greatest impact on the development of knowledge". Critical case sampling ensures that at least one of the universities selected is truly representative of the publicly funded university sector in Singapore. The internationalization of NUS is likely to be 'representative' of the phenomenon of internationalization of publicly-funded universities in Singapore. The history and experiences of NUS and expected information-rich internationalization programs and strategies will make 'thick description' of the internationalization phenomenon of Singapore universities possible.

Case Universities 2 & 3 – NTU and SMU

Both the Nanyang Technological University (NTU) and Singapore Management University (SMU) also meet the *criterion sampling* technique, which involves selecting cases that meet some predetermined criterion of importance (Patton, 2001:238). Both universities meet the criteria of being publicly-funded universities and have internationalization experiences.

They are also examples of '*typical case sampling*', as it is expected that both NTU and SMU are manifestations of the internationalization phenomenon of Singapore universities under the same funding system, governance and environmental or social setting. Data from either NTU or SMU should provide opportunities for comparisons with NUS on the similarities and/or differences in the purposes for, and processes of internationalization, thus providing further insights and/or revealing multiple social realities of the internationalization phenomenon. It is worthwhile to note at this stage that the three government funded universities, NUS, NTU and SMU have their own history, developmental strategies, academic focus, and turbulent times. These will be discussed in greater detail during the findings and analysis in relation to the internationalization of the three universities. A fourth publicly-funded university – Singapore University of Technology & Design (SUTD) has been set up in collaboration with the Massachusetts Institute of Technology, USA. As it is operational only in 2012, it will not be included in this study.

(4) Documentary Research as a Sole Data Collection Research Method

Guided by the main research objective, which is *to trace the internationalization of the government or publicly-funded universities in Singapore from a historical, social and economic developmental perspective*, and the research questions derived from literature review and the information required for analysis, *documentary research* has been identified as the most appropriate data collection method for the proposed study.

Documentary research and analysis is a systematic procedure for reviewing or evaluating documents, which include public and private documents, in printed and electronic formats (Scott 2006 and Bowen 2009). While the use of documentary sources may not be very popular in the main stream social research, documentary research is not new. Like other analytical methods in qualitative research, document analysis allows data to be examined and interpreted in order to elicit meaning, gain understanding and develop empirical

knowledge (Corbin & Strauss, 2008), which is also the intended outcomes of this study.

According to Creswell 1994:151), the strength of this method includes the opportunity it gives to researchers to examine text written in the participants' own words and often with substantial care, it is unobtrusiveness and there is little need for transcription. Its weakness includes the potential difficulty of obtaining access to documents, incompleteness of some texts and the difficulty in authenticating documents, which will be addressed or mitigated during the process of this study.

The strength of the method suggests the potential usefulness of documentary analysis as an academic research study to address new, dynamic and controversial social issues (Lee T W, 1999:108). The method certainly has a place in the study of the new and evolving nature of the internationalization of Singapore universities which this researcher is embarking on.

(4.1) Justification of using documentary analysis as a sole research method

A common choice of data collection method for a qualitative research approach is the use of in-depth interviews of participants supplemented with documentary analysis for data triangulation and enhancement of trustworthiness. Although there are obvious benefits of such a multi-data source collection approach, there are practical constraints, especially so given the word and resource limitations for a doctorate thesis in education. After having considered the issue seriously, and a literature review on the use of documentary analysis as a viable qualitative research method, this researcher has decided not to use the interview method or a combination of interviews and documentary research for the following reasons.

Firstly, it is the nature and aim of the study, which should determine the choice of the research method. As articulated in Chapter 1, and recapitulated at the beginning of this Chapter, the main objective of this study is to trace the

internationalization of publicly funded Singapore universities from a historical and developmental perspective. The context for the study is the economic and social transformation of Singapore since it achieved its self-government status in 1959 to the present day, with a focus on why and how Singapore universities internationalised during this period. It aims to map, understand and interpret the major historical developments and policies that explain the internationalization of Singapore universities and education system as a whole. This researcher is of the considered opinion such a study is best conducted through documentary evidence and analysis.

A historical analysis provides us with a sense of the past and the way the emerging trend of internationalization came about. The handling of documentary sources – government papers, diaries, newspapers and so on has been widely used as the hallmark of professional historians (Scott, 2006). By employing a wide range of documentary sources (from the government ministries, the universities and other media), enable the researcher to reflect on the development of this contemporary issue, and through which achieve a deeper understanding, and hopefully new insights or knowledge on the internationalization of Singapore universities. An interview method may not be able to cover the significant time frame of almost 50 years covered in this study, nor the likelihood of recruiting sufficient number of 'qualified' participants who are knowledgeable about the multi-faceted phenomenon for the interviews.

Secondly, the 55,000 word limitation for a Doctorate in Education thesis, and the availability of sufficient documents, from which data can be collected and analysed is another significant and practical reason for the choice of documentary analysis as the sole research method for data collection. During the course of this research and the review of literature pertaining to the internationalization of universities, this researcher has collected significant volumes of documents which are relevant to the research aims, specific research questions and useful for the study. Interview method is unlikely to yield the same richness of information available from documentary sources – given the time frame involved.

For interview method to be credible and representative, at least 8 to 10 participants or 'actors' who are involved in the internationalization of Singapore universities; comprise of a good mix of senior university administrators and academic faculty members, from each case university will have to be selected using the purposeful sampling technique. This will entail an interview of 24 to 30 participants for the study. This will put a significant strain on the researcher in term of time and resources. There is also the anticipated difficulty of gaining access to selected and willing participants for interview. Culturally in Singapore, it is not easy to convince people, especially those from the public sector organizations, to participate in interviews, despite assurance of confidentiality and observance of ethical practices. Permission for such interviews will have to be obtained, which may also be denied.

Given the focus of this study from a historical and policy developmental perspective, senior university management, such as the Vice Counsellor/President or Deputy Vice Counsellor or Provost will have to be included as 'critical' participants for the study, to give the institutional perspective. However, besides the potential issue of accessibility and permission; some of these heads of universities in Singapore may not have stayed long enough in the position to give a longitudinal or longer term developmental perspective of the internationalization phenomenon of universities in Singapore. Moreover, as discovered by Chan (2006) in her study, participants from interviews, such as the university administrators and faculty members do not speak with one voice, despite their shared interest in internationalization. The diverse responses that each makes to the growing phenomenon of internationalization in terms of purposes, strategies, processes and practices make analysis very difficult, if not impossible. In fact, Chan (2006:239) admits that 'due to the institutional focus of the study, as well as the constraint of space, the diverse views of the interview participants have not been systematically analysed and independently presented'.

On a more practical note, even if all the potential issues of access, availability of sufficient interview participants and time for the interviews, a combination of vast amount of documentary sources and the interview transcripts for analysis would have far exceeded the 55,000 word limitation for a Doctorate in Education thesis. It may be feasible for a PhD thesis on the same topic. The use of interview method may also be feasible for future or post-doctorate study on the same subject to augment and/or validate the results of the present study.

Thirdly, documentary research and analysis has been seen as a viable sole research method since the mid-19th century. In fact, documentary investigation was the main research tool of sociologists, such as Karl Marx and Emile Durkheim. Marx made extensive use of documentary sources and other official reports, such as Her Majesty Inspectors of Factories Reports made between 1841 and 1867, reports by the Medical Officer of the Privy Council, Royal Commission and Inland Revenue Reports, the Banking Acts, the Hansard and Census Reports, as well as newspapers and periodicals et al (as cited in Scott 2006, and Mogalakwe, 2009). Scott (2006) notes that the handling of documentary sources – government papers, diaries, newspapers and so on is widely used as the hallmark of professional historians. Mogalakwe (2009) argues that although the documentary research method may not be very popular research method in the last 20 years or so, it is nevertheless an acceptable and respectable research method that is also scientific and requires rigorous adherence to research ethics.

Some claim documentary investigation is just as good, and sometimes it is even more cost effective than the social surveys, in-depth interview or participant observation (Mogalakwe 2006 and 2009). Bowen (2009) contends that 'documentary analysis is less time consuming and therefore more efficient and cost effective than other research methods'. It requires data *selection*, instead of data *collection*. Fisher (2004) also argues that research in documentary materials has the advantage that it takes an open and pre-coded form in an open approach to *text* and *document*, and that the researcher may be trying to understand. This is what this researcher is attempting to do so in the

internationalization of Singapore universities from a historical and developmental perspective.

Silverman (1993) contends that documentary sources also have the advantages of being an unobtrusive method of data collection, and minimises the “*researcher effect*”, as compared to other qualitative research methods, such as interviews or participant observation. Furthermore, the data can be re-analysed, and additional data be sourced, if necessary.

Given the time and resource constraints, and word limitation of a Doctorate in Education dissertation, as well as the potential difficulty of gaining access for interview of participants, together with the documents already collected, this researcher decided that documentary research and analysis would yield a viable and credible research methodology for the topic being studied.

Bowen (2009:29) contends that ‘whereas document analysis has served mostly as a complement to other research methods, it has also been used as a standalone method’ in modern days. Indeed, there are some specialised forms of qualitative research that only rely solely on the analysis of documents. Merriam (1998) argues that for historical and cross-cultural research, relying on prior studies, documents included may be the only realistic approach (as cited in Bowen, 2009). The argument fits well with this research study.

Furthermore, McCulloch (2004:6-7) argues that “documents can provide potent evidence of continuity and change in ideals and practices, in the private and public arena. They are a significant medium through which to understand the way in which our society has developed, and how it continues to develop”. Hence, document research and analysis enables this researcher to trace the historical development and changes pertaining to the internationalisation efforts or strategies of Singapore universities. The use of published documents or records as a data source for will help to answer the research questions, such as the changing rationales and the approaches, programs and strategies that the universities have adopted in their internationalization drive. They should help to

reveal information about the “what”, “why” and “how” aspects on the internationalization of the universities.

Other quantitative data collection methods, such as questionnaire survey, are not considered because generalizability of findings is not the main objective of this study. Furthermore, as Gall, Borg and Gall (2003:222) observe “questionnaires cannot probe deeply into respondents’ beliefs, attitudes and inner experience”, hence they do not meet the requirements of the research questions, and if used, would contradict the logic of locating the study within an interpretive qualitative research methodology.

(4.2) Sources of Documents

As McCulloch (2004) has noted, documents are literally all around us. They are an integral part of our daily lives and our public concern. There are two types of documents that are used in documentary research, namely: *primary documents* and *secondary documents*. Primary documents refer to eye witness accounts produced by people who experienced a particular event or the behaviour we want to study. On the other hand, secondary documents are documents produced by people who were not present at the scene but who receive eye witnessed accounts to compile the documents, or have read eye witness accounts (Bailey 1994:194 as cited in Magolakwe 2009:45). Documents can further be categorised as *public*, *private* or *personal* documents. The list of public documents includes government publications; such as Acts of Parliament, policy statements, statistical bulletins, ministerial or departmental annual reports and consultancy reports etc.

For this research study, the relevant documentary sources include published government and university documents or records relating to, or containing some aspects of the internationalization or globalization of the case-universities or higher education in Singapore, available from the universities’ libraries or web-sites. These include: annual reports, mission statements of the universities, speeches of the case universities’ Vice Chancellors/Presidents or senior Administrators, and those of government ministers during major events/functions

or during parliamentary debates as well as media reports or other relevant publications. These documents are available from the Singapore government web-sites; university libraries, Singapore National Library Board, Singapore Statistical Office, or the National Archives of Singapore. The documents from these sources are reliable and authentic. In fact, Singapore is one of the world's leaders in e-government and information resources. Other prior research literature relating to the university education and economic development of Singapore and are relevant for this study will also be used.

The use of government publications and documents, such as Ministers' speeches as a qualitative data source is significant as such documents provide the government's perspective and/or national policy directions or insights behind the internationalization of higher education or universities. The Government is a stakeholder in the internationalization process of higher education (Knight 2003) and in analyzing rationales for internationalization there is a need to consider the diversity of stakeholders' in higher education (De Wit 2002). An understanding through documentary analysis of the government's policies or initiatives will enable the researcher to evaluate the impact or influence of such policies or initiatives on the internationalization of the case-universities studied.

Scott (1990:5) defines a document as "an artefact which has as its central feature an inscribed text". Scott (1990:59) gives most attention to the use of administrative paper produced by government and private agencies, which he regards as the 'single most important category of documentary sources used in social research'. This is the experience of this researcher too.

While also stressing the importance of administrative records, McCulloch (2004) also extended attention to personal documents of various types, such as diaries, letters and autobiographies. However, in the constraints of time and anticipated difficulty in accessibility, the latter types of documents are not intended to be sought extensively.

(4.3) Handling of Documentary Sources – Ensuring Quality and Rigour

The general principles of handling documentary sources are no different from other data collection methods. In all cases, data must be handled scientifically, although each source may require a different approach. Scott (2006:8-12) has formulated four criteria for the handling of documentary sources to ensure validity, reliability and trustworthiness. These are: *authenticity*, *credibility*, *representativeness*, and *meaning*. These criteria will be followed during the course of selecting the relevant documents or documentary sources for this research study to ensure the rigour and trustworthiness of the method.

However, Scott (2006:39-40) also cautions that these criteria of authenticity, credibility, representativeness and meaning should not be regarded as distinct phases in assessing the quality of documentary sources. Nor should they be applied in a rigid and formalistic way. Instead, the criteria should be seen as all interdependent and the researcher cannot adequately use one criterion to the exclusion of others.

Authenticity refers to whether the evidence is genuine and from impeccable sources (Scott 2006). Authenticity of the evidence for analysis is the fundamental criterion in any research. *Credibility* refers to whether the evidence is typical of its kind, and is free of error and distortion. According to Scott (2006:26), the question of credibility should concern the extent to which an observer is sincere in the choice of a point of view and in the attempt to record an accurate account from that chosen standpoint.

Representativeness refers to whether the documents consulted are representative of the totality of the relevant documents. *Meaning* refers to whether the evidence is clear and comprehensible. The ultimate purpose of examining documents is to arrive at an understanding of the meaning and significance of what the document contains (Scott 2006:32). However, what documents contain can have either a literal or face value meaning and an *interpretative* meaning. According to Scott (2006), the literal meaning of a document gives only its face meaning, from which its real significance must be reconstructed. On the other hand, in an interpretative understanding, the

researcher relates the literal meaning to the contexts in which the documents were produced in order to assess the meaning of the text as a whole. In other words, we need to comprehend the words themselves to follow the plot, the basic storyline. But, we also need to get between the line to understand their meaning and their deeper purpose, to develop a study that is based on the documents (McCulloch, 2004), which this researcher will do at the data analysis stage.

This researcher is also fully aware that documents are not deliberately produced for the purpose of research, but naturally occurring objects with a concrete or semi-permanent existence which tells us indirectly about the social world of the people who created them as observed by Payne and Payne (2004). This is the case too on the emerging internationalization phenomenon of Singapore universities. None of the documents sourced and analysed by this researcher were produced for the purpose of this research study. An inductive and flexible data collection approach may have to be deployed during the investigation process.

(4.4) Data Analysis and Approaches

Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study (Yin, 1994). Unlike quantitative data, which uses a variety of statistical analysis tools to identify statistical relationships between variables, qualitative data analysis generally involves holistically identifying *themes, patterns and categories*.

There is a wide range of interpretive or analytical approaches employed in qualitative research. Typically, documentary analysis, which is the chosen research method for this study, involves the study of public and private documents. According to Creswell (1994:151), the strength of this method includes the opportunity it gives to researchers to examine text written in the participants' own words and often with substantial care, its unobtrusiveness and the need for relative little transcription. The strength suggests its potential usefulness as an academic research study to address new, dynamic and

controversial social issues (Lee T W, 1999:108). For the purpose of this study, a combination of traditional interpretive data analysis approaches, - “*Content Analysis*” and “*The Constant Comparative Method of Grounded Theory*” (not grounded theory per se) and “*Hermeneutic interpretation of documents*” will be used to analyse the data collected from the various document sources.

Content Analysis is a systematic analysis and identification of patterns or themes in the text documents (Krippendorff, 2004) relevant for the study. The qualitative data will be ‘coded’ and grouped according to the *categories of themes* and relevant research questions for analysis. The analysis procedure is likely to be emergent; and the same document can be analyzed at different points of the study, with each analysis yielding new constructs, hypothesis and insights (Gall, Borg and Gall, 2003:283). The constant comparative analysis was originally developed by Glaser & Strauss (1967) for the use in grounded theory method of qualitative data analysis. However, for the purpose of this study, grounded theory is not intended to be used. Only a simplified coding process and the process of breaking down, examining, comparing, conceptualizing, and categorizing data adapted from Strauss and Corbin (1990:61) will be used. According to Gall, Borg and Gall (2003:250), data collected from the documentary research can be coded and developed into a set of categories of outcomes. The three basic elements of data analysis and theory generation include: *concepts*, *categories*, and *propositions*. (See [Figure 3.1](#) below)

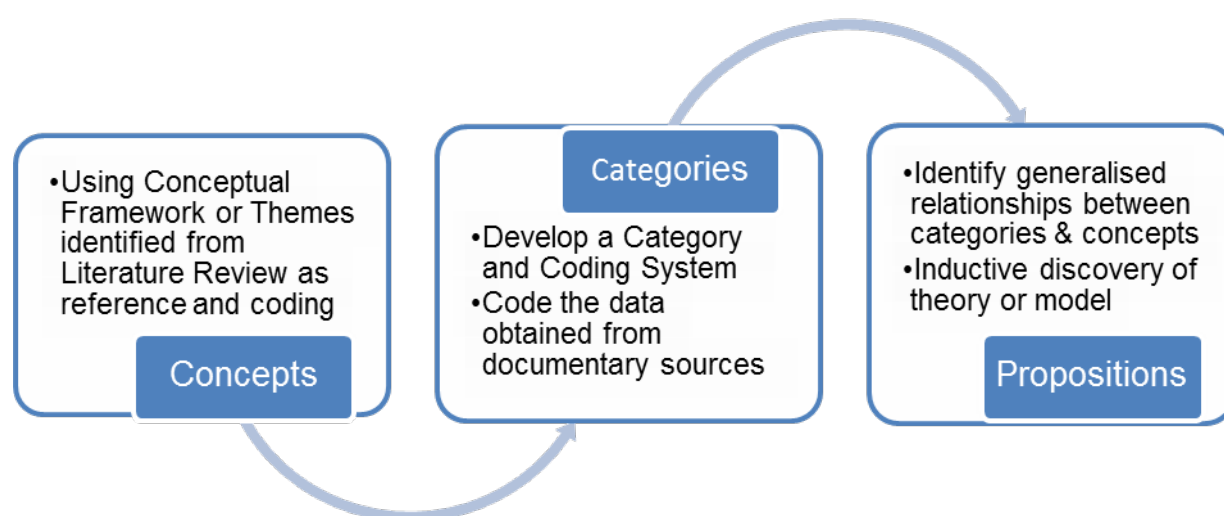


Figure 3.1: Data Analysis Approach (Adapted from Gall, Borg and Gall (2003:250))

Concepts are the starting point of analysis. Concepts or themes are usually identified during the literature review stage, although new themes may emerge as the research progresses and data being analysed. It is from the conceptualization of data, not actual data per se, that theory is developed or *proposition* made (Strauss & Corbin, 1990). *Categories* are generated through the same analytic process of making comparisons to highlight similarities and differences that is used to produce lower level concepts. Categories provide the means by which theory can be developed and/or integrated. *Propositions* indicate generalised relationships between a category and its concepts and between discrete categories.

The generation and development of concepts, categories and propositions is an iterative and emergent process. Any new theory, knowledge or insights relating to the internationalization of Singapore universities may be *inductively* derived from the study of the phenomenon it represents; i.e. discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to the phenomenon being studied (Strauss & Corbin, 1990).

An inductive approach offers the researcher a method of collecting qualitative data, a flexible structure in which to alter the intended path of the research as new findings present themselves and the freedom to investigate the phenomena without the need to generalise (Easterly Smith et al, 2002).

(4.5) Samples of Data Analysis

The following is an illustration of the approach (outline only) this researcher adopts to data analysis from documents sourced from the Singapore Ministry of Education official web-site (i.e. public documents) and the National University of Singapore (NUS). The example relates to Specific Research Question 3, which is on the *rationales* for the internationalization of Singapore universities from a historical and developmental perspective; and whether such rationales have changed over time.

For the purpose of this study, the following themes or conceptual framework identified at the literature review stage and adapted by this researcher is used for the coding exercise and analysis, according to themes.

◆ Academic

- Profile & Status - Academic standing or global recognition
- International dimensions of teaching or research
- International Co-operation
- Institutional Building
- Enhancing Quality
- *Other themes (not identified earlier) emerging from the data*

◆ Political / Geo-Political

- Foreign Policy (including regional policy)
- National Policy
- National and/or regional identity
- Technical Assistance
- Peace and mutual understanding
- *Other themes (not identified earlier) emerging from the data*

◆ Economic

- Economic Growth & Income Generation
- Global Competitiveness (as a result of globalization)
- Labour Market and/or Human Resource Development
- International Trade (GATS)
- National Education Demand (e.g. Preparing graduates for 'world of work')
- *Other themes (not identified earlier) emerging from the data*

◆ Social / Cultural

- National cultural identity
- Inter-cultural understanding / cultural sensitivity or cultural awareness
- Citizenship Development
- Social & Community Development
- Best of "East" meets "West" fusion
- *Other themes (not identified earlier) emerging from the data*

◆ Any Other Emergent Themes or Categories

As advised by De Wit (2002), the rationales driving internationalization of Singapore universities would also be analysed from the government and individual university's perspective. Chapters 4 and 5 will give fuller details of the findings and analysis for each research question. To achieve credibility of using

a qualitative documentary analysis approach, both the “emic” and “etic” accounts will be used in the analysis. The direct quotations from reliable document sources are particularly effective in clarifying “the emic perspective that is the meaning of the phenomenon from the point of views of the participants” (Gall, Borg and Gall 2003). An etic account is the voice or interpretation of the researcher. The thematic analysis is carried out manually by the researcher.

Themes / Rationales / Research Question 3

Period of Analysis: 2000 to present

Document Excerpt 3.1:

Source: Speech by Mr Teo Chee Hean, then Minister for Education in a 2000 Lecture to members of Alumni International Singapore titled “*Education towards the 21st Century – Singapore Universities of Tomorrow*” (MOE, 2000)

“..... the role of Singapore universities is to educate Singaporeans to be global workers [1] and to continue with its quest for excellence as world class or global institutions [2]”.

Data Coding, Commentary & Analysis

The Speech by the Minister reflects the thinking of the government. It is one of the major speeches that set the tone on the roles and policy directions of the Singapore universities towards the 21st century.

The coding includes:

[1] “Global workers” – a theme and a rationale for the internationalization of Singapore universities. The theme may be grouped under the broader category of “Economic Rationale” of labour market and/or human resource development.

[2] “quest for excellence” (as world class or global institutions) – another implied theme and rationale for the internationalization of Singapore universities. It may be grouped under the broader category of “Academic Rationale” of institutional profile or status, as well as “Economic Rationale” of global competitiveness, which will be analysed in greater details at the analysis stage in the next Chapter.

Document Excerpt 3.2

Source: Speech by Professor Shih Choon Fong, President, National University of Singapore at a university event on 31 January 2008 (NUS - Shih 2008)

“As a university **aspiring to global excellence** [2] in education, NUS has a responsibility to **prepare our graduates for life and work** [3] in a fast changing, **globalizing world** of increasing **cultural complexity** [4]. More importantly, they must be able to seize opportunities and take on challenges amidst a **rising Asia** [5].”

Data Coding, Commentary & Analysis

The Speech by the President of NUS is an example of **data cross-referencing** from two different document sources at different time period (the first in 2005 and the latter in 2008). It shows the alignment between the Government’s policy direction and that of the University. *(A study will also be made if there is similar alignment of the other two case universities at the detailed analysis stage from an intra and inter universities and government perspective. If not, the extent at which the rationales are different).*

[2] “aspiring to global excellence” is the same theme and rationale as Document Excerpt 3.1 as coded earlier.

[3] “prepare graduates for life and work” in a fast changing, globalised world is a similar theme as that of a ‘global worker’. It falls within the broader category of “Economic Rationale” of labour market and/or human resource development as in [1] earlier.

[4] “cultural complexity” is another possible theme and rationale. It is coded within the broader category of “Social / Cultural Rationale” of Inter-cultural understanding / cultural sensitivity or cultural awareness

[5] ‘raising Asia’ – this appears to be a new or theme, emerging from the last few years in view of the growing Asia, especially China and India. Further investigations will be done during the course of this study. Effectively, it may be argued as a “Social or Cultural Rationale” for internationalization with a focus in Asia. This may be a unique feature of the internationalization of Singapore universities with an Asian focus, a “fusion of the East and the West”

Although this is not a quantitative research, this researcher will make use of the technique of tabulation, as well as frequency counts of each theme or category to highlight the importance, ranking or priority so as to draw some conclusion for the study.

Document Excerpt 3.3

Source: Parliamentary reply on 19 April 2005, by Singapore Minister of Education to a question raised by a Member of Parliament on the subject of substantial tuition fee grants to foreign students studying in Singapore universities regardless of their affordability *(as against the general practice of charging higher tuition fees for foreign students in other countries)* (Singapore Parliament - MOE, 2005)

“The tuition-fee policy for foreign students is linked to our objective of attracting bright foreign students to study in our universities, which will increase our talent pool [6]. We need to recognise that we are competing for top students with other universities in the region and beyond. Any fee which is higher, coupled with a high cost of living in Singapore, would make it unattractive and financially difficult for foreign students to study in Singapore. Our universities need to ensure that they provide quality education at competitive rates [7] vis-à-vis those of other foreign universities”

Data Coding, Commentary & Analysis

The preceding excerpt from the document relates to the government’s policy of tuition fees for foreign students. Contrary to general global trend, income generation and higher tuition fees is not the economic rationale of attracting foreign students to study in Singapore universities.

[6] (Our objective of attracting bright foreign students ...) is to increase the talent pool” – a recurring theme within the category of “Economic Rationale” of augmenting labour market and human resource development in Singapore.

[7] “quality education at competitive rate’ – which may be coded under the theme of competitiveness. It will be discussed in greater rigour with other documents available at the analysis stage

Document Excerpt 3.3A

Source: Same as Document Extract 3.3 above

“Such a move has its benefits. Foreign students add to the vibrancy of the universities’ learning environment [8] by providing diversity and alternative perspectives, [9] given their different cultural and social backgrounds. This enriches the university education and experience of our local undergraduates [10], and ultimately adds to the international standing of our universities [11]. Foreign students, who receive subsidy from the Government, will have to serve a 3-year bond upon graduation by working in Singapore and hence supplement our labour force” [12]. (MOE2005)

Data Coding, Commentary & Analysis

The preceding excerpt is from the same document, a reply to Members of Parliament from the then Singapore Minister of Education on the rationales and benefits of subsidising foreign students studying in Singapore.

Recurring themes, such as ‘Vibrancy of universities’ [8], ‘providing diversity and alternative perspective’ [9], “enriches the experience of local undergraduates”, and ‘international standing’, and ‘supplement Singapore labour force. These themes and categories will be analysed as illustrated earlier together with other available documents, including secondary and international research, such as those conducted by Knight (2005, 2007 and 2010) for the International Association of Universities (IAU). This will enable comparison to be made, and enhancing the rigour and richness of the data available from multiple sources.

Hermeneutic interpretation of documents

To further enhance the rigour of the study and data analysis process, the technique of hermeneutic interpretation of documents will also be used to complement the content analysis and the constant comparative method of analysis. The purpose of hermeneutic interpretation of the document is to achieve a *deeper understanding of text* of the materials (Forster 1994), a quality criterion ‘meaning’ as advocated by Scott (2006) in the handling of document sources.

The hermeneutic interpretation of documents involves the study of *text*. It assumes that all text-based meaning is negotiated, and the text therefore involves self-presentation, secrecy, hidden agenda and potential manipulation (Lee, 1999:108-109). As a result, hermeneutic researchers must delve into deeper meanings.

Forster (1994) notes “the interpretation of these texts is governed by a hermeneutic spiral”. The understanding of disparate (and often contradictory) texts evolves upward through a spiral of understanding (p.150). According to Lee W (1999), to achieve the spiral of understanding, the following six generic steps are to be followed in the hermeneutic study or analysis of documents.

1. The researcher extensively and intensively *reads* and *re-reads* the text materials in order *to move beyond a superficial understanding*. Through such effort, the text’s underlying **themes** and tacit, taken for granted assumptions should become evident.

2. The researcher clearly *articulates the text's identified themes*. (Sometime, these themes may appear to diverge and to be contradictory)
3. The researcher *thematizes* the data by clustering or imposing order onto these themes. Simultaneously, this coherent packaging, structuring or thematising must meaningfully reduce the data
4. The fourth stage begins the *analysis*. The researcher compares the thematised (or meaningfully reduced and therefore more coherent) data with other texts. By *triangulating* the constructed interpretation across multiple sources of additional and independent texts, the researcher can corroborate or falsify the imposed categories (or simplifying structure)
5. The researcher employs as many reliability and validity checks as possible. Using the results of documents or data cross-referencing for reliability and validity checks, the researcher can then modify the thematised data. In hermeneutical term, the data are re-contextualised.
6. The researcher finalises the data in an academic research document or applied case report.

The above approach should further enhance the rigour and trustworthiness of using documentary sources as a sole method of data collection and analysis for this study on the “internationalization of Singapore universities from a historical and developmental perspective”

(5) Addressing the Issues of Validity, Trustworthiness and Generalizability

(5.1) Validity and Trustworthiness in Qualitative Research

As Patton (2000:162) observes: ‘there are no perfect research designs. There are always trade-offs’. Interpretive and qualitative research methodology has often been criticised for its lack of objectivity and generalizability. Ensuring validity, reliability and trustworthiness of a research study employing an interpretive and qualitative research approach using extensively documentary evidence will thus not be overlooked in this study.

Validity in qualitative research involves determining the degree to which researchers' claims about knowledge correspond to the research participants' constructions of reality being studied (Eisner and Peshkin, 1990). Lincoln and Guba, 1985) contend that as the interpretive research paradigm is based on different ontological and epistemological assumptions or beliefs, the criteria of validity and reliability should be considered from a different perspective.

This researcher subscribes to the concept of 'trustworthiness' or alternative validity criteria for interpretative qualitative research developed by Lincoln and Guba's (1985) to address the quality and rigour of the study. As summarised in the Table 3.2 below, the evaluation criteria for trustworthiness include: *credibility*, *transferability*, *dependability*, and *confirmability* as against internal validity, external validity, reliability and objectivity in quantitative research.

Table 3.2: Criteria for Judging Research Quality

Issues of Concern	Traditional Criteria for Quantitative Research	Alternate Criteria for Qualitative Research
Rigour of method	Internal Validity	Credibility
Generalizability of findings	External Validity	Transferability
Reproducibility of findings	Reliability	Dependability
Researcher's role in the inquiry	Objectivity	Confirmability

Source: Adapted from Trochim and Donnelly (2007:149) and Lincoln & Guba (1985)

As mentioned earlier, this researcher is fully aware of the limitation of using documentary research as the sole method of data collection and analysis. For example, prolonged engagement is not feasible. Triangulation of data with other sources, such as those from in-depth interviews is also not possible. However, this is compensated by the adherence to Scott's (2006) four criteria of *authenticity*, *credibility*, *representativeness* and *meaning*, as addressed in sub-section (4.3) of this Chapter. This researcher will also take step to ensure that as wide a ranging of relevant documents are available for analysis as practically possible for representativeness of the documents and data analysed. Cross referencing of documents from different sources, such as policy speeches/statements at different time period and/or reports from the Ministry of

Education and the Universities as well as from different appointment holders (e.g. Minister for Education, Minister of Manpower and Prime Minister), will be made to check or test the authenticity and credibility of the data or meaning of words or comments. Relevant records, such as raw data, analysis notes, process notes, personal notes and preliminary developmental information will be kept and made available for any inquiry audit, if required to assess the quality of the integrated processes of data collection, data analysis, and theory generation or '*dependability*' through the 'audit trail' technique developed by Lincoln & Guba, (1985:320-321).

Dependability is concerned with the reproducibility of findings; or the degree to which a measurement, given repeatedly, remains the same over time or within a given time period. 'Confirmability' refers to the degree to which a researcher can demonstrate the *neutrality* of the research interpretations, to be addressed in the next sub-section.

(5.2) Reflexivity and the Stance and Positioning of the Researcher

Reflexivity is the examination of the ways in which the researcher's own social identity and values affect the data gathered and the picture of the social world produced. Shacklock and Smyth (1998) see reflexivity as the conscious revelation of the role of the beliefs and values held by researchers in the selection of research methodology for the generation of knowledge and its production as a research account. In this case, it is an account of the internationalization of Singapore universities in a globalised economy from a historical and developmental perspective.

Hellawell (2006:483) contends that that the ability of a researcher to objectively stand *outside* one's own writing, and to be reflective about it, and about one's own relation to it; are some of the hallmarks of a good thesis. The goal of reflexivity is therefore to improve research quality, validity, reliability and relevance and to reveal knowledge limitations, thus leading to more rigorous research (Guillemin & Gilliam, 2004).

Reflexivity requires that the research process itself is critically examined. Decision making is made explicit, the methodological strengths and weaknesses are examined and the learning which takes place as a result of this process is utilised to improve research practice, which this researcher has attempted to do so at the research design stage and process as described earlier in this chapter. Reflexivity also requires that the values and position of the researcher are examined and that their biases and prejudices are made explicit.

This researcher's personal interest in the emerging and accelerating phenomenon of internationalization of higher education globally is a significant motivation and reason for the present study. The personal interest stemmed from this researcher's position as a Director and a senior academic in a Singapore polytechnic (*not the universities that form the focus of this study*) at which the researcher has been employed for the past 15 years. This researcher is of the view that the issue of '*insider*' does not arise, as the polytechnic where he works is not related to any of the Universities to be studied. Unlike the United Kingdom and a number of other commonwealth countries, where polytechnics have been granted university status, polytechnics in Singapore remain distinctively as polytechnics to meet the different manpower needs and economic development of Singapore.

However, this researcher is also fully aware that the findings of an interpretive qualitative research study, such as the present one, are subject to the *positioning* of the researcher within the study and the *personal experiences* that the person brings to the research context (Strauss & Corbin, 1990). Glaser and Strauss (1967) argue that 'it is these very features of the research that provide theoretical sensitivity and enhance the strength of the findings. I shall discuss my positioning and personal experiences in the context of this study and contend that these will not affect the overall validity, reliability and trustworthiness of this study. In fact, according to Glaser and Strauss (1967), it is these very features of the research that provide theoretical sensitivity and enhance the strength of the findings.

The Internationalization of higher education is both a topic of consensus and controversy. Some researchers accept this as a reality of a globalized world today. While others, such as Slaughter & Leslie (1997), Deem (2001), Altbach (2004) and Mok (2006) view the trend as academic capitalism or a new form of managerialism, or even a form of neo-colonization. This researcher takes the position that the internationalization of higher education has to be accepted as a reality; and no longer a choice of either the Singapore government or the universities. This is especially so given the fact that Singapore is one of the world's most competitive and globalized economies, as evident from the annual Global Competitive Report (GCR) which ranked Singapore as one of the most competitive economies in the world and first in Asia.

As a member of the senior management team in a polytechnic, this researcher is also involved in some aspects of the internationalization strategies and programs, such as overseas student and/or staff exchange of the polytechnic. During the course of work, he has the opportunities to meet and interact with senior academic and administrators of other institutions of higher learning and universities overseas, such as the United Kingdom, Ireland, France, Germany and Australia, where student recruitment, student or staff exchange and the general issues of internationalization are inevitably discussed at some of these meetings. According to Strauss and Corbin (1990), the professional experiences and knowledge on the subject will enable this researcher to have the theoretical sensitivity and the ability to see the 'subtleties of meaning of data', and to 'give meaning to data'.

This researcher is also a graduate and alumnus of the National University of Singapore (NUS), with a Master of Science degree in Management of Technology and a Master degree in Law. However, this fact should not make him an 'insider' as defined by Merton (1972) who is "an individual who possesses a priori intimate knowledge of the community and its members". This researcher cannot claim to have any priori intimate knowledge of the NUS; at the very most an affinity with the university. Any intimate knowledge of the university is likely to accrue as a result of this study. Again, it is likely to be

limited to the internationalization aspects of the university. He also is unaware of holding any pre-conceived view or biases against the other two case universities of this study; Nanyang Technological University (NTU) and Singapore Management University (SMU)

This researcher will endeavour to maintain as neutral or impartial a stance as possible during the data collection process and reporting of findings as advocated by Gall, Borg and Gall under the concept of 'reflexivity' (2003:17) and follow the research procedure closely and ethical standards to ensure the rigour and quality of the study. Pels (2003:211) argues that "there can be no such thing" as a search for knowledge which is purely interest-free, curiosity driven or value-neutral. Scientific practices are always bound up with intellectual, interpersonal, political and institutional considerations (Mauthner & Doucet, 2003; Moses, 2005 as cited in Lessard, 2007). This is more so in the current research study

(5.3) Potential Issue of Generalizability

This researcher is fully aware that a qualitative research approach may involve a "trade off" between "empirical generalizability" and "accuracy and detail" in relation to quantitative methodology, such as survey. To the positivist researcher, a qualitative research without being supplemented by a quantitative method, such as survey, may be considered weak, especially when the study is restricted by small 'sample size', such as two to three case samples as in the design of this study. Hence, it may be difficult to generalise the empirical findings in a larger context.

However, large scale generalizability is not the goal of this research. Instead, this researcher will provide sufficient 'thick description' of the Singapore case, the research setting and the context to enhance understanding and provide insights on the phenomenon of internationalization of Singapore universities from a historical and developmental perspective, so that the readers or users

can compare and decide for themselves on the applicability of the findings in their own situation as contended by Lincoln and Guba (1985).

(6) Chapter Conclusion

This chapter addressed the main methodologies and issues that frame the research design and the data collection method and analysis. It has located with justifications the study within the interpretative paradigm with a qualitative research approach using extensively documentary evidence as the sole method of data collection and analysis. The interpretive paradigm is considered the most appropriate paradigm for the proposed study, as it is rooted in the epistemological belief that “social reality is constructed by the people who participate in it; and is constructed differently by different individuals” (Gall, Borg and Gall 1996:18-19), which is the case for the internationalization phenomenon of universities as revealed in literature review in Chapter 2. “Thick description” to provide an in-depth understanding of the phenomenon of the internationalization of universities in the Singapore context, not generalizability is the objective of using the interpretive qualitative data, documentary analysis for the study.

The various issues associated with the design of this research study, especially in relation to limitations of the study, generalizability of the findings, validity and reliability, and steps to enhance trustworthiness vis-à-vis the importance of theoretical sensitivity, reflexivity, and stance and positioning of the researcher have also been highlighted and discussed. There are bound to have some weaknesses in any research design, especially given the time and resource constraints of a doctorate researcher. However, by making these weaknesses and limitations explicit, demonstrate reflexivity and awareness of the researcher.

The next two chapters will present on the research findings and analysis organised along the specific research questions and themes identified at the literature review stage as well any emerging themes surfaced from the documentary analysis in an iterative and inductive manner.

CHAPTER 4

FINDINGS AND ANALYSIS I

Chapter Introduction: Themes and Coverage

This chapter constitutes part one of the findings and analysis. It provides the findings on the historical development and the impetus leading to the current heightened state of internationalization of Singapore universities. The first section of the chapter “**Setting the Perspective**” (*towards the internationalization of Singapore universities*), examines - using documentary evidence - the historical development of university education in Singapore, in particular how the system internationalized and changed form during the period from its colonial days to the 21st century globalized economy today. It narrates, from the research conducted and the themes and sub-themes identified; a Singapore University story. It gives a thick description and tracks the historical, social-economic and political development in Singapore and demonstrates how university education development and subsequently the internationalization of Singapore universities are linked to, and influenced by, these developments.

The setting should help to answer the first and second specific research questions about the meanings and the evolution of the concept of internationalization from a Singapore perspective. It concerns both Singapore universities’ own, and the government’s, interpretations of the term “*internationalisation of universities and higher education*”, and goes on to track the emergence of the term “internationalisation of universities” in the three case Singapore universities.

The second section under the broad theme or heading of “**Rationalising the Globalisation Move**” describes and analyses the motivations or the driving forces that lead to the current state of internationalization of universities in Singapore. It answers the third specific research question on the *rationales* for the internationalisation of Singapore universities from a historical, political and

social-economic development policy perspective, and whether such rationales have changed over time.

Together, sections 1 and 2 address the ‘what’ and ‘why’ aspects of the main research question: “*Why and how have Singapore universities internationalized during the period from the beginning of nationhood in the early 1960’s to the globalized economy of today?*” The ‘how’ aspect, namely the approaches and strategies, will be addressed in Chapter 5 – Findings and Analysis II - under the broad theme of “**Developing Global Competitiveness – Moving Towards a Global University**”. Some of the approaches to and strategies for the internationalization of Singapore are uniquely Singaporean.

(1) Setting the Perspective - The Singapore Story

(1.1) Historical and Economic Development of Singapore

To understand Internationalization of universities in Singapore, it is important to appreciate the unique forces that have shaped the country. This research study reaffirms other literatures and studies that events and developments in Singapore during the past 50 years have significant bearing on how the country’s present government has positioned itself with regard to its social-economic development policies, international relations and education.

Singapore is a small city state with an area of 683 square metres. A recent population report (2011) released by the Singapore Department of Statistics showed that it has a resident population of 5.3 million people, of which slightly over a quarter are non-Singaporeans or immigrants. Singapore was a British colony prior to its independence in 1965. Today, it is one of the world most competitive and globalized economies. The Global Competitive Report (GCR) 2011-2012 ranked Singapore the 2nd most competitive economy in the world, just behind Switzerland and ahead of USA (5th), Germany (6th), Japan (9th), and UK (10th). The same report also ranked the quality of the Singapore educational system in second place, after Switzerland. According to the International Monetary Fund (IMF Report 2010-2011), Singapore’s GDP (nominal) per capita was US\$49,271 in 2010 (ranking 13th), ahead of US\$48,387 for the USA in the

same year. In term of Purchasing Power Parity, Singapore's GDP (PPP) per Capital is US\$59,711 ranking in 3rd place globally. The strength of Singapore dollars against the US Dollars and other major world currencies, its sustained economic growth and strong credit ratings, are all major contributing factors to Singapore's wealth.

Being a small city state, the economic development of Singapore is inevitably influenced by its internal and external global environment. Internally, a strong and stable government together with a robust and dynamic education system has always been cited as a major factor contributing to phenomenal Singapore economic growth. Economic and education system developments go hand-in-hand in Singapore. They are like the inseparable twins in Singapore nation building. The Ministry of Education (MOE) spells out on its web-site the role and emphasis of education in Singapore, as follows:

“Education is placed at a premium in Singapore as our people are the only resource that we can develop and rely upon. It is the most effective means of fully realising the potential of the people” (MOE 2011)

In Singapore, universities are viewed as key centres of excellence to produce and/or foster local talent and to attract foreign talent to the country. Talent and manpower development are vital to the economic development of a country. This is especially so for a small city state like Singapore, which has no natural resources.

To understand the reasons for changes in the education system, more specifically, the internationalization of Singapore universities, it is useful to trace back the historical, social and economic development in Singapore and how these developments have had an impact on university education development and subsequently the internationalization of Singapore universities. The analysis is done in the context of economic and social transformation of Singapore since 1965 with a focus on why and how Singapore Universities have internationalised during this period

(1.2) Stages of Economic and Education Development in Singapore

The economic and education development of Singapore may broadly be divided into two periods; the *Pre-Independence* or British Colonial Era, and the Post-Independence Period from 1965. The post-independence period can again be divided into three fairly distinctive stages of economic development, which will be described and analysed in greater detail later in this chapter.

○ Period 1: The Pre-Independence or British Colonial Era

This refers to the period from the founding of Singapore to its independence in 1965. Singapore was founded by Sir Stamford Raffles in 1819, and became a British Colony or a British Straits Settlement. It was granted self-governing status from 1959 to 1963. On 16th September 1963, it joined the Federation of Malaysia and became a state within the Federation. On 9th August 1965, it achieved its independence after a separation from Malaysia, as a result of differences in political and social ideology.

During the colonial days, high government officials were all British. The economic system was based on the entreport trade within the areas of Archipelago, now Indonesia, Malaysia and Singapore. Not surprisingly, the development of education was very much influenced or dictated by the colonial administration's policy. According to archival records maintained by the Singapore National Library Board (NLB Archive) on the Singapore's education system from 1820s to 1945, Sir Stanford Raffles declared in 1823 that education institutions in Singapore should aim "*to educate the sons of the higher order of natives and others to afford the means of instruction in the native languages to such of the company's servants and others they may desire it, to collect the scattered literature and tradition of the country.*" This goal has laid the cornerstone of the "British education policy" in Singapore. The *native languages* were then predominantly the Malay language or other local languages within the Malay Archipelago.

According to Goh and Tan (2008:149), the ruling British then believed imperial subjects must not be too educated because this would pose a threat to the

colonial administration. The administration also believed that higher education and English education in general, possessed an autonomous power and rarity, only a few privileged could enjoy. In a speech delivered at the Nanyang University Convocation ceremony on 18th August 1979, Dr. Goh Keng Swee, then Deputy Prime Minister and Minister of Education lamented that “so far as the colonial government was concerned, it was not necessary to educate everyone” (NLB Archive: Goh 1979)

Establishment of first University in Singapore

On the university and higher education front, there was little development after the setting up of Raffles College of Arts and Science and the King Edward Medical College in 1919 and 1921 respectively. The first university was only established in 1949 after the World War II, when Raffles College and King Edward Medical College were merged to form the University of Malaya, based in Singapore. The university was formed after a report of the Commission on “Higher Education in Malaya” appointed by the Secretary of State for the Colonies by Commission Chairman – Sir William H McLean. (*The University of Malaya was the predecessor of the University of Singapore. In 1962, the University of Singapore was established and subsequently in 1980 it became the National University of Singapore*).

Prior to 1959, the University was funded by the British colonial administration in Singapore and followed the English university education system with teaching faculty from Britain. It may be argued that early internationalization of higher education in Singapore started with the establishment of the University of Malaya in Singapore in 1949, albeit the British model of higher education system. This is similar to the practices of the European universities during the same period, with some mobility of faculty and students of the scholarly elite, as described in the literature review in Chapter 2. In fact, documentary records from the National University of Singapore and University of Malaya show that the Foundation Ceremony for the University of Malaya on 8th October 1949 was celebrated and attended by Vice Chancellors or representatives of over 25 universities from not only leading universities in the United Kingdom, such as

Oxford, Cambridge, St Andrews, and Edinburgh, but also universities from the United States of America, such as Harvard and Chicago, as well as from Australia, such as the University of Melbourne, among others. The development of the University of Malaya was akin to the 'classic' or the 'old' *internationalization* of universities during the post war period. It can be said that the University of Malaya belonged to the 'club'. The term "internationalization" was not in use at that time. However, the *international character* of the University was evident from the use of English as a medium of instruction. The curriculum used was also similar to that of the Oxbridge universities in Britain.

Mr. Lee Kuan Yew, the founding and first Prime Minister of Singapore acknowledged recently in his memoir (Lee 2000:158) that

"It is Singapore good fortune that under the British, Singapore had been the regional centre for education. The most significant was the use of English as the medium of instruction and curriculum".

The use of English as an international language and the sole medium of instruction for the University, however, were not without resistance. In 1955, in responding to the setting up of the English speaking University of Malaya, Nanyang University (more popularly known as *Nantah*, the short form of the University in Chinese), was set up as a private university with donations from people from all walks of life in Singapore and South East Asia as an alternative to the University of Malaya. Mandarin or Chinese was used as a medium of teaching and learning as a counter balance to the perceived British 'imperialism'. This caused tremendous tension between the two universities and the British administration. The then colonial government did not look with favour on the establishment of a Chinese university because of the communist threat from within and outside Singapore (Goh, 1995). Nanyang University became a centre of turbulence during the 1950s and 1960s and it was infiltrated with student extremists with communist ideologies right through the first 10 years of the Singapore independence era.

On the other hand, the *South East Asia focus* and reputation of Nanyang University has also become a source of strength, not only during its existence

from 1955 to 1981, but after its 'rebirth' in 1991 as Nanyang Technological University (or NTU). English is now NTU's language of instruction for teaching and research. The strength of the University and its approaches or strategies to internationalization with an Asian focus will be discussed in greater detail in Chapter 5 with reference to specific research question 4. Suffice to conclude at this stage that *internationalization* and *regionalization* of Singapore universities existed prior to the independence of Singapore in 1965, albeit on a very limited scope compared to the heightened and diversified level of internationalization today. There is also very little documentation of this phenomenon as the term '*internationalization*' did not exist then.

- *Period 2: Post Independence Era – Moving Towards a first world economy and a world-class university.*

Effectively, Singapore achieved full independence only on 9th August 1965 after its failed merger in the Federation of Malaysia, which lasted from 1963 to 1965. Despite the cynics and fear that Singapore was unlikely to survive, it has done extremely well after independence, compared not only with other newly independent nations, but other developed economies as well. Economically, Singapore achieved a first world or developed economy status towards the end of the 20th century, that is, only some 35 years after independence.

The post-independence era of Singapore may be sub-divided into three distinctive stages of economic and education development. Co-incidentally, the classification resembles fairly closely the different stages of the internationalization of global universities reviewed in the literature articulated in Chapter 2. Consequently, it may be argued that the outcome is the result of the responsiveness of the Singapore government to the changing global environment. It also reflects both the openness and the interdependency of the Singapore economy to global development. Mr. Goh Chok Tong, who was the second Prime Minister, has said “.... *For Singapore, our smallness and total dependence on the outside world will always make us vulnerable to changes in the region and the international environment*” (NLB Archive: Goh, 1995)

Stage 1: From 1965 to end of 1970s. – **Continuity & Survival**

Unlike many other newly independent nations, which discarded much of their colonial legacy, the Singapore government continued with the British system for publicly funded university education. English remained the language of teaching and learning and business communication. In 1962, University of Malaya in Singapore became the University of Singapore. The University of Singapore continued to maintain its international character and use English as the medium of instruction as well as other features of British university education, including the curriculum. On the other hand, the government was pragmatic to adapt to the changing needs and challenges of the social and economic environment. The size of student enrolment and course offerings were based on labour market needs. It was a period of *political struggle* and *economic survival*.

Immediately after its independence, the Singapore government was ‘struggling’ to survive and to build a city state without natural resources. In the introductory paragraph on an article, “*Building Singapore’s University System in a Globalised World: Issues, Policies and Challenges*” (Tan, 2008), Mr. Tony Tan Keng Yam, who was then a Deputy Prime Minister of Singapore (*now President of Singapore*) and Minister in charge of Universities in Singapore wrote:

“In the 1960s, Singapore faced the challenge of weak economic fundamentals. Labour participation was low, unemployment high and the labour force was poorly educated” (Tan 2008:129)

In those early years, the Singapore Education Ministry focused on building a national education system which would provide mass education for all. Tan (2008:130) added:

“The emphasis at the university level in the 1960s and 70s was to rapidly expand enrolment in order to produce the professional manpower needed to staff a growing economy and to meet the social needs”

The government termed this as a period of “*survival economics*” and “*survival driven education*” system. At his address at the University of Singapore

Convocation Ceremony 1968, the Vice Chancellor, the late Dr. Toh Chin Chye, who was also concurrently the Deputy Prime Minister, touched on the immediate objective of preparing young men and women to meet the nation's challenges in the 1970s. He argued:

The time has come that has necessitated a change in the priority of education content not only in the curriculum, but the sphere of education to meet the challenge of the time, and to ensure our students can play a more meaningful role in Singapore, which they will have to assist in developing and enriching to a collective effort in a grand decision. In the final analysis, the aim of tertiary education is the provision of men and women to better serve their human beings in the manner valued in the essential field of human endeavours where such services are needed for their welfare and well beings. (NLB Archive: Toh, 1968)

The focus was obviously on social development and nation building. In another opening speech at the 3rd Conference of the South East Asia Minister of Education Council earlier in the same year, Dr. Toh also spoke on education as an instrument of nation building or social restructuring, as well as education and its impact on economic growth. He asserted:

In newly independent countries, heavy emphasis has to be placed on education as an instrument of nation building or social restructuring or social engineering. (However), there is no standard formula which can be adopted by all countries, as every government has its own philosophy, which in turn will decide on the nature of its government system. (NLB Archive: Toh 1968)

Interestingly, the nation building objective and policy direction of the newly independent Singapore government was no different from that of the British colonial government in 1949. In his Speech at the Foundation Day of the University of Malaya, 1949, the Chancellor Malcolm MacDonald, said *inter alia* that:

".....the University of Malaya is being founded at the same time as foundations are being laid for a nation of Malaya. That is a most happy coincidence for a university can play a notable part in making a nation".

He added,

"I do not suggest that its main conscious purpose should be political. Its purpose might be higher education. It must seek to lead faithfully its

students up the mountain slopes of learning so that as they climb they see with their eyes the grand view of knowledge and wisdom, truth and beauty. But that progress will bring many reactions not only in the educational but also social and political fields". (NLB Archive: UOM 1949)

Goh and Gopinathan (2006:4) opined that the ideology propagated the inseparability of economic and political survival. The successful fusion of economic and political survival required the internalization of an entirely new set of social attitudes and beliefs by the people of Singapore. In the process of "catching up" after the economic and political woes inherited prior to independence, important policies, especially those in the field of education and manpower development were speedily implemented. While the economics of education was in focus, the role of education in socialization and nation building process was not forgotten.

The pragmatic approach of the Singapore policies on education, social and economic development, paid off. Towards the end of the 1970s, Singapore had achieved its new economic status of a '*newly industrialized economy*', because of its high sustained economic growth. Going against conventional wisdom at that time, Singapore opened its economy to foreign investments and leveraged on multi-national companies (MNCs) to gain access to technologies, markets and management expertise.

Declining demand of Chinese medium University Education during the 1970s

Singaporeans are renowned as pragmatic people. Parents and employers realized the dominance of English as an international language in the world of business and commerce; parents in particular declined to send their children to Chinese schools and Nanyang University. On the other hand, the demand for university places at the only publicly-funded university with English as a medium of instruction and British curriculum, the University of Singapore, remained high. To sustain the high economic growth trajectory, the government felt that it was important to review the development of the university sector at this time. In 1979, Sir Frederick Dainton, then Chancellor of Sheffield University was invited by the Singapore government to lead the review.

The Dainton Report (1979) recommended that Singapore should have only ‘a *single and strong university*’ to be based in a new and larger campus at Kent Ridge at the Western part of Singapore nearer to the Jurong industrial development estate, where the multinational companies set up their factories and operations in Singapore. In a fairly adversarial and forceful manner, the report concluded:

“The arguments for maintaining two universities whether on two campuses or one (an absurd proposition) are extremely weak, whilst those in favour of a single strong university at Kent Ridge are compelling and I recommend accordingly”. (Dainton 1979:524 NTU Archive)

The report was accepted by the Singapore government. It set a new chapter in the development of university education in Singapore. The same report also recommended that ‘*links with overseas institutions of high quality (which) could be valuable in the next decade in improving the quality of research and teaching and should be developed*’ (Dainton 1979:537 NTU Archive).

In effect, Sir Frederick Dainton was recommending an *internationalization* of the ‘new’ single university through linkages and collaborations with high quality institutions overseas.

Stage 2: From 1980 to 1999 – **Change and Rapid Growth**

In 1980, the National University of Singapore (NUS) was officially formed with the merger of the University of Singapore and the Chinese medium Nanyang University. Effectively, it was the ‘demise’ of Nanyang University. English was the adopted language of teaching and learning in the merged University, and the university system remained British. Dr. Tony Tan Keng Yam, then Minister of Education was appointed as the first Vice Chancellor of the merged National University of Singapore. The appointment of a Minister from the Education ministry signified the Singapore government commitment and strategic intent to bring the University to the next level in its nation building and economic development.

The period from the 1980s to 1990s was one of rapid change and economic growth. In economic policy language, it was a move from skills and *labour intensive* industries to capital intensive industries with higher technology, value added, and demand for a more skilled workforce. In his inaugural Speech as a Minister of Education and Vice Chancellor Designate, National University of Singapore at the Welcome Convention for new NUS students on 2nd July 1980, Dr. Tony Tan said:

Singapore today is a young nation, very much in the growth and development phase. Our economy has an insatiable demand for technological and professional manpower. For the present, I do not see any escape from the necessity to gear university education to the demands of the market. (NLB Archive: Tan 1980)

Four years later, in another Welcome Convention for NUS students held on 2nd July 1984, Dr. Tan, then in his new capacity as Minister-in-Charge of the University reiterated:

The fundamental duty of the university must therefore be to provide the trained manpower which a country requires for its economic and social development. In Singapore, this is particularly urgent as we are in the midst of upgrading our economy to gear ourselves up for higher value-added, more skills-intensive industries. (NLB Archive: Tan 1984)

The role of university education to provide trained manpower, and economic and social development was therefore fully entrenched in Singapore since the beginning of nationhood. The government set the direction and continued to play a crucial role to ensure its success. This role of higher education can only be fully understood by appreciating the vulnerability of Singapore as city state. Higher education is integral in the political, social and cultural development of the multi-racial, multi-lingual and cosmopolitan society that is Singapore.

At a speech at the Nantah Alumni Global Reunion Dinner on 3rd June 1995, then Prime Minister Goh Chok Tong said:

Looking back, the merger of Nanyang University and University of Singapore had served Singapore well. Had Singaporeans chosen to

have one Chinese language and one English language university, I believe Singapore would have been worse off. It would have perpetuated the gulf between the Chinese-educated and the English-educated Singaporeans. Today, there would have been two groups of Chinese Singaporeans living in two separate cultural, linguistic and social political worlds.

He added

“Singapore is already small, and the faultline right down the middle of the country would have reduced our effectiveness as a nation” (NLB Archive, Goh 1995).

The above statement is an example of the typical pragmatic approach Singapore takes towards national unity, be it for education, social or economic related issues.

In retrospect, the hard and politically sensitive decision on the merger of the two universities, Singapore University and Nanyang University to become the National University of Singapore in 1980 also paved the way for the rise of a *world-class university system* in Singapore. It sowed the seed for the *internationalization* of Singapore universities as recommended in the Dainton (1979) report, although as stated earlier, the term ‘*internationalization*’ was neither used in the report; nor found in any literature or documents. With the exception of a few bright high school leavers who were sent and sponsored to pursue a university education in developed countries overseas in UK, Australia and New Zealand under the Colombo Plan scholarships, internationalization or international education or student and faculty mobility was almost non-existent during the period from 1960s to the late 1970s and early 1980s.

Beginning of post-Independence University Internationalization in Singapore

In his Speech to welcome the first batch of NUS students on 2nd July 1980, the Minister of Education and Vice Chancellor Designate, Dr. Tony Tan disclosed that *“the incoming students for the academic year were chosen from a pool of 7,612 applicants from 13 countries, Singapore, Malaysia, Indonesia, The Philippines, Thailand, Brunei, Hong Kong, Sri Lanka, Egypt, Iran, Burma, India and the USA” (NLB Archive: Tan 1980).*

It is noted that the international students or applicants then were mainly from the developing countries in the Asian region. Four years later, in another Welcome Speech to the fourth batch of NUS students on 2nd July 1984, Dr. Tan announced that the number of applicants had increased to 10,874 with applicants from 18 countries, an increase of 5 countries. These new applicants included those from developed countries, such as England, Germany, Japan, and Finland. Although the number from each country was small, it signifies the beginning of international status of the National University of Singapore. In the same speech, Tan announced that the undergraduate student population in NUS had increased by 50% to 8,600 students in 1980, to 13,000 students in 1984 (NLB Archive: Tan 1984).

This period also signified the beginning of 'massification' of university education in Singapore. Today, NUS has a total student population of over 35,000 and the total student population in the four publicly funded universities is over 70,000.

To meet the growing student intake, the new NUS University began to recruit significant numbers of foreign and international faculty staff, as it would take some time before the university could generate from within itself the people to staff the system. During the same period, the number of academic staff also doubled from 600 in 1980 to 1200 in 1984. Just under half of the academic staff were Singaporeans. The remainder is drawn from 29 countries, including the UK and the USA (NLB Archive: Tan 1984), indicating the international character and diversity of the teaching faculty in NUS, as early as the 1980s.

In an address by the first Prime Minister of Singapore Mr. Lee Kuan Yew to the University staff on 20th May 1980, after the merger of Nanyang University with Singapore University, the direction was set for the recruitment of university faculty. Mr. Lee stated:

"The world is a market for university teachers. This means we must pay world market price if we want good teachers" (NLB Archive: Lee 1980)

The positions of Vice Chancellor, Deans of Faculties or Schools and other senior University Administrators, however, remained local. This was partly due to the potential political influence of university education in the early years of nation building in Singapore, especially during the 1960s and 70s when the two universities, particularly the Nanyang University were infiltrated by communists and student extremists. The situation is different today with a heightened state of internationalization of Singapore universities in a globalized economy. Presidents or Vice Chancellors of three out of four publicly funded Singapore universities and some of the Deans and senior university administrators are foreigners. The globalization of the world economy and the Singapore government's desire to have the best talents, regardless of nationalities, to build and manage world class universities are reasons for the bold move in the late 1990s and beginning of the 21st century, which will be discussed further later.

The 'rebirth' of "Nanyang University"

While the merger between the two universities in 1980 was generally accepted as the right direction, there was also a sense of tension and uncertainty at the ground level, as evidenced from newspaper reports and other literature (Goh and Tan, 2008). The tension was caused by the difference in ideologies between the English educated and the Chinese educated. The English educated were seen to be more westernized and affluent with good jobs, whereas the Chinese educated were seen to be the underdogs, unable to find professional and executive jobs; they were also more leftist inclined. There was a suspicion that the government was against the Chinese educated, and was for closing down the Chinese educational institutions. In 1981, the Nanyang Technological Institute (NTI) (the name 'Nanyang' was kept to alleviate the tension, even though it remained an institute of NUS. The establishment of NTI and the use of English as a medium of instruction was also aimed at addressing the declining enrolment of students in the old Nanyang University and as a way of improving the job prospect of its graduates. NTI would focus on producing practice-oriented engineering graduates as opposed to a more research oriented academics produced by NUS. Ten years later in 1991, NTI was upgraded to Nanyang Technological University (NTU), and became the second

full-fledged public funded university in Singapore. Sir Frederick Daiton, who was once again, invited to review Singapore university education in 1989, concluded in his report,

By 2000, Singapore should aim to have two strong university level institutions; one at Kent Ridge and one at Jurong, with many subjects being offered on both campuses. This would introduce a healthy element of friendly competition for students, for current and future resources and for research grants and contracts and links with industry and commerce.
(The Straits Times, 14th February 1990)

In 1996, the Singapore then Prime Minister, Mr. Goh Chok Tong put forward the notion of making Singapore the “*Boston of the East*”, which would be achieved by developing NUS and NTU as Harvard and MIT respectively (Goh, 2006). The vision of the Singapore government was for NUS and NTU to be among the world’s best by the beginning of 21st century. By the mid-1990s, NUS made a strategic shift from basically a traditional British model of a public teaching university to a more comprehensive research intensive university (although this distinction has subsequently become important in Britain, too).

On a national level, the Singapore government’s intention of internationalizing and developing Singapore into a ‘*global education hub*’, or as sometimes referred to as ‘*global school house*’, dates back to 1986, when education was identified as a catalyst of human resource development and a potential contributor to the Singapore economy (ERC 1986). The momentum picked up only after the next Economic Strategic Committee Report in 1993 (ERC 1993). Under the global education hub strategy, the Singapore government adopts a ‘3-tiered system’ of universities to provide a vibrant and diverse array of undergraduate and postgraduate courses for local and international students. These are: (a) *World Class Universities (WCU)*, targeted to attract top world universities, such as INSEAD of France and University of Chicago, USA, to establish campuses and operations in Singapore. (b) *Singapore government funded universities*; namely NUS and NTU (SMU was not established at that time), which form the bedrock of the university sector to meet Singapore’s core manpower and talent needs, and (c) *Private universities*, which may be

branches of foreign universities, or locally established. A discussion and analysis of the success or otherwise of this strategy is, however, not included within the scope of this study, which focusses only on the internationalization of publicly funded Singapore universities. Suffice to say that the “Global School House” or “Global Education Hub” strategy is an initiative to promote Singapore as an educational hub with internationally renowned universities and to attract international students to study in these non-government-funded institutions. The target is to attract 150,000 students by 2015.

International Academic Advisory Panel - an Impetus to Internationalization

As part of the internationalization strategy, an International Academic Advisory Panel (IAAP) was set up by the Ministry of Education (MOE) in 1997 to advise the Singapore universities on major trends and directions in university education and research with a view to raise their international standing, enhance their students’ experience, and develop them into world class institutions of excellence (MOE-IAAP, 1997).

The Panel, which still meets bi-annually, comprises of distinguished academics, university leaders and prominent industry figures from the USA, UK, Switzerland, Finland, Japan, China and India. Although the term ‘*internationalization*’ is not in the terms of reference of the Panel or the press releases by MOE, this is yet another unique feature of internationalization of universities in Singapore! The Panel had since met seven times, the last meeting was held recently in June 2012. It has provided some valuable advice to the development, including internationalization, of the university sector in Singapore (MOE Reports on IAAP)

In its first meeting in August 1997, the Panel endorsed the directions of the two universities, NUS and NTU, in their bid to become world class institutions (MOE IAAP 1997). The International Panel of Advisors also suggested a *third university* to be established to (a) meet the demand for university education among Singaporeans and (b) attract international students to meet the manpower needs of Singapore (IAAP, 1997). The latter will be discussed and analyzed in the next section under “rationalizing the move towards

internationalization,” or the driving force behind the internationalization of Singapore universities from related documents and government policy statements.

Establishment of Singapore Management University

In 1999, the Singapore Management University (SMU) was established as the third publicly funded university in Singapore. It was set up as a private limited company and governed by the Singapore Company Act, but funded by the government. This constitutes yet another innovation as part of the government's commitment and funding of higher education in Singapore. It can be argued that contrary to the situations in other developed countries, such as the United Kingdom and Australia, funding for higher education has never been a limiting factor for the growth of a new or existing university in Singapore. .

SMU started with a 5-year collaboration agreement with the Wharton Business School, University of Pennsylvania, USA and its design follows that of the American university education system and Wharton's curriculum. Its first and second Presidents were seconded from the Wharton Business School. Hence, it may be logical to conclude that SMU was internationalized since day one of its establishment. This is yet another unique feature of the internationalization of Singapore universities – to ‘kick start’ a new university through collaboration with another world class university. Such an approach or strategy was repeated with the setting up of the fourth university – Singapore University of Technology and Design (SUTD) which started its operations in 2012 with the Massachusetts Institute of Technology (MIT) in USA and Zhejiang University from China, as partners.

Stage 3: 2000 to present – ***Sustaining Growth in a Globalized Economy***

With the rise of China and India, and given the generally weakening or sluggish American, European and Japanese economies, the global economic landscape is changing dramatically in the 21st century. It is a period of intense competition and uncertainty. The thrust of economic policy and developmental is towards sustaining growth with a continued focus on innovation, research & development

in a globalized and knowledge based economy. Higher education to develop manpower and talent to meet the needs of the 21st century remains a top priority for Singapore.

Table 4.1: Stages of Economic Development in Singapore

	Economic Conditions & Developmental Focus
The 1960's	A time of turbulence and economic uncertainty. Developmental focus on low skills, labour intensive export oriented industries. (<i>Poor infrastructure, unemployment, labours unrest Such were the odds against Singapore in the 1960s</i>). A period of "Survival Economics, Survival Driven Education"
The 1970's	The move into skills intensive industries. (<i>Singapore was positioned as a quick operation start-up location, where factories were built in advance of demand and a highly skilled workforce was readily available</i>). Singapore achieved its "Newly Industrialised Economy" (NIE) by end of 1970s.
The 1980's	The era of capital intensive and high technology industries (<i>Singapore manage to attract the first wafer fabrication plant. Dubbed as the "Second Industrial Renovation" for Singapore</i>)
The 1990's	Technological and service industries both boom (<i>Service sector becomes a second pillar of the Singapore economy</i>). Singapore's status from a developing economy in the 1960s and 1970s to a developed economy is firmly entrenched.
The 2000's	A move toward a Knowledge-based Economy with a strong focus on innovation, knowledge and Research & Development

Adapted from: Singapore Economic Development Board (<http://www.edb.gov.sg>)

In 2000, SMU received its first class of business students numbering 320 students (SMU Stakeholders Report, 2000). With the setting up of SMU, competition among the three publicly funded universities, NUS, NTU and SMU intensified. Tan (2008:133) wrote

"To be at the forefront of the latest developments, Singapore needs to create a diverse, differentiated and competitive university sector that will support its economic growth and social development".

He added:

"A vibrant university sector will not only attract and retain top talent; it will also help to create jobs and wealth"

SMU has done well since its inception. At a speech at SMU's Commencement on 20th July 2005, Mr. Tharman Shanmugaratnam, then Minister for Education,

declared that: “SMU has done remarkably well in its first 5 years”. He attributed the success to both employers and the students themselves.

Together with the increasing pace of globalization towards the beginning of 21st century, and increased university competition locally and globally, the term “internationalization” first appeared in the Annual Report of the National University of Singapore for Academic Year 2000. For the first time, a full section was devoted in the report on the rationales and programme strategies for the internationalization of NUS. In the Report under the heading “Internationalization”, the University states -

"As NUS heads towards becoming a global knowledge enterprise, it gave a fresh impetus to its internationalization drive. Through the year, the University lived out its aspiration to be a confluence of local and foreign talents where minds are open and receptive to the richness of cross cultural exchanges and perspective. ... The University carried out a full program of international engagements covering international outreach, forging strategic alliances and active participation in academic network".
(NUS, 2001:42)

Since then, internationalization has become an important direction for the development of university education in Singapore. Internationalization of Singapore universities has gained momentum.

In 2006, following the success of the SMU model, NUS and NTU were corporatized (converting from a statutory board under the umbrella of MOE to each be a private entity), but remain as publicly funded universities through the MOE. The corporatization gives the universities more autonomy and more freedom to manage their funding, but in return, they are accountable to the government through MOE for the outcomes and good corporate governance (MOE 2006). The universities can decide what undergraduate programs to offer, enrolment targets and criteria for admission, tuition fees to charge, terms and conditions of faculty recruitment and how faculty, students and the university are evaluated and benchmarked. It is a move away from the traditional tight control and ‘micromanagement’ to just providing policy guidelines and monitoring of outcomes and governance. Such a move has also resulted in an intensifying of

competition, pace and wide ranges of approaches and internationalization strategies among the universities. The ranking of NUS and NTU have rocketed upward during the last 10 years or so. Both are now among the top 100 universities in the world. NUS is ranked 40th by Times Higher Education World Universities Ranking 2011-2012, and 2nd best in Asia in the latest 2012 QS University Rankings, Asia. Similarly, NTU is now ranked 58th in the QS World University Rankings and 4th in the World Young universities, below 50 Years.

The Future – From 2012 and beyond

Competition in the university education system is expected to intensify further from 2012 and beyond. In 2009, the Singapore government announced the setting up of the *fourth publicly funded* university, Singapore University of Technology and Design (SUTD) with Massachusetts Institute of Technology (MIT) and Zhejiang University, one from USA and one from China as international partners – a new “East meets West” strategy. SUTD has commenced operations in 2012. On 12th April 2011, the Singapore government announced the launch of Yale-NUS College of Liberal Arts to offer an American styled Liberal Arts degree in Singapore, a joint degree of the US Yale University and the National University of Singapore (NUS). Internationalization of universities in Singapore is accelerating and becoming more complex and innovative. As Knight and de Wit (1995:14) state, “the pursuit of knowledge in a modern world requires vast resources which are not all available in any one university, international cooperation between higher education institutions in many cases then becomes a necessity”.

Section Conclusion – Interpretations & Emerging of Internationalization

This section addresses the first and second specific research questions on the meanings and emerging concept of internationalization of universities in Singapore from a historical and developmental perspective. It attempts to summarize and conclude from the documents analyzed when the term “internationalization of universities” first emerged in Singapore and the government's and Singapore universities' own interpretations of the term.

It is clear from the historical and developmental analysis, that university development in Singapore is intimately linked to the country's economic and social development. The government realized this early in its independence, and had stated repeatedly and categorically that the fundamental duty of the university must therefore be to provide the trained manpower which a country needs for its economic and social development. In a Singapore Government's press statement by the Prime Minister of Singapore Mr. Lee Kuan Yew on 14th June 1959 on the appointment of Ministers after the People Action Party (PAP) first came into power, he said

"..... The government will transform the Education Ministry into a live and vital organ of government in teaching and training our young men and women to grow up to lead happy and purposeful lives. The Government's duty is to provide the leadership in building a more prosperous and a happier Singapore". (NLB Archive: Lee 1959)

The statement set the tone and the political will of the PAP Government to make education as the cornerstone in nation building, economic, social and human development in Singapore. The same commitment and political will continues today.

While university education development in term of its direction, policies and strategies with clear intended outcomes, such as graduate profiles to meet the national needs is clear, what is less obvious is the role internationalization of universities has played in the education and economic development of Singapore. University development is planned. Internationalization of Singapore universities was not (planned), at least until almost the end of 1990s or the 20th century as evident from this documentary analysis. This is not surprising as internationalization is still an evolving process and conceptually elusive, as observed by researchers, such as Knight (1993), Callan (1998) et al.

It may be argued that the act or process of internationalization of Singapore universities is a consequence of the Singapore government policy and the institutional response to the competitive global environment. As Altbach (2004)

has remarked, “*internationalization is seen as one of the ways a country and a university responds to the impact of globalization*”.

As observed by the (OECD), internationalization is also seen as “*the complex of processes whose combined effect, whether planned or not is to enhance the international dimension of experiences of higher education in universities and similar educational institutions*”. This observation aptly describes the evolving nature and the Singapore experience of the internationalization of universities. The evolutionary nature and stages of historical development of the internationalization of Singapore universities is also similar to the internationalization of universities or higher education elsewhere, especially the European experience as revealed in the literature review in Chapter 2. The evolutionary stages also correlate closely with the various stages of economic development in Singapore.

The term ‘*internationalization*’ was only applied to the university environment in the year 2000, in the Annual Report of the National University of Singapore. This is despite the fact that the processes akin to internationalization began after the founding of the first university in Singapore in 1949, when it was decided to use English as a medium of teaching and research and to follow the British curriculum. In the NUS 2000 Annual Report, published in 2001, under the heading of Internationalization, it begins: “*As NUS heads towards becoming a global knowledge enterprise, it gives fresh impetus to its internationalization drive*” (NUS 2001). The word ‘fresh’ impetus aptly describes the sentiment. It is also interesting to note that the term and the scope of ‘internationalization’ in the NUS Report were articulated by Professor Shih Choon Fong. In 2000, Prof Shih, who received his PhD degree from Harvard University in 1973 and had worked in leading research institutions and universities in the USA, took over the helm of NUS as President and Vice Chancellor. In this capacity, Prof Shih has been actively promoting the NUS global profile and reach. (Source: NUS web-site). Prof Shih was a key driver and champion in the internationalization of NUS.

Prior to 2000, the term ‘internationalization’ of universities was not found in any documentary searches. A similar term which surfaced during this research is “*internationalism*”.

The term “internationalism” appeared in a Speech by Mr. Lee Yock Suan, Minister for Education, at the inauguration of the Master in Public Policy (MPP) Programme at Centre for Advanced Studies, NUS on 9th October 1992. During the speech, he said: “*two concepts have been central to Singapore’s public policy: internationalism and excellence. Singapore has based its open door economic strategy on international trade and investment and on free market exchange of goods and services....*”. He added, “*I hope that the MPP Programme with its international student body will further the process of internationalism*”. Effectively, this is an example of the internationalization of universities in Singapore, more specifically NUS, and its post graduate Master of Public Policy programme, which attracts students regionally and internationally. Other terms that were (and are still) commonly used include: ‘student exchange’, ‘international education’, ‘global education’ or ‘globalization’. De Wit (2010) observes that in the literature and in the practice of internationalization of higher education, it is still quite common to use terms which only address a small part of internationalization and/or emphasize a specific rationale for internationalization. The same is true for Singapore.

There is also no clear definitive interpretation, or meaning assigned to the term ‘internationalization’ of universities in Singapore, or elsewhere. Knight (1999) observes that “*internationalization means different things to different people and as a result, there is a great diversity of interpretations attributed to the concept*”.

In the absence of field interviews, which is outside the methodology deployed for this study, this researcher used a documentary study of the visions, mission statements, strategic goals and plans of the three case Universities and the policy statements of the government speeches et al as proxies to their understanding and interpretation of the term ‘internationalization’ of universities.

Table 4.2: Visions of NUS, NTU and SMU

	Vision
NUS	Towards a Global Knowledge Enterprise - A leading global university centred in Asia , influencing the future
NTU	A great global university founded on science and technology
SMU	To be a premier university , internationally recognised for its world class research and distinguished teaching.

Both NUS and NTU have the descriptor of a “*global university*” in their Vision Statement. SMU uses the adjective “premier university” with “World class” research and distinguished teaching. NUS further explains that it will be a “globally-oriented university”, in the distinguished league of the “world’s leading universities”. A key node in global knowledge networks, NUS will have distinctive expertise and insights relating to Asia.

Table 4.3: Mission Statements of NUS, NTU and SMU

	Mission
NUS	To transform the way people think and do things through education, research and service
NTU	Nurturing creative and entrepreneurial leaders through a broad education in diverse disciplines
SMU	To create and disseminate knowledge. SMU aspires to generate leading edge research with global impact as well as to produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU is committed to an interactive, participative and technologically-enabled learning experience. Towards this end, it will provide a rewarding and challenging environment for faculty, staff and students to kindle and sustain a passion for excellence.

If the Mission Statement of SMU is also included together with the vision statement, all the three Singapore publicly funded universities would have the term “*global*” or “*global university*” in their Vision and Mission Statements. Two conclusions can be drawn from this analysis in the context of Singapore:

First, at the institutional level, internationalization is interpreted as '*to be a global university*', which is 'world-class' or 'premier' in nature. This is consistent with the government's policies of Singapore universities as 'world-class' in responding to a globalised world as evidenced by various speeches of the Ministers and senior government officials. This may be summed up aptly in a Speech by Mr. Goh Chok Tong, then Senior Minister (previously second Prime Minister of Singapore) at the NUS Centennial Dinner on 2nd July 2005 when he urged NUS to '*Go Global*' to become a "*top notch university in a relentlessly changing and global world*" (NLB Archive, Goh 2005). In a way, internationalization is interpreted as a response to globalization as reasoned by Knight (2004)

Secondly, while aspiring to be global universities, the 'globalization' of Singapore universities has an Asian slant or focus. In a Tsinghua Global Vision Lecture delivered by Professor Tan Chioh Chuan, then newly appointed President of NUS on 1st June 2009, he disclosed: "*since I became the President of NUS, we have evolved the concept further by positioning the vision of NUS, not just as a global university, but one that is a global university centred in Asia*". (NUS Tan CC 2009). This is not surprising because of the proximity of Singapore to Asia and its historical roots and heritage. The Asian-centric focus is also in recognition of the continuing and very rapid and profound rise of Asia on the world stage. In fact, both the Singapore government and the universities are promoting themselves as the best between the 'west and the east' for education and business.

The interpretation of the Singapore government and universities of the term internationalization as '*going global*' or '*to be global universities*' may be supported by the definition or perspective adopted by Soderqvist (2002) in his conceptualization of internationalization of higher education, where he asserts, "*Internationalization of higher education is a change process from a national higher education institution to an international higher education institution leading to the inclusion of an international dimension in all aspects of its holistic management in order to enhance the quality of teaching and learning and to*

achieve the desired competencies". The internationalization of Singapore is clearly a change process. The National University of Singapore (or NUS), for example, is first, a national university. In the face of changing internal and external environments, NUS has had to transform itself into an institute of international higher education, or in its own terms, 'a global university'. The international dimensions and the approaches adopted by the Singapore universities to achieve the desired outcomes or competencies will be discussed in Chapter 5 under Findings & Analysis II.

The internationalization of higher education is also a revolutionary or transformational process (Levin 2008). The expansion of the Singapore university education system with the establishment of SMU in 2000, and a fourth university, Singapore University of Technology & Design (SUTD) in 2011 with a shift from the previous predominantly British system to an American system through collaborations with two world renowned universities - the Wharton Business School and MIT respectively - are examples. The bold or 'revolutionary' move enables the Singapore government to start two new universities in 'double quick' time to meet the increased demand for quality university education in Singapore through forging partnerships with well-regarded overseas universities. The partnership notion helps the fledgling Singapore universities to internationalize. It is also the government's intention to transform both SMU and SUTD (in the near future) to be '*world-class*' universities, although that may take a long time.

As observed by Mok (2007), many Asian universities are questing to be 'world-class' universities, yet no one really has defined what the term 'world class' universities means, other than the judgments indicated through the world university rankings. Both SMU and SUTD are not comprehensive universities. SMU is focusing on business management and law; and SUTD is focusing in technology and design. However, that is an example of the speed and determination of government to enhance Singapore's global competitiveness of and its universities. The rationales behind such a move will be discussed in the next section.

(2) Rationalising The Move (*towards the internationalization of universities*)

After having set the perspective and defined the term ‘internationalization’ in the Singapore context, it is logical to move to the second section or theme – “Rationalizing the Move”. This addresses the third Specific Research Question, which looks at the rationales or ‘why’ Singapore universities are internationalizing from a developmental perspective, using the evidence of documents available, which are then analysed at governmental and institutional levels. As analysed in the earlier section of this chapter, the internationalization of Singapore universities as an integral part of the universities’ teaching and research functions is only evident towards the end of 1990s or 20th Century. Hence, it is not surprising that no document was found on the rationales behind the internationalization (or similar terms) of Singapore universities up to 2000. This endorses the proposition that the early stages of internationalization were largely unplanned and happened fortuitously.

As advocated by De Wit (2002), when analyzing rationales, there is a need to consider firstly, the global norms and sectoral competition, secondly the government policies; and lastly the individual university’s vision, mission, goals and international strategies, which have been analysed earlier in section one.

(2.1) Global Norms & Sectoral Competition

With the globalization of the world economy brought about by the advancement of info-communication technology towards the end of the 20th century, competition among countries and institutions of higher learning has intensified too in an interconnected world. In a State of The University Address by the Vice Chancellor of NUS, on 30th July 2001, Professor Shih Choon Fong sums up the global competition and norms succinctly,

“The global eco-system has created intense competition for talent, ideas and capital. They flow quickly, unimpeded by boundaries. Furthermore, education and research have become a fast moving industry. There are no barriers or boundaries against entry into this industry” (Shih 2001)

He added that Singapore is expanding its higher educator sector too, and more and more foreign universities would be setting up campuses here. And that is the reality and the reason why we (Singapore and the universities) need to globalize or internationalize. *“The world has changed and Singapore has to change too. NUS and Singapore has a shared destiny. NUS will rise and fall with Singapore”*, concludes Professor Shih.

That is a significant reason why internationalization at NUS has accelerated under Professor Shih’s leadership as a President & Vice Chancellor from 2000 to 2008. NUS has set the pace and lead the internationalization of universities in Singapore. The establishment of the Singapore Management University in 2000 in collaboration with the Wharton Business School, USA and the entries of other world class universities, such as INSEAD, France, Chicago Business School from USA, which operate independently, and many other universities from Australia and the United Kingdom working with the privately owned Singapore Institute of Management has increased competition in the university sector and accelerated the internationalization initiative among the publicly-funded universities from the beginning of the 21st century.

(2.2) Government Policies & Direction

In Singapore, the government sets the tone and direction for the internationalization of Higher Education. Speaking on this wide ranging topic: “Singapore as a Hub for Higher Education” at a function of the Fulbright Association on 31st July 1998, the Minister for Education and second Minister for Defence Mr Teo Chee Hean (now Deputy Prime Minister of Singapore) said:

“For Singapore to play a role in the international flow of talented people, it will have to start by re-orienting its higher education sector. Instead of being passive trainers of graduate manpower to feed the economy, the universities should increasingly be seen as partners in our drive to be a centre in the flow of talent and ideas.” (MOE Archive, Teo 1998)

He added

To achieve this, we will need to work on two fronts. On the one hand, we need to develop outstanding institutions in Singapore. On the other hand,

we need to attract more talented people to make these institutions even better. Both must go hand in hand.

The Minister concluded

We are a small country. But we have always played a useful role in international affairs. The efforts outlined above represent almost direct ways of developing mutual understanding, trust and a sense of shared vision, by drawing people together in the pursuit of knowledge and education. (MOE Archive, Teo 1998)

The Minister was explaining the rationales and encouraging the universities in Singapore to 'internationalize' and to attract more talented people to Singapore. Both are still significant rationales today. The term '*outstanding institutions*' has subsequently evolved to become the 'world-class' or '*global university*' today. Singapore's roles in international affairs may have become less significant, although Singapore as a country is still well respected and continues to play a role in international and regional affairs. At the university level, the Lee Kuan Yew School of Public Policy, for example, plays an important role in the training of students and administrators at graduate degree level. It has attracted students, not only in the region, but from developed countries who want such a degree in administration with an Asian focus. In a government press release dated 20th May 2002 published in the NUS Centennial Publication "*Transforming Lives – NUS Celebrates 100 Years of University Education in Singapore*", Mr. Tharman Shanmugaratnam, then Senior Minister of State for Education (now Deputy Prime Minister) of Singapore said:

"Our local universities recognize that to compete successfully both in Singapore and in the global arena, they must tread new paths and actively seek opportunities outside Singapore. Through such outward reaching strategies they can add new dimensions to Singapore's role as an Asian education hub" (NUS 2005)

Those statements above by the two Ministers from the Ministry of Education became the cornerstone of the government policy guideline and the rationales for the present day internationalization of Singapore universities. The statements cover almost all the four rationales - economic, academic, cultural/social and political for the internationalization of higher education in the

literature review (see De Wit, 2002) and Knight, 1997, 2004). Documentary analysis, including data cross referencing and checking of subsequent government ministers' speeches, as well parliamentary debates et al follow the same or similar themes.

(2.3) The Singapore Rationales for Internationalization

The motivation to internationalize is contingent upon the national context and the environment in which an institution operates (Cuthbert 2002). This study has used extensive documentary data analysis and concludes that the rationales for the internationalization of Singapore universities from both the government and institutional perspectives may be summarized into three themes or desired outcomes. These are: (1) producing 'World Ready' Graduates, (2) Enhancing 'Competitiveness', which could include: 'institutional competitiveness' (to become 'world class' universities) or Country Global Competitiveness (as a destination for higher education for students and other universities), (3) Talent Augmentation or Human Resource Development for Singapore. The findings are summarized in Table 4.4 called "**The Singapore Model of Internationalization of Higher Education**" developed by this researcher.

Table 4.4: Singapore Model of Internationalization of Higher Education

Approach	Process/Strategies	Desired Outcomes
Internationalization at Home + Internationalization Abroad	Infusing international / inter-cultural dimension into the teaching and research for a holistic learning to achieve the desired competencies	"World Ready" Graduates
Collaboration Partnership & Networks, <u>or</u> Specialized Institutes with Singapore publicly funded universities <u>or</u> Attracting Foreign Institutes to set up in Singapore	Brand / Reputation Building (<i>to achieve global profile and reach</i>), and/or Joint Degree Programmes Global School House	Institutional Competitiveness and/or Country Global Competitiveness
International Student & Staff Recruitment	<ul style="list-style-type: none"> ○ Scholarships & Tuition Fee Grant (<i>for students</i>) ○ Paying International market rate (<i>for faculty</i>) 	Talent Augmentation <u>or</u> Human Resource Development

Each of these rationales may not necessarily be mutually exclusive. Interestingly, the model has a close resemblance to the 2010 survey results of the International Association of Universities (IAU 2010), which placed the top three rationales for the internationalization of universities as “improved student preparedness”, “internationalized curriculum”, and “enhanced institution profile”. In reviewing the overall results of its 2010 study, IAU (2010:62) also concludes that *“the focus on students is of utmost importance. Internationalization is viewed as a process that brings great benefits to students. It is a way to prepare them for an internationalized world, to improve the teaching and learning process and to improve the academic offering for students”*. I called this as “world ready” in Singapore. In fact the first two rationales “improved student preparedness” and “internationalized curriculum” can be combined into a broader theme of producing “world ready” graduates as articulated by this researcher. This is the similarity of the findings between the IAU 2010 study and the Singapore study, although a different research methodology is used. I shall now elaborate the findings and support them with documentary analysis and evidence.

(2.3.1) Producing ‘World-Ready’ Graduates

The concept of educating Singaporeans to be a “global workers’ or ‘world ready’ was first articulated in the year 2000 by Mr Teo Chee Hean, then Minister for Education. In a Lecture to members of Alumni International Singapore titled *“Education towards the 21st Century – Singapore Universities of Tomorrow”*, he announced that the role of Singapore universities is to *“educate Singaporeans to be global workers and to continue with their quest for excellence as global institutions”* (MOE, 2000). This message was subsequently reiterated at various forums at both government and institutional levels, and has become a mission of the universities. Other term used included “global ready” graduates. The desired outcome of a university education in the 21st century is to produce ‘world ready’ graduates, and internationalization of universities has become an enabler to achieve the outcome.

Singapore's concept or aspiration has the support of Gacel-Avila (2005) who contends that universities are now expected to train new generations of graduates to live and work successfully in a globalised world. In a FY 2007 Singapore Parliament Committee of Supply Debate on 6th March 2007 on the topic: "*Preparing our Young for a Global Future*", the Minister for Education declared: "*Developing a global outlook for our students is therefore an important strategy of MOE. We want to nurture Singaporeans who are culturally versatile, but confident of their own identity.*" (MOE 2007) The Minister elaborated on the rationales and examples of approaches or strategies of doing so;

We have to groom young Singaporeans who feel quite comfortable working with people who come from different places, looking for opportunities in new places outside Singapore, and working in places quite different from Singapore. Our tertiary institutions are linking up with partners abroad through student exchanges and internships, through collaborative research projects and joint degree programmes. We aim to provide opportunity for 30% to 50% of our tertiary students to have an overseas stint during the course of their studies. At SMU, students go on study missions to visit companies like, Wipro, Tata Consultancy Services in Bangalore in India or industrial parks in the Pearl River Delta region in China.

A presentation by Professor Tan Chorh Chuan, President, NUS at the 1st Asian University Presidents Forum, Guangzhou on 12 – 14 November 2010 echoed the same theme. He asserts:

The internationalization of Asian universities is critical because an increasing proportion of graduates would need to work and live with people from different cultures and parts of the world. Hence, a core skill for the graduate of the future is the ability to be effective in diverse cross cultural settings. It is therefore critical that universities provide many appropriate opportunities for students to develop and acquire these skills through global education programmes. (NUS-Tan, 2010)

Shih (2005:7) summed up the theme and sentiment.

Today, our students who are a more diverse group drawn from around the world face a different set of challenges. We see our role as equipping them with skills and ability that will enable them to discover and make the world their own. Preparing our graduates to be world ready, culturally sensitive across different settings through global exposure or internationalization programmes will help to achieve the outcomes.

(2.3.2) Enhancing Global Competitiveness

Enhancing or achieving 'global competitiveness' is increasingly becoming a main driver or motivation for Singapore to internationalize its universities and education system. The competitiveness may include institutional and/or country competition. The National University of Singapore (NUS) and Nanyang Technological University (NTU) in Singapore, for example are moving towards this direction as a rationale for their internationalization drive. Both the universities are positioning themselves as 'global universities' by actively promoting their international branding and engaging in numerous internationalization programs and academic cooperation projects aimed at upgrading their perceived quality. Their partnerships and links with overseas universities are geared to those with very high world status and ranking. The ultimate goal would be to have NUS and NTU dubbed respectively the Harvard University and Massachusetts Institute Technology (MIT) of the East as challenged by then Prime Minister Mr. Goh Chok Tong in 1996 (NLB Archive: Goh, 1996).

To achieve global competitiveness, one must compete and benchmark with the best internationally. This is another significant rationale for internationalizing a university. In his inaugural address on 1st June 2000, Professor Shih Choon Fong, newly appointed Vice Chancellor of NUS set his vision "NUS as a Global Knowledge Enterprise". He explained:

..... NUS will be competing with the best universities in USA, Europe and Australia and Asia. A worldwide perspective is needed to effectively deal with knowledge generation, dissemination and applications. Today, being the best in the region is not good enough. We must compete in the international arena. Our academic programmes and research initiatives must be evaluated by international benchmarking.
(NUS, Shih 2000)

At a more recent presentation ten years later, at the first Asian University Presidents Forum in 2010, Professor Tan Chorh Chuan, who took over the helm as President of NUS in 2008 shared that by establishing strategic partnership

with leading world class universities, NUS has been able to leapfrog ahead, and boosted its growth trajectory, reputation and competitiveness.

The drive to internationalize has produced positive results for NTU too. In a speech on 21st July 2009, at the official opening ceremony of the School of Physical and Mathematical Sciences Building at NTU, Dr. Ng Eng Hen, Minister for Education and second Minister for Defence acknowledged that NTU's international reputation as a global university has been growing steadily. As a result, it is able to attract and retain top quality faculty. The strategic networks that NTU has established with renowned overseas universities have also led to meaningful and diverse collaboration, leading to the enhanced reputation and competitiveness of NTU in students and faculty staff recruitment.

However, internationalization is an on-going process. Building global competitiveness is always a 'work-in-progress'. In the FY2010 Committee of Supply Singapore Parliamentary Debate on the topic of "Strengthening of Education for All - *Nurturing Future Ready Singaporeans*" – Dr. Ng Eng Hen, reiterated, among other things:

"..... Our universities must also compete in the race to attract talent if they are not to be relegated to the 'second division' universities".

He again declared:

NUS, NTU and SMU have done well in this regard. To stay in the first division, strategic partnerships count. ... This is why NUS tied up with Duke University on the Duke-NUS Medical School and forged alliances with global institutions such as Peabody Institute of John Hopkins university et al. Similarly, NTU has partnerships with top British (e.g. Imperial College) and US universities (e.g. Carnegie Mellon) on joint post-graduate programmes and research projects, while SMU was established with strong linkages to the Wharton School of the University of Pennsylvania. This is the same rationale for the new Singapore University of Technology & Design (SUTD) to team up with MIT and Zhejiang University.

The Global Competitiveness can accrue to Singapore as a country too, especially when the government is a prime driver in the university development strategy, which includes providing the guidance and policy direction on how

Singapore universities should compete in a highly competitive and globalised economy, and the roles in nation building. Singapore has gained much reputation and global competitiveness in this area. In the IAAP meeting report on 12th November 2010, IAAP noted that the development of Singapore higher education system has reached a watershed. Singapore has done well. It started by adapting from established educational models, but is now making bold moves to pioneer new ones in leveraging its network of international partners, judiciously learning from more developed countries, and playing catch up. This strategy has worked well for Singapore. Today, it is increasingly innovative and moving ahead of the curve – helped by its abundant financial resources. It added, “*Singapore is poised to have a truly distinctive tertiary education system, with applications globally*”. This will contribute significantly to the country’s economic growth. This will also be critical in Singapore’s talent augmentation strategy in the face of keen competition in the region (MOE Press Release 2010). The strategic alliances and bold moves in the setting up of SUTD mentioned by the Minister for Education earlier in the year in Parliamentary debates are examples.

The ways that some of these projects are structured are innovative and unique. They enable Singapore to leapfrog in the world internationalization league. The Singapore government hopes that the role of partnerships, strategic alliances and networks will accelerate the international reputations of these new universities. This will be discussed further in Chapter 5 - that is, the approaches and strategies or the ‘how’ aspect of internationalization of Singapore universities.

The Global School-House, which is a multi-faceted initiative to establish Singapore as an education hub will not be discussed as this is not within the scope of this study. Suffice to say that, the initiative aims to increase the contribution from the private education services sector (for all levels) from 2% of GDP in 2003 to between 3 to 5% by 2015 (MTI 2003). This researcher is of the view that the target was ambitious given the increased global competition and

setbacks the initiative faced, including the high profile withdrawal of the UNSW Asia Campus in Singapore in 2007, after only one year of operations.

(2.3.3) Augmenting Talent or Human Resource Development

From an economic standpoint, Singapore is not so motivated by income generation to internationalize its universities as perhaps is the case in other countries. Singapore universities do not require international students to supplement their income. Rather, the objective in recruiting academically bright foreign students to Singapore is talent augmentation or human resource development for the future. Foreign students studying in any of the three publicly-funded universities in Singapore are given a substantial tuition-fee grant regardless of their affordability. In a parliamentary reply to a question raised by a Member of Parliament on the subject on 19 April 2005, the Singapore Minister of Education said:

“The tuition-fee policy for foreign students is linked to our objective of attracting bright foreign students to study in our universities, which will increase our talent pool. We need to recognise that we are competing for top students with other universities in the region and beyond. Any fee which is higher, coupled with a high cost of living in Singapore, would make it unattractive and financially difficult for foreign students to study in Singapore. Our universities need to ensure that they provide quality education at competitive rates vis-à-vis those of other foreign universities”.

The Minister added:

“Such a move has its benefits. Foreign students add to the vibrancy of the universities’ learning environment by providing diversity and alternative perspectives, given their different cultural and social backgrounds. This enriches the university education and experience of our local undergraduates, and ultimately adds to the international standing of our universities. Foreign students who receive subsidy from the Government will have to serve a 3-year bond upon graduation by working in Singapore and hence supplement our labour force”.
(MOE2005)

Singapore is a small country. With a low birth rate of less than 1.2, Singapore has stagnant population growth. It needs foreigners and talent to augment its labour force or human capital to maintain the rate of economic growth. In

recent years, Singapore has attracted overseas students from not only the Asian countries, but students from other developed countries in Europe and USA.

The Minister also assured the parliament that *in providing a subsidized university education to foreign students, our universities have to ensure that only the best students are admitted, based on stringent admission criteria. Those who matriculated are of high calibre and serve to intellectually spur our local students, which is a good development. The percentage of foreign students to the total yearly intake is also capped at 20% (MOE 2005).* This figure has since reduced to 16% because of political pressure. (Straits Times, 15 Oct 2012)

To gain the tuition grants, foreign students who have completed a course of studies in a Singapore university or polytechnic are required to give an undertaking and enter a bond to work in Singapore for a duration equivalent to the length of their studies. In view of the sustained economic growth in Singapore, these foreign students, mainly from Malaysia, China and India have no difficulty in securing jobs after graduation. The graduates help to augment the manpower needs of Singapore.

While the rationale is sound and has served Singapore well, it has a political drawback. In view of the increase in foreign workers, including the professional levels, and the pressure on housing and transportation, the government is increasingly facing resistance from Singapore voters. This has forced the government to fine-tune the tuition fee grants for foreign students and reduce the cap on foreign students. Many of these beneficiaries have also left Singapore for 'greener pastures' in USA or Australia after serving their bond obligations, and some even leave before completion of their obligation. In a number of political forums or interviews, the founding and first Prime Minister of Singapore Mr. Lee Kuan Yew has openly said he would be happy if 50% or more of these foreign students were to stay and become permanent citizens, as their talents will serve Singapore well. The debate on the subject is still going on.

Section Conclusion

This section has used documentary analysis to reveal the rationales and the driving forces behind the internationalization of Singapore universities from both the government and institutional perspectives. There is significant alignment in the perspectives of the government and the three case universities on the rationales and the approaches to how the universities should be internationalized or 'go global'. This is not surprising given the strong commitment to education development and the enormous funding given to the corporatized, but publicly funded universities. Universities or for that matter, all education institutions are partners in nation building. There is unity of purpose led by strong government. The universities are accountable for the outcomes and their governance to MOE.

(3) Chapter Conclusion

This Chapter has discussed and analyzed the historical development of the internationalization of Singapore universities since the country's independence to the present period has witnessed a steady heightening of internationalization, fed by the developing globalized economy. It has looked at the background factors and the beginning of the internationalizing process at the three publicly-funded case universities in Singapore.

Education development at all levels is closely linked to the different stages of economic and social development and nation building in Singapore. The hallmark of the Singapore government is that it responds decisively and pragmatically to the changes in the regional, international and global environment to make what it conceives as a better Singapore for its citizens. The decisiveness of the government and the dramatic economic growth from a Third World economy to a First World economy within 40 years of its independence is the envy of not only the developing, but many developed economies as well. This will be discussed further in Chapter 6 under overall discussion and conclusion.

As examined from the various documentary sources, the term '*internationalization*' of universities is interpreted as '*going global*' by the government; and '*to be a global university*' by the three case universities. This is (to be) achieved by the process of infusing international and intercultural dimensions, such as overseas immersion or exposure programmes into the teaching, research and services of the universities, as well as strategic alliances and partnership programmes with leading universities globally, as discussed further in the next Chapter.

It is perhaps not surprising that the term '*internationalization*' first emerged distinctively in Singapore universities only in the year 2000. Other terms used previously include international education and internationalism in 1991. This is similar to the use of nomenclature in other countries according to the literature review. Internationalization is still an evolving term, as cross-border mobility of teaching staff and students continues to increase, and universities seek new ways to enhance their rankings and reputations. As an umbrella or generic term, it is used to mean different things to different people, depending on the historical economic or social, cultural and political context of the universities.

Producing '*world-ready*' graduates, talent augmentation and human resource development, and enhancing the competitiveness of Singapore and its universities are the main rationales for '*going global*', or '*to be a global university*' - are the main drivers for internationalization of universities in Singapore.

The two sections "setting the perspective" and 'rationalizing the move' in this chapter answers the first two specific research questions respectively. The next chapter, which presents Part II of the finding and analysis, will examine in greater detail the approaches and strategies involved in the internationalizing of Singapore universities, and whether there are uniquely Singapore features in the process.

CHAPTER 5

FINDINGS AND ANALYSIS II

Chapter Introduction: Theme & Coverage

This chapter addresses the *last* and *fourth* specific research question, “*what have been the approaches, programs and strategies adopted by the Singapore universities and government in their internationalization drive during the years?*” It addresses the ‘*how*’ aspect of the main research question, the “Internationalization of Singapore universities in a globalised economy – why and how do they internationalize?”

There are two main sections in this chapter. Section one “**Developing Global Competitiveness** – *In Quest to be Global Universities*” discusses from documentary findings and analysis the various *approaches, institutional programs* and *strategies* adopted by the Singapore government and the universities in their internationalization drive with the objectives of (1) enhancing the global competitiveness of both the country and the universities; (2) developing the Singapore universities into global universities, and (3) producing ‘*global ready*’ graduates to meet the human resource development needs for the nation. Section two “**Visualizing the Outcomes**” assesses the stage or level of the current internationalization of the three case universities and the comparative position of these universities using the “internationalization maturity model” derived and developed during the literature review in Chapter Two.

(1) Developing Global Competitiveness – *In the Quest to be Global Universities*

Just as the interpretation of, and rationales for, internationalization differ, the approaches along which a country and institution address the implementation of internationalization of higher education are also varied and different - because of differing priorities, cultures, histories, and resources (Altbach, 2002). This truism applies to Singapore too, as its higher education development and its

internationalization are directly and closely linked with the historical, social and economic development of Singapore as evidenced in the earlier chapter.

The approaches and strategies for the internationalization of universities refer to the initiatives, measures and programs adopted by them to integrate or infuse the international/intercultural and global dimensions into the purpose, functions and service of the university (Knight 2004). From a strategic management perspective, the internationalization of universities is a cyclical or iterative process as illustrated by the figure below.

Figure 5.1: Internationalization Cycle - Approaches, Strategies and Implementation [Adapted from Knight and de Wit (1995) and Rudzki (1995)]



The desired outcomes of internationalization, along with the motivations and underlying rationales, will have a direct influence on the approaches and strategies to be adopted. As found and analysed in the previous chapter, the rationales for the internationalization of Singapore universities may be summarized into three major themes or outcomes: (1) producing 'World-Ready' Graduates, (2) enhancing 'Competitiveness', which could include: 'institutional competitiveness' (to become 'world-class' universities) or country global competitiveness (as a destination for higher education for students and other universities), and (3) talent augmentation or human resource development.

Hence, the approaches and various Internationalization strategies adopted by the Singapore government and individual universities are geared towards achieving these three major outcomes.

Given the strong influence of the Singapore government on higher education development, a discussion on the internationalization strategies of Singapore universities should include the government's strategic approaches and/or direction as well as the individual institutional and program strategies. The program strategies refer to those academic programs, activities and services which integrate an international dimension into the teaching, research and service functions within a university. Knight (2004) further classifies program strategies at institutional level into two streams of activities – *Internationalization “Abroad”* and *Internationalization at “Home”* (details in Chapter 2). This conceptual framework is used with some modifications to the Singapore context for the findings and analysis in this chapter.

(1.1) Government's Approaches and Strategic Direction

As analysed earlier, the Singapore government has played a significant and dominant role in the state's economic and education development since its independence in 1965. The government sets the strategic and policy direction. The individual publicly funded national universities will then support the government policy direction, design relevant program strategies, and implement them to achieve the desired outcomes.

In a presentation on “Singapore's Higher Education Sector” by the Higher Education Division of the Singapore Ministry of Education (MOE) to a delegation from Kazakhstan on 19th February 2009, the MOE clearly sets out its role in the governance of the three publicly funded universities; NUS, NTU and SMU, as: “(to) set the overall strategic direction and policies for the university sector, and provide funding for the university and ensure accountability for the use of public funds”. In return, NUS, NTU and SMU with their own boards of trustees and management would have to “decide on their own strategic direction; and with autonomy over finances and human resources”.

Although publicly-funded, national universities in Singapore are corporatized entities as private companies guaranteed by the government. It may be said that these universities thus adopt a form of academic managerialism', a term coined by Slaughter & Leslie (1997), involving an approach using clear outcomes with key performance indicators (KPI). This may also explain the efficiency of the Singapore university sector. Publicly-funded universities in Singapore have the comfort of strong financial support (including research funds and donations), strengthened outside government by the discipline and responsiveness of the private sector

In setting direction, the Singapore government, however, does not do it alone. It adopts a consultative approach. Prior to making major policy decisions, it forms university sector review committees, comprising of representatives from the university sector, senior government officials and prominent leaders from industry. The last three reviews were carried out in 2003, 2008, with the latest in 2011. The latter concluded that the participation rate be expanded to 40% of cohort by 2020. (Source: MOE University Sector Review Reports 2003, 2008 and 2012). The presence of the university sector representatives explains why there is always significant policy alignment between the government and the universities as all major policies or strategic directions would have been discussed, debated and agreed by all parties.

The Singapore government has perfected the art and science of 'social engineering'. For some universities and academics, especially those in more liberal democratic countries, the degree of government control over academia in Singapore is seen to infringe certain freedoms. This researcher does not intend to argue the merits or otherwise of such a view. Suffice to say that many think the approach works for Singapore, a small city state of 5 million, although it is also the case that the government is recently facing increasing resistance from voters in the face of globalization and greater political awareness.

In setting the strategic direction for education, the government also widely consults international renowned expertise in the relevant field, and makes study trips to 'world best-in-class' institutions to learn their best practices for possible adoption in the Singapore context. A notable example is the International Academic Advisory Panel (IAAP), formed in 1997 to advise the government on the trends and developments of university education globally and in Singapore. A Press Release on 23rd May 1997 from the Singapore Ministry of Education on the formation of IAAP, declared:

In line with the objective of developing the National University of Singapore (NUS) and the Nanyang Technological University (NTU) as world-class centres of excellence in scholarship and research, the Government has established an International Academic Advisory Panel (IAAP) to advise the Government on the research direction and strategies which NUS and NTU should adopt and to provide up-to-date information on the major trends and directions in university education and research today.

The press statement added:

The IAAP will also help NUS and NTU link up with leading universities and research institutions world-wide, thereby facilitating collaboration in research, staff and student exchanges. (MOE IAAP 1997)

The establishment of the IAAP is a unique approach in Singapore. It sets the tone of the government's desire and commitment in its quest to make Singapore universities 'world class' and 'global universities'.

Since its establishment, IAAP with its members from world-renowned universities and leading multinational companies has provided some useful international links and networks for both NUS and NTU to reach out to other world class universities, thus helping them to accelerate the internationalization effort and the quest to become 'world-class' or 'global' universities. Since its inaugural meeting in 1997, IAAP has met over eight times, and MOE has acknowledged IAAP's contributions to the development of the Singapore university sector. Examples of such contributions include, its recommendation and/or endorsement for the setting up of the third publicly-funded Singapore Management University (IAAP 1999), corporatization of NUS and NTU to give

both universities greater operational autonomy enabling them to be more responsive to the changing global education landscape, to better fulfil their missions and yet enjoying the security of government funding (IAAP 2006); and the setting up of fourth publicly-funded science and technology university (Singapore University of Technology & Design) (IAAP 2008) et al.

The continuing role of IAAP was reinforced in a press statement by the MOE after the 2007 IAAP meeting, at which it said: *“The IAAP will help MOE to articulate and chart the strategic direction for the Singapore tertiary sector in the next stage of development”*. (MOE IAAP 2007). IAAP is an advisory panel and a ‘sounding board’ of ideas for the university sector development in Singapore. This is evident from a Speech at the Welcome Dinner of the third Meeting of the IAAP on 8th January 2001 by Dr Yeo Ning Hong, then Chairman of the MOE’s International Academic Panel, at which he announced

.... *We can also review the structure of the higher education sector to enable Singapore to develop its citizens to their full potential. To help us in our tasks, the Prime Minister, the Senior Minister and various Cabinet Ministers have kindly consented to meet with IAAP members for an exchange of views. We shall also be interacting with representatives from government ministries and statutory boards, and* (MOE IAAP 2001)

Dr Yeo was a former Cabinet Minister. In the same Speech, Dr Yeo also proudly announced that at the IAAP’s second meeting in January 1999, the Panel noted that both the National University of Singapore and the Nanyang Technological University had successfully implemented the IAAP’s recommendations (endorsed by the government) made at the inaugural meeting; in particular, the progress in the broadening of education, the recruitment of international students and the development of research (MOE IAAP 2001). This is yet another demonstration of the united approach and close working relationship between the government and the university sector.

The government’s approach and commitment to the internationalization of Singapore universities was succinctly reinforced in a speech by then Senior Minister (formerly Prime Minister of Singapore) Mr Goh Chok Tong at the

National University of Singapore (NUS) Centennial Dinner on 2nd July 2005. Senior Minister Goh reiterated the government's direction and institutional strategies for Singapore universities to become world class or 'top-notch' universities. He asserts:

"For NUS to become a top-notch university in such a relentlessly changing and globalised world, it must tackle three key intertwining challenges: first, go global; second, attract top talents; and third, be competitive". (NLB Archive: Goh 2005)

He further explained:

First, going global, university education has become truly globalized. NUS must strive to improve its standing and performance globally and benchmark itself against the best universities around the world. NUS must aspire to be among the top, not just in the region, but the world.

Second, NUS must draw top talent – students and faculty. NUS must attract <not only top students from Singapore, but also> good students from all over the world, particularly from the region. They must boost the intellectual and learning environment. NUS must also attract top professors as good faculty will attract good students and produce world-class research. This is a virtuous cycle which will improve the overall quality and reputation of the University.

Third, for NUS to be competitive internationally, it must find ways to enhance its attraction. To be attractive, NUS must be able to provide students with the best of both worlds – an enriched local experience combined with global exposure.

The theme of the speech is consistent to an earlier speech by then Minister of Education Mr. Tharman Shanmugaratnam (now Deputy Prime Minister of Singapore) in a speech delivered at the Stanford Club Annual Dinner on 8th May 2004, during which he spoke on the rationales and strategies for Singapore universities to attract top professors, to provide students with greater international exposure by taking in foreign students and by aggressively promoting exchange and study abroad programmes; as well as for the universities to compete in a globalized world (MOE 2004). It is thus representative of the position and policy direction of the Singapore government.

In essence, the government was urging Singapore universities to 'go global' (a term synonymous with 'internationalization' in the Singapore context), to be 'globally or internationally competitive', and to attract top talents – students and faculty not only regionally but internationally; and be able to provide students with an 'enriched local experience' combined with 'global exposure'. These are the key themes in the internationalization of Singapore universities. Although the address was at the National University of Singapore and the setting was NUS, the advice or direction was meant for all publicly-funded universities in Singapore. Documentary analysis shows that the same themes or sub-themes appeared in all previous and subsequent government ministers' speeches, statements or parliamentary debates. This is evident in another Speech by Mr Goh Kim Yong, then Minister of State, Ministry of Education and Ministry of Manpower, at the opening of the 15th World Conference hosted by Nanyang Technological University (NTU) on cooperative Education on 27th June 2007, the Minister shared with the international participants Singapore's approach and program strategies to develop 'global perspectives' in its students. He stated;

At our three universities, international student exchange programmes have given students more opportunities to develop global perspectives in the discipline they pursue. I am pleased to note that our local universities, the National University of Singapore (NUS), Nanyang Technological University (NTU) and Singapore Management University (SMU) have partnered with many universities all over the world.

He went on to give some examples of the wide ranging program strategies adopted by the Singapore universities and the benefits of such strategies,

At NTU, the Global Immersion Programme gives students the opportunities to gain overseas exposure by spending one or more semesters abroad. They have the option of taking courses at a partner university or working at an overseas organization. For example, students going to China have the chance to be attached to multinational companies, leading Chinese companies and startups in well-known hi-tech parks.

The NUS Overseas Colleges in Silicon Valley, Philadelphia, Shanghai, Stockholm and Bangalore provide opportunities for students to immerse themselves in the dynamic environment of these global entrepreneurial hubs. Students in the programme engage in full-time internships at the start-ups and take entrepreneurship courses at NUS' partner universities.

At SMU, 32 students from the Lee Kong Chian School of Business recently visited the UAE and Qatar on a Business Study Mission. The Mission, a part of their undergraduate curriculum, studied how Singapore companies in UAE and Qatar carried out their internationalization strategies. The Study Mission gave students a better understanding of the region and offered them the chance to see how businesses are conducted in a different socio-economic environment. (MOE, 2007)

The disclosure also gives a glimpse of the slightly differing focus or internationalization program strategies adopted by NUS, NTU and SMU. NTU, for example has a stronger China-focus, partly because of its 'heritage' or origin as a Chinese university; NUS is more international, and SMU focuses on niche business and humanities programmes. It must, however, be noted that all the three universities have now reached a higher level or stage of internationalization. All are global in outlook, but at the same time, they are not ignoring the growing importance and dominance of the Asian economies and influence.

In 2008, the MOE disclosed that it has set a target of at least half of the undergraduate student population at the three local universities heading overseas on exchange programmes, or research or work attachments. This target has since been exceeded by all the three case universities. In the NUS Yearbook 2009/10 published by its International Relations Office (IRO), Professor Anne Pakir, Director of the International Office proudly announces:

Having achieved the University's target of sending 50 percent of its annual student cohorts on overseas exposure, IRO is now actively seeking multi-dimensional, multi-locational, multi-experiential education and opportunities for our students. (NUS-IRO 2010)

The analysis will now move on to discuss how the three case universities are formulating and implementing the program strategies at the institutional level.

(1.2) Institutional Approaches, Strategic Goals and Program Strategies

The three case universities' approaches and strategies towards internationalization mirror closely that of the Singapore's government position

and strategic directions. This is evident from a documentary review and analysis of the vision, mission statements and strategic goals, annual reports, as well as press releases and speeches of the universities' Presidents, Vice Chancellors and Senior Administrators. The approach and key themes of the strategic goals and intents of all the three universities are in line with the MOE's approach and strategic intent of developing NUS and NTU into world-class research intensive global universities, and SMU into a 'best-in-class' university in business and management recognized internationally. It can be concluded that 'going global' or internationalization is strategically important and central to the overall institutional strategy or strategic plan of NUS, NTU and SMU.

Table 5.1: A Summary of Strategic Goals of NUS, NTU and SMU

	Strategic Goals / Intent
NUS	<ul style="list-style-type: none"> ❖ Provide a <u>high quality education</u> and experiences that stretches students, is <u>globally-oriented</u>, and develops skills and values to enable them to <u>reach their full potential</u> ❖ Focus on <u>high impact research</u> that advances knowledge and its application, and which is of <u>high international quality and impact</u>. (Source: NUS web-site)
NTU	<ul style="list-style-type: none"> ❖ To become a <u>great global university</u> by 2015 to be achieved by building on its current strengths and heritage to <u>make its mark internationally</u>, and to be the <u>best of the 'East and West'</u>. (Source: NTU's Five Year Strategic Plan – NTU 2015 unveiled in 2010)
SMU	<ul style="list-style-type: none"> ❖ Build a <u>faculty of international distinction</u> and promise ❖ Strengthen SMU's <u>relevance for the Singapore business community</u>, for related governmental and social agencies in Singapore, and for businesses and agencies <u>across Asia</u>. (Source: SMU web-site)

Note: Only the strategic goals that are relevant to this study are included. The relevant themes reflecting the government's intention are underlined.

(1.3) Case Universities' Program Strategies – How they do it?

As part of their move to go global, NUS, NTU and SMU have established various student mobility programmes for students to gain an international or inter-cultural exposure. One of the most common and significant programmes is

student exchange programmes, where local students have the opportunities to study in overseas partner universities or work as interns sponsored by a partner university to gain an international experience. Student Exchange programmes are two-way – beside local students going overseas, they help bring the best and brightest from around the world to NUS, NTU and SMU to interact with the student community in Singapore; part of the ‘Internationalization at Home’ effort in Singapore. Other internationalization programs include: strategic partnerships or alliances with overseas universities or groups of overseas universities to offer joint degree or double degree courses, joint research, faculty exchange, setting up of Overseas Campus or Study Centres, international student and faculty recruitments, among others.

(1.3.1) Internationalization at National University of Singapore (NUS)

From a modest medical school founded in 1905, the National University of Singapore (NUS) has evolved into Singapore’s global university with distinctive strengths in education and research with an entrepreneurial dimension. The history of NUS epitomises the historical and economic development of universities discussed in Chapter 4. Today, NUS is a fully-fledged comprehensive and research intensive university with 16 faculties and schools offering a broad-based curriculum underscored by multi-disciplinary courses and cross faculty enrichment. Its corporate brochure (NUS 2012) states:

NUS takes pride in offering a multi-faceted education that addresses the passion and aspirations of young people in a fast changing world. Across all disciplines, our programmes equip students with the academic rigour and intellectual capacity to meet the challenges of the future. (NUS Corporate Brochure 2012)

The statement is consistent with the vision, mission and internationalization strategic direction of producing ‘world ready’ graduates. Today, NUS has an enrolment of over 26,000 undergraduates and 10,000 postgraduate students from 100 countries, and produces annually over 6,500 bachelor degree, and 3,500 higher degree graduates, including over 500 PhD degrees (source: NUS State of University 2011).

As a research intensive university, NUS has three autonomous national Research Centres of Excellence (RCE) and 22 university-level research institutes and centres. It has a total of 9,700 faculty and staff, of which over 2,600 are research staff. For the Financial Year 2009, NUS was awarded close to S\$370 million in research funding.

Table 5.2: Historical Development of NUS – Major Milestones

Year	Major Development Milestones
1905	Founding of The Straits Settlements and Federated Malay States Government Medical School – Re-named King Edward VII Medical School in 1913 – First Institution of Higher Learning in Singapore
1928	Raffles College was set up
1949	Legislation was passed in Singapore for the establishment of University of Malaya , founded with the merger of King Edward VII Medical School and Raffles College.
1955	Nanyang University or Nantah was built from contributions and resources pooled from the Chinese Community
1962	The University of Singapore was established, following the decision of the Governments of Singapore and the Federation of Malaya that the Singapore Division and Kuala Lumpur Division of the University of Malaya should become autonomous national universities in their respective countries.
1980	The National University of Singapore (NUS) was formed through a merger between the University of Singapore and Nanyang University on 8 th August. Dr Tony Tan Keng Yam was appointed as the first Vice Chancellor and Minister of Education concurrently (<i>signifying the strong link between NUS and MOE in the university development in Singapore</i>)

Source: NUS web-site: <http://www.lib.nus.edu.sg/nusbiodata/history.htm> (accessed on 20th June 2011)

(a) Internationalization in NUS – Approaches and Strategies

As discussed in Chapter 4, the ‘internationalization’ of NUS can be traced back to its predecessor, the University of Malaya established in Singapore in 1949. Although the term ‘internationalization’ did not exist then, the development of the University of Malaya was akin to the ‘classic’ or the ‘old’ *internationalization* of universities during the post-war period. The *international character* of the University was evident using English as a medium of instruction and a British curriculum similar to that of the Oxbridge universities in England. The use of English and the influence of the British system of higher education continue

even after Singapore achieved its independence. Student and faculty mobility continued although on a very limited scale until the late 1980s. Towards the end of 1990s, internationalization activities within the National University of Singapore (NUS) gained momentum. The term 'internationalization' first appeared in NUS in its 2000 Annual Report, which devoted more than one full page explaining the rationales for the activities undertaken for the internationalization of the university. In Year 2000, Professor Lim Pin, second Vice Chancellor of NUS, stepped down after 19 years of distinguished service. He was succeeded by Professor Shih Choon Fong who brought to his appointment *a strong vision to propel NUS into becoming the intellectual and entrepreneurial pulse of Singapore, in the same manner that Stanford University synergies with the Silicon Valley in the USA.*

In his first inaugural Address as the new Vice Chancellor of NUS in June 2000, Professor Shih also posed a challenge for NUS to be a '*first world*' university. (NUS 2000)

As part of its internationalization strategy, NUS carries out a full programme of international engagements covering international outreach, forging win-win strategic alliances and active participation in international academic networks. (NUS Annual Report 2000) It provides students the opportunities to gain valuable cross-cultural experience and develops in them a strong appreciation of global issues to be future or 'world ready' graduates. This is achieved through strategic collaborations with its global partners and active participation in global networks offering enriching global education, research and entrepreneurial programmes for its students. Similarly, NUS advocates that its faculty should be well connected with globally-oriented colleagues around the world, collaborating in educational and research activities that cannot be achieved with the same effects in one location (Source: <http://www.nus.edu.sg/global/> accessed 5th September 2012)

(b) International Relations Office – a pivotal for NUS Internationalization Programmes

Management focus and support is important for a successful internationalization programme. To support its internationalization drive or 'go global' strategy, NUS has a full-fledged International Relations Office (IRO) with clear mission and strategic goals. Established in 1996 with only three staff, it had a total of 39 staff in 2012. In 2009, the International Relations Office was restructured with three functional foci, mainly (1) Global Education, (2) Global Opportunities and (3) Global Alliances and Networks to provide a better quality experiential education and diverse opportunities for NUS students and staff (NUS IRO Yearbook 2009/10). Besides creating international opportunities and promoting these opportunities to students, the International Relations Office also offers enriching international programmes for NUS academic and executive and professional staff. An example is the Administrative Staff Exchange Programme (ASEP), which provides staff the opportunity for an exchange to a university of their choice to learn more about the administrative services and supports and internationalization programmes of the host university. This is yet another unique feature of internationalization programme in NUS.

In addition, IRO works with NUS faculties and schools to implement these internationalization programmes and strategies. The International Relations Office in NUS may probably be one of the largest International Offices of any university in the world, and definitely the largest among the three case universities studied. It demonstrates the commitment and strategic and systematic approach of NUS leadership in the internationalization of the University. As Elkin, Farnsworth and Templer (2008) observe, institutions with strategic focus achieve a higher level of internationalization than institutions without.

According to the NUS IRO Yearbook 2009/10, the mission of the NUS International Relations Office is to foster partnerships with premier institutions around the world to enhance NUS' standing as a world-class institution in tandem with NUS' vision of becoming a leading global university centred in Asia.

The office plays a pivotal role in the current continuing internationalization of NUS. The International Relations Office is also responsible for the marketing outreach, including selection, pre-departure briefings or orientation of the various internationalization programmes to the students. In the same Yearbook, Vice President, University and Global Education, Professor Lily Kong says:

In a pivotal role, the International Relations Office (IRO) contributes to NUS's positioning as a global knowledge enterprise and has been strategic and diligent in helping to bring to life NUS' internationalization strategies.

Professor Lily Kong explains:

These strategies are in turn drawn up in response to the challenges and opportunities of globalization and the rapid pace of development in emerging economies. Specifically NUS seeks to bring "the world to NUS", and "NUS to the world". (NUS Yearbook 2009/10:3).

In essence, Professor Kong is referring to the concepts of "Internationalization at Home" and "Internationalization Abroad". "Internationalization at Home" is internationalization that occurs on the home campus, which Professor Kong refers to as '*bring the world to NUS*'. These include programmes or activities such as Incoming Overseas Student Exchange Programmes. These are international students and faculty and international conferences held locally that help students develop international understanding and intercultural skills without even leaving the home campus (Nilsson 1999 as cited by Wachter 2003).

"Internationalization Abroad" refers to cross-border internationalization activities that happen abroad, which includes significant mobility of students, faculty staff, academic programmes, off-shore campuses et al. In the context of National University of Singapore, it can be broadly classified along the lines of the functional structure of NUS International Relations Office, summarised in Table 5.3.

Table 5.3: “Internationalization Abroad” Programme Strategy at NUS

	“Internationalization Abroad”
Global Education	<ul style="list-style-type: none"> ◆ Student Exchange Programme ◆ Sino-Singapore Undergraduate Exchange Programme ◆ NUS Overseas Campus (NOC) Experience ◆ Study Trip for Engagement & Enrichment Programmes (STEER)
Global Opportunities or Global Programmes	<ul style="list-style-type: none"> ◆ International Summer Programmes (i-SP) ◆ International Internships (I-Intern) ◆ International Research Attachment (i-RAP) ◆ Concurrent, Double and Joint Degree Programmes
Partnerships and Alliances	<ul style="list-style-type: none"> ◆ Bilateral Partnerships with individual university for Student and staff exchange, research and joint or double degrees ◆ International Alliance of Research Universities (IARU) ◆ Association of Pacific Rim Universities (APRU) ◆ ASEAN University Network (AUN) ◆ Universitas 21 (U21) ◆ Asia Pacific Association for International Education (APAIE)

(c) Program Strategies in NUS – Providing a Global Education and Global Opportunities for Students – Internationalization Abroad

According to the NUS Annual Report 2000 on “Internationalization in Education”, *the international character of NUS education is marked by the rich diversity of perspectives it offers.* The NUS Global classroom is facilitated by distance learning technologies as well as through experiential cross campus learning and living. Overseas study stints are built into many of the programs the University teaches with its international partners and its leadership grooming programs, like the University Scholars Program. The main thrust, however, is through its Student Exchange Program (SEP) where cross cultural immersion provides enhancement in preparing students for an increasingly globalized world where cross-cultural teamwork and solutions are the operational modes.

Student Exchange Program

The Student Exchange Programme (SEP) is the largest overseas exchange programme at NUS. The programme provides for undergraduates to spend a semester at one of the 180 top universities from 30 countries around the world while earning credits towards their NUS degree. As reported in NUS IRO Yearbook (2010), over 1400 NUS students participated in the Student Exchange Programme in Academic Year 2009. This is a phenomenal growth from a figure of 289 students who went abroad on the exchange program in 2000. The top 10 SEP destinations in 2009 are: USA, Canada, United Kingdom, Sweden, Germany, China, Hong Kong, The Netherlands, South Korea and Denmark in that order.

Under the Student Exchange Program, students enjoy the opportunities to spend up to two semesters and immerse themselves in a different culture and learning environment, in countries as diverse as the United Kingdom, China, India, USA, Mexico, South Africa and Poland. In the year 2000 alone, the University signed a total of 29 Student Exchange Agreements (NUS Annual Report 2000). Today, it has established strong relationship with over 350 partner universities (comprises of over 180 university-wide partners, and over 160 faculty-level partners) to offer student exchange programme and other programmes, such as international summer programmes and internship et al. (NUS IRO Yearbook 2010)

True to the spirit of internationalization, NUS has also made the bold move of signing up a growing number of non-English language institutions as exchange partners. These are mainly French and German universities highly regarded internationally for their niche strengths in science and technology. To sustain the momentum of this uncharted path, and to prepare students for the stints abroad in these non-English language institutions, NUS introduced language immersion courses, such as French and German as part of its curriculum. (NUS Annual Report 2001) The introduction of non-English language immersion courses is another feature of the internationalization program strategy in NUS.

Other Global Opportunities

In addition to the Student Exchange Program, NUS offers other unique and innovative avenues for students to embark on alternate overseas educational experiences. These alternate programs include;

- ❖ shorter student overseas study trips, which may include; field trips, immersion programs or attending of overseas conferences
- ❖ the International Summer Programmes (i-SP), which allow students to explore traditional and non-traditional destinations such as East Asia, Europe and Latin America to cultivate a deeper appreciation of the host country's culture and lifestyle;
- ❖ International Internships (i-Intern) or International Research Attachment Programmes (i-RAP) which offer students to hone their professional skills and knowledge in a cross-cultural workplace environment in an organization or institution overseas.

Statistics available from the International Relations Office show that in 2009, the Student Exchange Programme is the most popular with 1445 students embarked on the programme. It was followed by International Summer Programme (i-SP) with 530 students, Study/Field Trips or Immersion Programme with 387 students, NUS Overseas Campus programme with 128 students and International Internship (i-Intern) with 98 students. International Research Attachment Programmes (i-RAP) were offered to only 12 students. This is not surprising as the programme is also less suitable for undergraduate students.

(d) Double Degree and Joint Degree Programmes

As part of its internationalization strategy or global education program, NUS offers an extensive range of double, concurrent and joint degree programmes in partnership with leading universities. For example in Academic Year 2010/2011, it launched among other programmes, a Bachelor of Science (Honours) in Life Sciences and Master of Research in Molecular Biophysics (M. Res) concurrent

degree programme with King's College, London as well as a Master of Public Policy double degree programme with the University of Tokyo, which is the University of Tokyo's first ever double degree programme with an overseas institution. Currently, NUS has over 60 double degree and joint degree programmes with top universities around the world, which may be conducted solely in Singapore or partly in Singapore and partly in the partner universities overseas. (NUS Corporate Brochure 2012) Such dual or joint degree programme can be classified as under internationalization abroad and internationalization at home, or both.

(e) NUS Overseas Colleges

A unique feature of internationalization abroad at NUS is the NUS Overseas Colleges (NOC) Programme. Since 2001, seven NUS Colleges have been set up in Silicon Valley (2002) and Philadelphia (2003) in the United States, Shanghai (2004) and Beijing (2009) in China, Stockholm (2005) in Sweden, Bangalore (2008) in India, and Tel Aviv/Haifa (2011) in Israel.

These colleges are for NUS students. They are not the traditional branch campuses of a university in an overseas country, which recruit students and conduct classes in the host country. Under the prestigious NUS Overseas Colleges (NOC) programme, NUS undergraduates spend up to a year working and studying in one of its Overseas Campuses located in the leading entrepreneurial hubs in collaboration with a partner university. While at these Colleges, the students engage in internships with start-up companies while taking courses at NUS' partner universities, such as Stanford University, and the University of Pennsylvania, Fudan University and Tsinghua University and the Royal Institute of Technology in Sweden. The concept of the NUS Overseas College is again unique, not found in any literature on the internationalization of universities.

(f) Internationalization @ Home in NUS

Alongside 'internationalization abroad', 'internationalization at home' is equally important in a university's internationalization drive to create the vibrancy and

diversity of an intercultural and intercultural campus environment. In fact, a sub-heading of “Internationalization @Home Programmes” exists under the NUS Global Education web-site (<http://www.nus.edu.sg/global/programmes2.html>) signifying the equal emphasis on the internationalization at home program strategies at NUS. Besides the presence of international students, these ‘internationalization at home’ programmes include - inbound student exchange programme from NUS overseas partner universities, dual or joint degree courses described earlier, NUS University Town (UTown or NUS Residential Colleges), Duke-NUS Medical School and Yale-NUS College of Liberal Arts.

(g) International Student Exchange Programme

The international student exchange programme (inbound) is the most significant among the various internationalization ‘at home’ programmes in NUS. In the Academic Year 2009, NUS attracted a total of 1,449 international students from its overseas partner universities; the students spend a semester or more of studies in NUS and gain credit transfer for the curriculum in their home universities.

Table 5.4: Student Exchange Programme – Analysis by Number of Students

	Inbound (I@H)	Outbound
AY2002	469	534
AY2003	538	643
AY2004	533	746
AY2005	676	861
AY2006	938	1,082
AY2007	1,101	1,229
AY2008	1,267	1,288
AY2009	1,449	1,389

Source: NUS IRO Yearbook 2009/2010

The number of inbound international exchange students in NUS is a phenomenal growth of slightly over three times from a 469 students in 2002; reflecting an accelerated pace of internationalization in NUS and globally during the last decade.

In NUS, over 41% of the inbound international students for the exchange programme come from Europe (with a small percentage from Middle East and Africa), followed by those from Asia and Australasia region (32%) and USA and Canada (27%). For the outbound exchange programme, not surprisingly, Europe and USA/Canada are the two most popular destinations.

Table 5.5: Student Exchange Programme – Analysis by Region

	Average Percentage (AY2002 – AY2009)	
	Inbound (I@H)	Outbound
Asia Australasia	32%	23%
Americas	27%	32%
Europe/Middle East/Africa	41%	45%
Total	100%	100%

Source: NUS IRO Yearbook 2009/2010

(h) Dual or Joint Degree programmes at Home

An example of the distinctive feature of internationalization at home at NUS is the Dual Graduate Degree Master of Laws (LLM) offered by the respective law schools in New York University (NYU) and the National University of Singapore (NUS). The Programme entitled NYU@NUS is taught predominantly by NYU Faculty in residence at NUS with collaborative teaching between NYU and NUS Faculty. The programme allows students from around the world to experience two educational cultures in Singapore, and to earn two Master of Laws degrees; one from a leading American and another from an Asian law schools. (NUS Press Release 15th February 2006). In 2012, NUS has a total of over 60 dual, concurrent or joint degree programmes at undergraduate and graduate level with leading universities in USA, Europe and Asia.

(i) NUS University Town

‘NUS University Town’ concept is another unique ‘internationalization at home’ program strategy in NUS. A distinctive feature of the NUS University Town is its

rich intercultural and international diversity. When fully completed and operational, these residential colleges will house some 6,000 students, both undergraduate and postgraduate, with 40% of the residents coming from abroad. (NUS Shih 2007) Modelled on that of the Oxford and Cambridge universities with teaching and learning integrated into the residences, the residential colleges in NUS University Town (or UTown in short) creates a highly interactive environment with an engaging collegial culture among a diverse mix of students, thereby enhancing the global or intercultural experiences of the students.

(j) Joint Collaboration Campus / College – The Duke-NUS Medical School

Established in April 2005, Duke-NUS Graduate Medical School is a bold and innovative collaboration between the Duke University School of Medicine and the National University of Singapore (NUS). It has a distinctive research-intensive curriculum based on Duke's model of medical education, and aimed at producing physicians-scientists who will bridge the basic sciences and clinical medicines. Professor Shih describes it as '*a milestone for NUS in its drive to be a global university*' (NUS Shih 2005)

(k) Joint Collaboration Campus / College – The Yale-NUS College

In April 2011, NUS announced the establishment of the Yale-NUS College to offer a unique brand of liberal arts education that brings together the best of the Eastern and Western intellectual traditions. In the words of Yale President Richard Levin as quoted by Professor Tan Chorh Chuan, NUS President in his State of University Address 2010;

The proposed Yale-NUS College will offer "an exciting opportunity to develop a novel curriculum spanning Western and Asian cultures, exploring their similarities and differences, and better preparing students for lifelong learning in an interconnected, interdependent global environment. (NUS, Tan CC 2010)

This collaboration between NUS and Yale University, one of the world leading universities and an acknowledged leader in liberal arts education, ushers in a new model for liberal arts education, which incorporates the relevant contexts,

thinking and cultures of Asia. The collaboration allows NUS to leap-frog ahead to make significant contributions in the field of liberal arts education in Asia, thus enhancing NUS' global competitiveness and leadership in global education. NUS-Yale will admit its first batch of students in 2013.

(l) Other "Internationalization at Home Programmes"

To bring the intellectual and cultural pulse of the world to NUS students, NUS launched for the first time the Internationalization @Home programme "Study in Japan Day" and "Faces of South East Asia" in 2009. Since then, there are other regular events, conferences and foreign guest-speaker series, which aim to broaden the intellectual and global outlook of the students. (NUS IRO 2010) The 'internationalization at home' programmes in NUS are varied and wide ranging.

(m) Enhancing International Profile - Partnerships and Strategic Alliances

In a globalised environment, it is increasingly important for institutions to work together. They compete for global standing, faculty and students and yet collaborate on areas of common interest. To NUS, partnerships are at the heart of their international engagement and internationalization pursuit. Partnerships make the wide-ranging programmes under the 'internationalization abroad' and 'internationalization at home' possible. Vice President of NUS Global Relations, Professor Lily Kong admits that "(strong) *partnership is even more important as NUS strives to deepen relations and develop (more) new programmes with them*". (NUS, IRO Yearbook 2010)

As found earlier, NUS has over 360 university partnerships which supports the various inbound and outbound student (and staff) exchange programmes, summer programmes, internships, study trips, and collaborative research et al. Under the leadership of NUS' third President Professor Shih Choon Fong, NUS has also formed or initiated global alliances with leading universities worldwide, including the International Alliances of Research Universities (IARU), the Association of Pacific Rim Universities (APRU), Universitas 21 (U21), and the

ASEAN Universities Network (AUN), thus enhancing NUS' international positioning to be in the 'clubs' of world-class universities. The International Alliances of Research Universities (IARU), launched on 14th January 2006, for example, consists of 10 world-leading research intensive universities – The Australia National University, ETH Zurich, National University of Singapore, Peking University, University of California, Berkeley, University of Cambridge, University of Copenhagen, University of Oxford, University of Tokyo and Yale University. On the other hand, APRU is a consortium of 36 leading research universities along the Pacific Rim. Members include Stanford University, California Institute of Technology, University of California, Berkeley, University of South California in the USA; Peking University, Tsinghua University and Fudan University in China, University of Tokyo, Kyoto University and Keio University in Japan; Seoul National University in South Korea, Australia National University in Australia, just to name a few.

The international standing of NUS was further boosted in Year 2000 with the election of NUS President Professor Shih Choon Fong as the Vice Chairman and Chairman-Elect of the Association of Pacific Rim Universities (APRU), which is housed in NUS (NUS Annual Report 2001)

In June 2005, NUS hosted the first-ever joint Presidents Roundtable of Association of American Universities (AAU) and the Association of Pacific Rim Universities (APRU), which drew the participation of 52 university presidents from Americas, Asia and Australasia. AAU is the premium consortium of 62 research universities in North America, including Harvard, Yale, Duke, John Hopkins, Stanford and MIT. Professor Shih Choon Fong, NUS President explained the benefits to NUS in his message in the State of University Report 2005. He said:

We have kept up the momentum in global initiatives. NUS' leadership of the Association of Pacific Rim Universities (APRU) continues to enable NUS and Singapore to lead and facilitate major discussions with important stakeholders on the future of higher education, research and enterprise in the Pacific Rim.

Professor Shih added:

The hosting of the first-ever joint Presidents Roundtable of the Association of American Universities (AAU) and APRU at NUS made it the largest gathering of university presidents from the Americas and Pacific Rim in Singapore. It marked a promising start for AAU and APRU in building 'a ten thousand mile bridge' across Pacific, linking member universities through collaborative initiatives and programs. (NUS Shih 2005)

The partnership between universities that share similar values open the door to greater opportunities - particularly in global collaborative research - than any one university could provide on its own. NUS' strategic move in these partnerships and in a leadership role wherever opportunities arise has further enhanced NUS' international standing in the global education sector and its pursuit as a global university.

(n) NUS – A Global University Centred in Asia – A Thought Leader in Asia

There is a slight shift in the internationalization strategy and the vision of NUS as 'global university', after Professor Tan Chorh Chuan took over the helm as President/Vice Chancellor of NUS in December 2008. In a Speech delivered by Professor Tan Chorh Chuan at the Tsinghua University Global Vision Lecture on 1st June 2009, titled: "Nurturing the Talent of Tomorrow – Global Education for a Globalised World", Prof Tan boldly declared:

Since I became the President of NUS, we have evolved this concept [of a global university] further by positioning the vision of NUS, not just as a global university, but one that is a global university centred in Asia. (NUS Tan 2009)

In early 2009, the Vision of NUS was changed from "Towards a Global Knowledge Enterprise – *Unrelenting pursuit of excellence in education, research and service*" to "Towards a Global Knowledge Enterprise – *A leading Global university centred in Asia, influencing the future*" (NUS State of University Report 2009). While the fundamental of the vision "Towards a Global Knowledge Enterprise" remains unchanged, the primary focus appears to have

changed. Speaking at a lunch to welcome him as the new President, Professor Tan explained,

The move is to capitalise on NUS' expertise in the region. As Asia grows, it will also face great challenges. More research and scholarship is needed to understand critical issues within Asia and to find suitable solutions. This will allow NUS to educate students who not only have an understanding of global issues, but also an Asian Perspective and context (The Straits Times, 9th January 2009)

NUS' stance as a global university with an Asian perspective permeates every aspect of the university experience for students and faculty alike. In line with NUS' aspirations to influence the future, NUS also positions itself as a thought leader and preferred partner in Asia. In this connection, the NUS Global Asia Institute was established in 2009 to enable researchers in diverse fields to collaborate on large scale issues that impact Asia and the world. Delivering his State of the University Address on 30th October 2009, Professor Tan Chorh Chuan; President of NUS said of the new Institute:

The new NUS Global Asia Institute set up in September this year will provide the platform for integrative Asia-studies. An initial set of research theme has been defined, which for a start, are centred around critical issues for Asian cities in a globalising world. (NUS-Tan 2009)

The NUS Global Asia Institute will bring together existing expertise from NUS and other universities, particularly those with expertise in India and China, in its quest for solutions that will solve the critical issues within Asia. In line with its centred in Asia strategy, a \$17 million NUS Initiative to improve Health in Asia (NIHA) was launched, contributing towards policy formulation and thinking in public health and development of health systems in Asia. Other new research set-ups include the Sustainable Supply Chain Centre of the Asia Pacific. NUS believes that its students will benefit substantially from this research-intensive culture, through the elements of critical thinking and international exposure.

(1.3.2) Internationalization at Nanyang Technological University (NTU)

The analysis will now move to the second case university, Nanyang Technological University. Founded in 1991, Nanyang Technological University

(NTU) has a distinguished lineage with roots that go back to 1955, when Nanyang University (Nantah), the first Chinese-language University in South East Asia, was set up with donations from people of all walks of life.

Today, NTU is a comprehensive and research-intensive university with globally acknowledged strengths in science and engineering. It is ranked among the top 20 technology universities in the world, and 47th position in The QS World Universities Ranking 2012. In its strategic blueprint - NTU 2015, NTU aims to become a 'great global university' by 2015. Organised into four Colleges (Engineering, Science, Business and Humanities and Social Science) and five autonomous institutes, it has 23,000 undergraduates and around 10,000 postgraduate students. The five autonomous institutes include: the National Institute of Education (NIE), the Rajaratnam School of International Studies (RSIS), the Earth Observatory of Singapore (EOS) and the Singapore Centre on Environmental Life Sciences Engineering, in collaboration with Imperial College, London. RSIS is a graduate institute running the Institute of Defence and Strategic Studies, recognised as a world authority on terrorism.

(a) International Faculty and Visiting Experts

According to the NTU Web-site, the University has a total of over 3,300 teaching and research staff hailing from more than 70 countries around the world, bringing with them *dynamic international perspectives* and years of solid industry experience (NTU 2012). In addition to its full-time faculty, NTU has attracted 11 Nobel laureates and Field Medallists to its panel of International Advisors (*a parallel version of the MOE's International Academic Advisory Panel*). The University also regularly flies in Nobel laureates and other scientific giants '*to enrich the life and work of the university community*'. (Straits Times and Business Times, 12th July 2005)

In 2007, the "Nanyang Assistant Professorship" (NAP) scheme was established to recruit top researchers and scholars from around the world to drive the university's new wave of multi-disciplinary and integrated research. Under the NAP scheme, NTU offers up to S\$1 million for research start-up grant coupled

with research studentship. A total of over 400 applicants were received for 10 available awards for the first year of the launch and another 700 applicants were received for another 10 places in the second year. This is another example of recruitment of talent and human resource development to augment the limited pool of talent in Singapore, another motivation for the internationalization of universities in Singapore. Such programmes with attractive awards are meant to attract the world's best talent.

(b) Internationalization of University Leadership

For the first time since its establishment, NTU appointed a non-Singaporean, Professor Bertil Andersson, an internationally renowned scientist, who was then Chief Executive of the European Science organization to the post of Provost from April 2007. Prof Andersson was subsequently appointed as the third President of NTU in 2011, succeeding Dr Su Guanling, who helmed NTU for nine years. This is yet another signal of the accelerated internationalization drive in NTU.

(c) Development of Program Strategies in NTU

This research shows that in pursuit of its vision and mission to become a great global university founded on science and technology, NTU has been taking many new initiatives in order to achieve this goal. Since its founding in 1991, there has been growing impetus in its internationalization efforts. The '*going global*' effort, as interpreted as internationalization by Singapore universities, in NTU started off with the forming of an 'International Relations Office' (IRO). In a publication "Coming of Age – 21 Years of Success" to commemorate the 21st Anniversary on the founding of NTU, the first Director of the International Officer, Professor Lim Mong King recalls:

In late 1991, Dr Chiam (first President of NTU) spoke to me. He said, "We are now a full-fledged university, we have to be known overseas and be a global player". That was why we set up IRO. (NTU 2002:4-2)

Since then, all internationalization related programmes and activities come under the International Relations Office, directly under the President Office, which according to Professor Lim signifies the importance NTU place on its overseas links.

Professor Lim also discloses that the two initial priority areas of cooperation in NTU were its twin thrusts of research and teaching (NTU 2002:4-2). The first MOU was signed in 1992 between Nanyang Business School with Sloan School of Management at MIT on a collaboration which '*saw eminent professors visiting NTU and teaching students*'. In 1995, another MOU on joint research projects and international student exchange programmes was signed with Imperial College of London. By 2002, NTU had signed a Memorandum of Understanding (MOU) with over 200 top universities and research institutions world-wide on International Student Exchange Programme (INSTEP) and general cooperation. "*This is to reflect our goal to internationalize NTU*", observes Prof Brian Lee, the Director of IRO in 2002. (NTU 2002:4-3)

The pace of Internationalization accelerated in 2003 after Dr Su Guanng was inaugurated as the second President of NTU, and the successor to former NTU/NTU President Dr Chiam Tao Soon. Dr Su launched the "**NTU Undergraduate Experience**" initiative, which emphasised a holistic and comprehensive education, nurturing creative, entrepreneurial *global* leaders. The emphasis on '*global*', which is consistent with the government's strategic intent of producing 'global ready' graduates, is noted. A **Global Immersion Programme (GIP)** was conceptualised as an important and integral part of the "New Undergraduate Experience" at NTU.

Dr Su explains that under this initiative, NTU students will receive their core academic training in Singapore, followed by one or more semesters overseas to take subjects and/or undergo work attachment in an organization. In 2004, the first batch of students embarked on this flagship Global Immersion Programme to China and the US to get a unique multi-country experience of language, culture, industry and entrepreneurship. Under the initiative, students could also

take up the Global Immersion Programme in more than one country. In 2006, another initiative the “*Global Summer Studies Programme*” was rolled out to give NTU students more opportunities for overseas exposure.

In a message published in the NTU Web-site encouraging students to participate in the Global Immersion Programme, then Associate Provost, NTU Professor Er Meng Hwa explains: “*As Singapore is heading towards a globalised knowledge-based economy, NTU recognises the need to prepare its students with the necessary skills, knowledge and exposure for global challenges*” (NTU 2005). The outcome of the Global Immersion Programme matches the strategic intent. A student Thomas Ng, who has recently completed a Global Immersion Programme, GEM Explorer in University of Wyoming, USA was quoted to have said:

“..... *Being able to meet and live with other international students empowers one with a global mindset. It allows one to think in different perspectives, accommodates new practices and mindsets; and break social barriers.*” (Source: NTU Web-site 2012 accessed 11th August 2012)

(d) “*Internationalization Abroad*” at NTU

Many NTU undergraduates now spend a semester or two at top ranked universities worldwide, gaining invaluable first-hand work and cultural experiences in challenging new environments through international student exchange programmes, immersion programmes et al. More NTU students are also doing their industrial attachments or internships overseas, in prestigious international corporations in countries, such as USA, Canada, Germany, France, Holland, Australia, India and China. In addition, NTU has also created across national boundaries double or joint degree programmes with reputable overseas partner universities at both undergraduate and post-graduate degree levels.

(e) *Overseas Study Centres, Offices or Campus*

In 2005, NTU boosted its overseas presence with offices in Beijing and Shanghai, both in China, near top Chinese universities and hubs of business

and finance. NTU also held its first overseas convocation in China to celebrate the graduation of its China based graduates. In the same year, NTU launched a new Masters in Public Administration for Chinese government officials (Chinese Press 'Lianhe Zaobao' '14 January 2005). Building on its unique strengths in delivering effective programmes for the China market, NTU launched the Nanyang Centre for Public Administration to further enhance the training of the top civil servants from China in 2009 (*This is comparable with the Lee Kuan Yew School of Public Policies in NUS*)

In addition to its overseas centres in Beijing and Shanghai, China, NTU has other centres in USA, Europe and India hosted by well-known partner universities, such as the Georgia Institute of Technology in the United States, University of St Gallen in Switzerland and the Indian Institute of Technology and Peking University in China. Through the University's flagship Global Immersion Programme, covering 13 cities in five countries, NTU undergraduates also spend from 6 months up to a year to study at these overseas campuses or work in the countries under the internship programme. As announced on 24th July 2011 by the newly appointed NTU President Professor Bertil Andersson, NTU will open its first campus in China, the NTU Tianjin College (Straits Times, 2011)

(f) *"Internationalization at Home" at NTU*

While focusing on "Internationalization Abroad", NTU has not forgotten the other stream of internationalization program strategy – "Internationalization at Home", which includes the role of international students and faculty to create an international environment. The following extracted from a NTU Publication titled *"Challenging Boundaries, Breaking Grounds"* to commemorate its 20th Anniversary gives a flavour of the "Internationalization at Home" in NTU.

Even within the campus, we transcend geographical boundaries. Our students come from as far as Canada, Egypt, Japan, China, India, France, South Africa, Romania, Zimbabwe, Scandinavia, and North and South America, representing talent from over 40 countries spanning six continents. In academic year 2000/2011 alone, NTU received 158 inbound undergraduate exchange students, including some 30 students from the Norwegian School of Management on a one-year attachment to

the Nanyang Business School. Add to this, our population of full-time foreigner students who make up 20 percent of our undergraduate pool and the result is a truly distinctive cosmopolitan campus. Meanwhile, 59 percent of our 1,750 academic and research staff hail from 44 countries. This figure is swelled by the eminent academics brought in from around the globe on our visiting professorship programmes. (NTU 2001:47)

(g) Partnerships and Alliances - A University beyond Geography

Since its founding in 1991, NTU has been establishing strategic alliances with leading institutions and with the industry at both the multilateral and bilateral level. Besides the collaborations with the Sloan School of Management at MIT in 1993 on student and faculty exchanges, and that with Imperial College London in 1995 on joint research projects and international student exchanges, examples of other major bilateral institutional partnership collaborations or alliances include:

- ❖ In 2003, NTU and Stanford University launched the Singapore Stanford Partnership, a premier graduate education and research programme in environmental science and engineering.
- ❖ In 2005, Cornell University School of Hotel Administration and NTU sign a contract to establish a joint Master's programme in Hospitality Management through the new Cornell-Nanyang Institute of Hospitality Management at NTU. (The Straits Times, 23rd September 2005)
- ❖ In 2008, NTU partners the Ewing Marion Kauffman Foundation to establish the first Kauffman Campus outside the United States to promote entrepreneurship.
- ❖ In 2009, NTU unveils the CNRS International-NTU-Thales Research Alliance (CINTRA) Laboratory, a joint collaboration with Centre National de la Recherche Scientifique (CNRS) and the Thales Group of Companies. German R&D Company Fraunhofer-Gesellschaft partners NTU to set up its first interactive digital media (IDM) research institute outside Europe and the United States.
- ❖ In 2012, NTU has partnered Imperial College London, one of the leading medical schools in Europe, to set up a new medical school in Singapore.

The latest NTU-Imperial partnership, which covers an initial term of 18 years, will see Imperial College London leading curriculum development and running the medical school together with NTU in 'double speed' time. Its first cohort of 50 medical students will commence classes in 2012. Combining NTU's core strengths in engineering and business with Imperial's world-renowned medical expertise, the new Medicine School will educate doctors who can meet the growing challenges of ageing and healthcare in Singapore. This is yet another unique feature of the internationalization of Singapore universities, similar to the Duke-NUS Medical School and Yale-NUS College for Liberal Arts.

(h) Strategic Alliances

Not to lose out to NUS, which hosts the office of the multi-lateral Association of Pacific Rim Universities (APRU) founded in 1997 with a consortium of 42 leading research universities, and the International Alliances of Research Universities (IARU) in 2006, NTU led the creation of the Global Alliance of Technological Universities in 2009. This is a global grouping of leading technologically-based universities that serves an advocacy role for the place of technology in the world. Major issues include biomedicine and healthcare, sustainability and global environmental change, security of energy, water and food supplies, security and changing demographics and population. Formally launched in April 2009, the seven founding universities include: California Institute of Technology, Georgia Institute of Technology, both from the USA; Imperial College, London, Eidgenossische Technische Hochschule Zurich of Switzerland, the Indian Institute of Technology, Bombay, Shanghai Jiao Tong University of China and Nanyang Technological University. Such strategic partnerships and alliances are deemed to have many benefits.

In a publication titled "*Challenging Boundaries – Breaking Barriers*" in 2001 to commemorate the 20th Anniversary of NTU, the Chairman of NTU Council Mr Koh Boon Hwee wrote, "..... *The close ties and partnerships that NTU has built*

worldwide over the years have seen the university learning from the best around the world” (NTU 2001:43)

In an Address by Dr Su Guaning, NTU President, to welcome delegates of the QS Asia Pacific Professional Leaders in Education Conference Opening Ceremony on 4th August 2005, Dr Su advocates:

“Global partnerships with the best will accelerate the development of NTU towards a comprehensive and globally recognised university.”

He further declares:

“We believe that partnerships are critical to becoming stronger and healthier in this era of globalization. And thus the theme of the conference – forging global partnership – should take us forward – and further”. (NTU Su 2005)

This is indeed true for NTU (and NUS), which was *not ranked* under the Global University Rankings in the late 1990s or early 2000s, and has since risen in the rankings to the top 50 towards the mid-2000s. In the Global Ranking of the top 200 universities published by the Times Higher Education Supplement 2006, NTU was placed at 48th position while NUS was in 22nd position. (The latest released QS World University Rankings 2012 place NUS and NTU at 25th and 47th positions, respectively)

Partnerships with world leading universities and other internationalization programs have play a significant part in such an achievement. In fact, the organising and hosting of the QS Asia Pacific Professional Leaders in Education Conference at NTU as part of its 50th anniversary celebrations (*counting from the founding of Nanyang University in 1955*), with more than 400 academics and professionals from over 180 universities and institutions in Europe, North America, the Middle East, Africa and Asia (TODAY newspaper, 5th August 2005) is also a significant image booster and reputation builder for NTU in achieving its global competitiveness. It raises the profile of NTU almost overnight.

During a visit to NTU some years ago, Professor David Edward Newland, then Head of Department of Engineering in Cambridge University advised NTU to

'host more international conferences, invite more visiting professors and attract scholars from all over the world to spend their sabbaticals at the University' so that people can see for themselves the progress of NTU, the good facilities and strong curriculum. (NTU 2002)

(i) Internationalization Strategy with an Asian focus

NTU too adopts an internationalization strategy with an Asian focus. This is not surprising given its original "Nantah root" with the Chinese language as a medium of instruction. However, what is surprising is that it took almost 15 years since its 'rebirth' in 1991 to 'reclaim' publicly its inclination towards an Asian focus. During a Memorandum of Understanding (MOU) Signing Ceremony between the Indian Institute of Technology Bombay and NTU to foster closer ties in education and research in 2005, Dr Su Guanning, then President, NTU was reported to have said, *"We have tended to look at the Western World for partnerships, overlooking the activities and potential in Asia. It is time we got together"*. (The Business Times, 11 January 2005 Page 10) The landmark agreement is the first between NTU and an institution in Asia outside China. NTU's strong collaborations with universities in China, however, are not new.

(1.3.3) Internationalization at Singapore Management University (SMU)

The analysis of institutional internationalization strategies will now move to Singapore Management University. Singapore Management University (SMU) modelled after the Wharton Business School, USA was established in 2000 and funded by the Singapore government. It is a relatively smaller teaching university and has a much shorter history of only 12 years compared to NUS and NTU.

SMU has six Schools in six different fields: Business Management, Accountancy, Economics, Information Systems, Law and Social Sciences, and an enrolment of 6,800 undergraduate students and 400 postgraduates. Its reputation in the education sector and industry is high as evidenced by political leaders, such as

the former Minister for Education Mr Tharman Shanmugaratnam who commented that “*SMU’s greatest contribution to higher education in Singapore has been as the change agent of the university sector*” (The Straits Times 21st January 2006). The global diversity within the campus and the large number of leading university partners that it has established within a short span of a decade is another testimony of its success and standing.

(a) Internationalization of Curriculum and Leadership since Inception

It may reasonably be argued that SMU has been internationalized since its inception as the University has been using the American university model offering a broad-based education. Its first President, Professor Janice Bellace was also seconded from the University of Pennsylvania for a period of two years. From 2001 – 2004, Professor Ronald Frank, also from University of Pennsylvania served as SMU’s second President. He was succeeded by Professor Howard Hunter (2004 – 2010) followed by Professor Amoud De Meyer, who are all internationally prominent academics. (Professor Meyer was the founding Dean of INSEAD in Singapore). In this respect, university leadership plays an important role in the internationalization of a university.

In sharing his vision, direction and strategies for SMU during the State of University Address 2011 the newly appointed fourth President of SMU, Professor Amoud De Meyer reiterates that ‘*expanding the global mind share*’ and ‘building an ‘*international brand*’ through various internationalization efforts remain one of the key strategic goals of SMU for the next five years. He explains,

The higher education landscape in Singapore has grown more competitive with the new Singapore University of Technology and Design (SUTD), the Yale-NUS Liberal Arts College, and the Lee Kong Chian School of Medicine at NTU (in collaboration with Imperial College, London). Aspirations of students today have also changed with greater choices for higher education and hence, becoming more demanding customers. Many are seeking the most rewarding university experience that would best position them for the global market place. (SMU Meyer 2011)

(b) World-Class Curriculum and International Faculty

To deliver a world-class curriculum, SMU has some 300 faculty, selectively recruited from around the world. 59% of its faculty members are non-Singaporeans. (Source: SMU web-site) A globally diverse and well qualified faculty pool enables SMU to pursue its mission to provide a 'world-class' business education and become a global leader in its field.

(c) International Collaborations & Partnership

In the same State of the University 2011 Address, Professor Meyer, SMU President also announced that SMU have over 200 partner universities for undergraduate exchange and various collaborations with leading universities, such as Wharton Business School, Peking University, and Indian School of Business, Carnegie Mellon University, University of Pennsylvania and the University of Chicago, et al. Such collaborations with leading institutions allow SMU to draw on academic and research strengths across all major disciplines.

(d) Global Exposure for its Students

Like its counterparts, NUS and NTU, SMU provides global exposure for its students through the following internationalization abroad programmes:

- ❖ International Student Exchange Programmes
- ❖ Summer Study Programmes
- ❖ Business Study Missions
- ❖ Overseas Internship, and
- ❖ Community Services Projects

Under the international student exchange programmes, SMU has a total of over 200 partner universities in 46 countries (SMU web-site). SMU asserts that such opportunities will give students “*a global perspective in different cultures, education systems and work practices, including gaining an international network of friends and future collaborators*”. It adds: “*such experiences will adequately prepare students for the global market place*”, which is consistent with the strategic direction of the Singapore government for universities to

produce 'world ready' graduates to enhance Singapore competitiveness in a globalised economy.

Summer study programmes allow SMU students to spend four weeks at a designated top university for a fee. SMU explains that this way, students enjoy high quality academic and cultural experiences while living in a different country over the summer. Students can choose between the University of British Columbia in Canada and the University of St Gallen in Switzerland for a summer study programme. One of the returning students from a 4-week summer study programme at St Gallen Switzerland said: "*there's really no better way to expand one's horizons*". (SMU web-site)

Overseas Study Missions in SMU, as quoted by Mr Gan Kim Yong, then Minister of State for Education and Manpower at a Conference is a unique feature of SMU's 'internationalization abroad" initiative (MOE Gan 2007). These Overseas Study Missions cover a host of site visits to multi-national companies in countries, such as Argentina, Chile, China, Germany, India, Qatar, Russia, Spain, UAE, USA and Vietnam. The visits enable students to 'gain insights into the real world operations of a variety of industries in different cities within a short span of time, and often afford the opportunity of interacting with their CEOs.

(e) International Students

International students play a significant role in Internationalization at Home. SMU has 14% international students at undergraduate level and 31% of international students at postgraduate level. These international students come from 36 countries, predominately from India, China, ASEAN countries as well as further afield such as Europe, North America, Africa, the Middle East, Maldives, Japan and South Korea. (SMU Web-site) In addition, SMU also receives inbound international students for one or more semesters of exchange programmes with over 200 university partners from 46 countries. These international students bring to SMU '*the richness of cultural diversity, creating a learning environment beyond geographical borders and introducing global*

perspectives'. This is in effect the benefits of 'internationalization at home' as revealed earlier in literature.

(f) *"Asianization of Global Strategy" – Seizing Opportunities of the East*

Like NUS and NTU, over the last 10 years since its inception, SMU's approach and institutional strategies towards internationalization have also changed from being American and European centric to an increasing focus on Asia to seize the opportunities there. In the State of University Address 2011, President Professor Meyer articulates his "Asianization of Global Strategy" for SMU. He advocates:

In order to extend our global mindshare, SMU needs to seize the opportunities which are heading East. Companies are fast moving their investments to Asia. Singapore is well regarded as a natural landing pad for access to ASEAN, China and India. SMU as an institution will be very attractive to universities, corporations and government around the world as an academic and resource partner if we can demonstrate our competencies as an Asian knowledge hub. In short, to internationalise, SMU needs to become "strongly Asian".

He elaborates further the benefits of the approach and strategies for SMU:

We are in a position of strong advantage to develop insights and business networks in Asia and emerging markets through our teaching, research and outreach. The better we know Asia, the more SMU will become an irresistible value proposition to global partners from the US, Europe, Middle East, Latin America and Africa seeking to come to this part of the world. The more we know Asia, the easier for SMU to expand our global footprint. (SMU Meyer 2011:15)

The strategy should not be confused with that of an Asian regionalization strategy. What SMU is advocating and pursuing is still an internationalization strategy to achieve global mindshare and competitiveness, but with an infusion of Asian strategy within the global strategy. In essence, it is a West meets East approach, where Singapore universities (and the country as a whole) have a strong comparative advantage over other world leading universities because of its strategic geographical location, historical education development and pragmatism of the Singapore government.

Section Conclusion

This section “Developing Global Competitiveness – *In the Quest to be Global Universities*” has explored and discussed - using documentary analysis - the various approaches, organizational and program strategies that the Singapore government and the three case universities, NUS, NTU and SMU have adopted in their internationalization drive in accordance with their vision, mission and strategic direction; organizational positioning, thinking and beliefs, leadership style and the intended outcomes. The findings and analysis answer directly the fourth specific research question on *‘what are the specific approaches, organizational and program strategies adopted by the Singapore universities and government in the internationalization of Singapore universities to date?’*

It is clear from the findings and analysis that the Singapore government and the three case universities have a common view and united approaches towards the internationalization of universities in Singapore. Many of the approaches taken, such as the consultative process through the International Academic Advisory Panel (IAAP), University Sector Review Committees, the learning and adopting of best practices of the British, American and European university systems, and the formation of strategic alliances or partnerships with world-class universities to ‘leap-frog’ a new strategic initiative, such as the establishment of SMU with Wharton Business School in 2000, Duke-NUS Graduate Medical School in 2005, Yale-NUS College of Liberal Arts in 2011, and the Imperial-NTU Medical School in 2012, are carefully calibrated to secure world class higher education as quickly as possible. In some respects it is a unique approach in terms of scale, intensity, coherence and consistency – brought about by a strong controlling government. The reasons behind this uniqueness and how it can work in Singapore will be explored and discussed further in the next Chapter – Discussion and Conclusion.

All three case universities have also designed and implemented a comprehensive range of ‘internationalization abroad’ and ‘internationalization at home’ program strategies consistent with some of the best practices found in

literature, such as the findings of the International Association of Universities (IAU) reports 2003 and 2011. The university leadership, the organizational supports and the impressive list of partnerships which the three case universities have built up over the last two decades are success factors for bringing about the current heightened level of internationalization in the three case universities, NUS, NTU and SMU. The subtlety in differences, if any, of the various program strategies and approaches adopted by the three case universities, including the “internationalization with an Asian focus”, described as “Asianization of a Global Strategy” by SMU will also be explored in the next chapter.

The next Section will attempt to compare and analyse the comparative stage or level of internationalization using the “University Internationalization Maturity Model” developed in Chapter 2.

(2) Visualizing the internationalization Outcomes

The most challenging part in the strategic management of an internationalization process is the measurement of outcomes, the last element within an internationalization cycle ([Figure 5.1](#)).

A university senior administrator or a government officer may wish to assess (a) the level or stage of internationalization an institution has achieved and (b) the current level of internationalization achieved against the desired or targeted level of internationalization using a set of criteria measuring internationalization.

There are few “instruments” to measure the outcomes and the effectiveness or otherwise of an institution’s international programmes or policies in response to increasing globalization. A wider literature search concerning the measurement of the outcomes of internationalization yield little result, except a research paper by Elkin, Devjee and Farnsworth (2005) on “Visualizing the internationalization of universities”. Elkin, Devjee and Farnsworth (2005) develop a “measurement framework” or ‘model of internationalization’ that operationalize the process of internationalization by identifying the relevant factors that together could *firstly*,

help to define the ‘meaning’ or key elements of internationalization in the context of an institution or institutions, and *secondly*, give an indicative measure on the level of performance of the institution or comparative performance of two or more institutions.

(2.1) Level of Internationalization – A Comparative Measure

Using the framework developed by Elkin, Devjee and Farnsworth (2005), and adopting it in the context of the internationalization of the Singapore case universities, this researcher develops a comparative measure or model of the level of internationalization of the three case universities; NUS, NTU and SMU. In developing this measurement framework, 12 relevant factors are used.

The 12 factors are:

- ❖ Quality of Mix of International Students
- ❖ International Student Exchange Programmes
- ❖ Overseas Study Missions or Study Trips
- ❖ International Internship
- ❖ Diversification of Faculty Staff
- ❖ International Research Collaboration
- ❖ Overseas Colleges or Centres
- ❖ Joint Degree or Double Degree Programmes
- ❖ International Partnerships and Alliances
- ❖ Infrastructural Support for Internationalization
- ❖ “Internationalization at Home” programmes
- ❖ Reputation – World University Ranking

The resultant model - a ‘Radar’ Chart (Figure 5.2 below) gives a graphical representation of the level of internationalization for each university. It is an effective way of displaying the results. It gives a clear comparative level of performance in each element of the university's internationalization initiative.

Clearly, NUS is ahead of NTU and SMU in its internationalization strategy in term of scope, depth and richness of its programs and strategies.

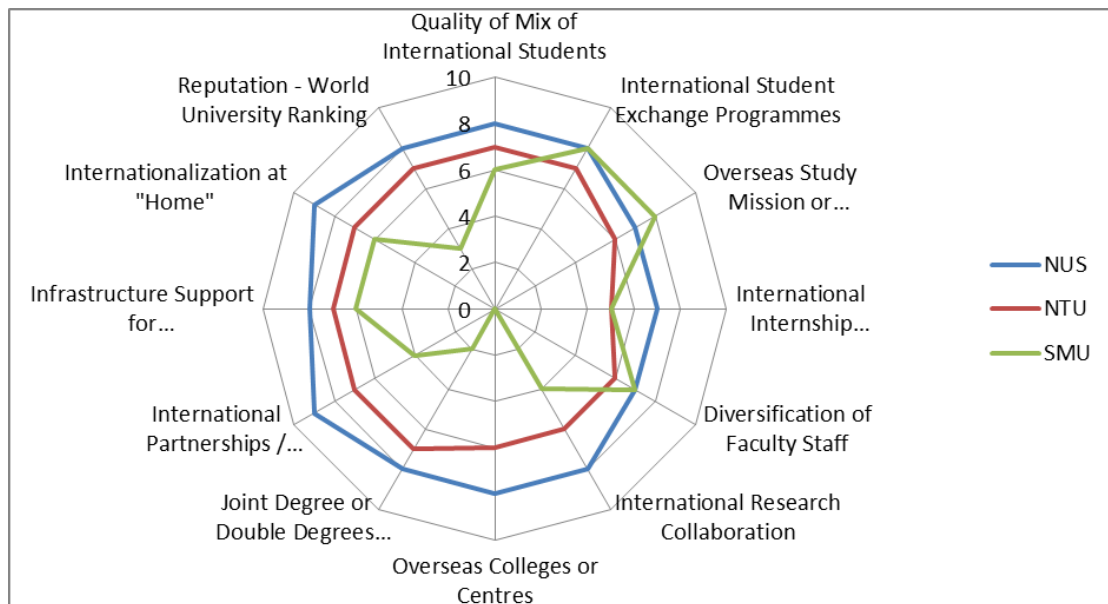


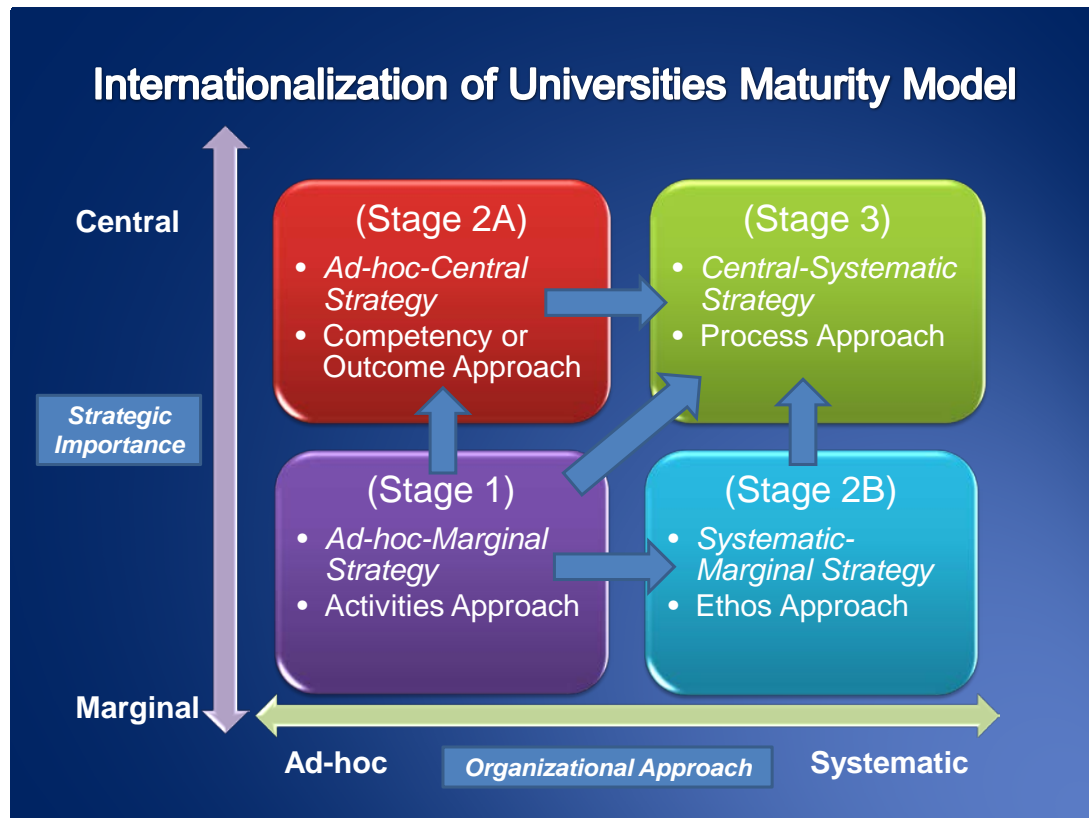
Figure 5.2: Comparative Level of Internationalization among three publicly funded Singapore Universities [Adapted from Elkin, Devjee and Farnsworth (2005)]

However, it must be noted that the measurement is not absolute, but relative. Likert scales are used for the measurement on the ‘*best estimate*’ of the level of performance outcomes for each factor or element of internationalization for each university. Each scale ranges from 0 to 10, where 0 is the lowest or “not applicable” and 10 denotes the highest level.

(2.2) Alternative Measurement – Internationalization Maturity Stage Model

An alternative measurement is to use an “Internationalization Maturity Model”, that is, a model for the analysis of the *stage of maturity* of the internationalization initiative within a university, developed by this researcher during the Literature Review in [Chapter 2](#) (Page 58, Section 4.6, Figure: 2.4), reproduced below for ease of reference.

Figure 5.3: “Internationalization of Universities Maturity Stage – A Model for Analysis (Developed by author - Re-produced from Figure 2.4)



This theoretical framework is developed by integrating (a) Davies (1995)’s two-dimensional model of an institution’s level of strategic commitment to internationalization and (b) Qiang (2003)’s ‘typology of approaches’ to measure the level of commitment or ‘*maturity*’ stage in the internationalization of a university. The evolutionary stages of the three case universities may be analyzed and the results may be interpreted as follows:

Stage 1 denotes the most basic or fundamental level of internationalization in a university, where internationalization is ‘activities-based’, and takes place in an ad-hoc or opportunistic manner without any strategic direction. *This is likely to be the case of **NUS** in the 1980s to end of 1990s; and **NTU** from 1991 to 2003 from the documentary analysis.* From Stage 1, a university’s internationalization strategy may move towards Stage 2A or Stage 2B.

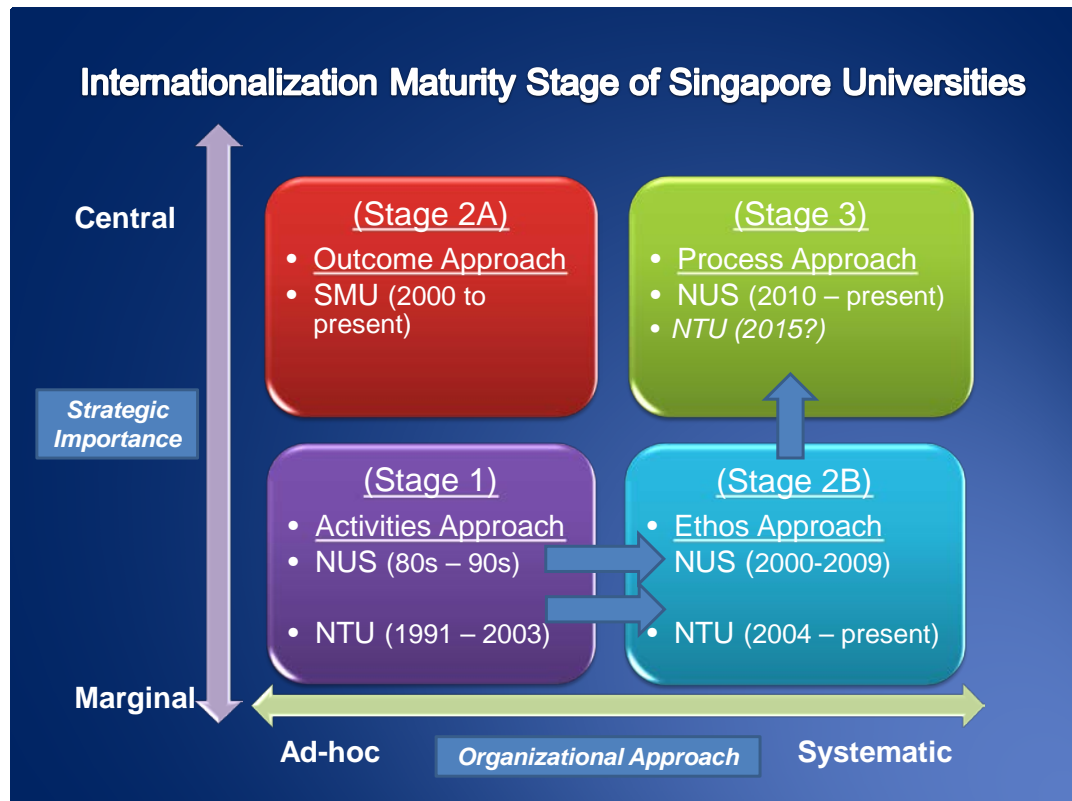
At Stage 2A, the number of internationalization activities or programmes is growing rapidly throughout the universities. Internationalization is central to the university with clear objectives or outcomes. However, the implementation approach is still ad-hoc and may be opportunistic. *This is the case of SMU, which leap-frogged its internationalization process through the strategic alliance with the Wharton Business School. Internationalization was central to SMU. However, as it is still relatively a new university, it will likely remain at this Stage until 2020 – the time it may take for it to achieve its strategic goal of becoming a truly global university.*

At Stage 2B, the organizational approach to internationalization is more systematic and internationalization becomes an ethos of the university. However, while the numbers of internationalization programmes or activities are growing, there is scope for more innovative programmes and the pervasiveness of internationalization throughout all faculties within the university is not yet evident. ***NUS** was at this stage from 2000 to 2009. NTU is most probably at this stage from 2004. Currently, it is moving towards Stage 3, and will most likely reach there in 2015, when it completes its 2015 Strategic Thrusts.*

At Stage 3, internationalization has reached a maturity stage in the university. Internationalization is well entrenched and clearly articulated as a strategic goal and mission of the university. The organization approach is highly systematic; and impressive numbers of internationalization programmes exist with clear output indicators across the various faculties in the universities. It is reasonable to conclude from the study that NUS achieved this stage at the beginning of 2010, after a decade of relentlessly pursuing its global university strategy. Today, NUS prides itself as the first Singapore home grown global university. NUS's diverse community is now a confluence of Singaporean and global talents, both faculty and students, embracing a 'no-walls' organizational culture that supports multi-disciplinary education and research.

Figure 5.4 below gives a pictorial view of the evolutionary development and the relative stages of internationalization for the three case-universities developed from this study.

Figure 5.4: “Internationalization Maturity Stage of Singapore Universities”



(3) Chapter Conclusion

Part I of the Findings and Analysis in Chapter Four has discussed and analyzed the historical development of the internationalization of Singapore universities since the country's independence and up to 2012. It has witnessed a steady heightening and broadening of internationalization, fed by the developing globalized economy. It has looked at the background factors and the beginning of the internationalizing process at the three publicly-funded case universities in Singapore.

The term '*internationalization*' of universities is interpreted as '*going global*' by the government; and '*to be a global university*' by the three case universities. Producing '*world ready*' graduates, talent augmentation and human resource

development, and enhancing the competitiveness of Singapore and its universities are the main rationales for '*going global*', or 'to be '*a global university*' - are the main drivers for internationalization of universities in Singapore. There is an impressive degree of congruity between the government's strategic policies on higher education and the universities' own strategic initiatives – a fact that may not be too surprising given Singapore's renowned brand of governance.

This Chapter, Part II of the Findings and Analysis has examined and discussed in greater detail the approaches and strategies involved in the internationalizing of Singapore universities. Section one of the chapter "Developing Global Competitiveness – *In the Quest to be Global Universities* discussed – using documentary analysis - the various approaches, organizational and program strategies that the Singapore government and the three case universities, NUS, NTU and SMU have adopted in their internationalization drive in accordance to their vision, mission and strategic direction; organizational positioning, thinking and beliefs, leadership style and the intended outcomes. All the three case universities have designed and implemented a comprehensive range of 'internationalization abroad' and 'internationalization at home' program strategies consistent with some of the best practices found in literature. The findings and analysis answer directly the fourth and last specific research question on "*what have been the approaches, programs and strategies adopted by the Singapore universities and/or government in their internationalization drive during the years?*"

Section two of the Chapter, "Visualising the Internationalization" gave a comparative analysis on the differing level and stages of internationalization of the three case universities, NUS, NTU and SMU. The two models developed are significant theoretical contributions of this study. The next chapter will give an overall discussion of the findings and conclusion of this study.

CHAPTER 6

DISCUSSIONS AND CONCLUSION

Chapter Introduction

This conclusion chapter discusses the findings and draws conclusions to this study on **“The Internationalization of Singapore Universities in a Globalized Economy – A Documentary Analysis.”** The main Research Question is: *“Why and how have Singapore universities internationalized since the beginning of nationhood in the early 1960’s?”* The study is set in the context of the economic and social transformation of Singapore since it achieved its self-government from the British in 1959, and its independence in 1965 to the present day, with a focus on why and how Singapore Universities have internationalised during this period. Accordingly, the four Specific Research Questions are:

Firstly: What is Singapore universities’ and government’s interpretation of the term “internationalisation of universities or higher education”? Are there other interpretations of the internationalisation of Singapore universities?

Second: When did the term “internationalisation of universities” first emerge in Singapore? Was there an equivalent term prior to this?

Third, What are (or were) the rationales for the internationalisation of Singapore universities from a historical, political and social-economic development or policy perspective? Have such rationales changed over time?

Fourth and lastly: What have been the approaches, programs and strategies adopted by the Singapore universities and/or government in their internationalization drive during the years?

More specifically, this chapter aims to address succinctly, (1) the four specific research questions, and (2) an overall conclusion and implications of the study. In concluding, it will also (3) discuss the significance of the study and the original or theoretical contributions the study makes, as well as address (4) the limitations of this study and (5) make recommendations for future studies. The possible issues relating to the limitations on the use of documentary analysis as the sole research methodology in this study, and the steps taken to ensure

validity and trustworthiness, as well as issues of reflexivity and the stance or positioning of this researcher have already been addressed in Chapter Three – Research Methodology, and hence will not be included in this chapter.

(1) Addressing the Four Specific Research Questions

(1.1) SRQ 1: Interpretations of the term “Internationalization of universities”

As Knight (1999) has observed, *‘internationalization means different things to different people and as a result, there is a great diversity of interpretations attributed to the concept’*. As also observed by Middlehurst and Woodfield, (2007), the ways in which internationalization is described, defined and implemented through policies, procedures, activities, and partnerships developed by the higher education institutes on the one hand, and by policy makers on the other hand, vary considerably between countries, between stakeholders and even within institutions. This study also reveals that there is no definitive interpretation, or meaning assigned to the term ‘internationalization’ of universities in Singapore. Hence the meanings of ‘internationalization’ of universities by the Singapore government and the universities are best derived from an inductive process, by examining documents and speeches.

In the absence of field interviews, which is outside the methodology deployed for this study, this researcher used a documentary study of the visions, mission statements, strategic goals and plans of the three case Universities and the policy statements in government speeches, as well as the activities and programs developed by these universities as proxies to their interpretation or understanding of the term ‘internationalization’ of universities. This is a logical and viable approach given the observation by Middlehurst and Woodfield (2007), and Knight’s (2003) updated definition of internationalization of higher education at the national, sector and institutional levels as *‘the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education’*. The vision and mission of the universities clearly fall within the ‘purpose’ in Knight’s (2003) definition of internationalization

that a policy maker should consider when embarking on an internationalization strategy. Results from subsequent discussions and findings on the approaches and program strategies adopted by the Singapore government and universities in specific research questions three and four together through checking and cross referencing will further validate the appropriateness of this inductive approach in the interpretation of ‘internationalization’ of universities in Singapore.

Table 6.1: Visions of NUS, NTU and SMU (Re-Produced from Table 4.2)

	Vision
NUS	Towards a Global Knowledge Enterprise - A leading global university centred in Asia , influencing the future
NTU	A great global university founded on science and technology
SMU	To be a premier university , internationally recognised for its world class research and distinguished teaching.

As examined from the vision and mission statements of the three case universities and various documentary sources discussed and analyzed in Chapter four, the term ‘*internationalization*’ of universities is interpreted variously by the universities as ‘*to be a global university*’, which is ‘world-class’ or ‘premier’ in nature at the institutional level. Both NUS and NTU have the descriptor of a “*global university*” in their Vision Statement. SMU uses the adjective “premier university” with “world-class” research and distinguished teaching. NUS further explains that it will be a “*globally-oriented university*”, in the distinguished league of the “world’s leading universities”. NUS also claims that as a key node in global knowledge networks, NUS will have distinctive expertise and insights relating to Asia (extracted from NUS’s Strategic Goals)

The Singapore universities’ interpretation is consistent with the government’s intention for Singapore universities to become ‘world-class’, in a globalised world. This assertion is evidenced in various speeches of the Ministers and senior government officials and can be validated by cross-referencing with other relevant archival documents (in words or data) available from different government ministries and universities. The government’s intention for

Singapore universities to internationalise can be summed up aptly in a Speech by Mr Goh Chok Tong, then Senior Minister (previously second Prime Minister of Singapore) at the NUS Centennial Dinner on 2nd July 2005 when he urged NUS to 'go global' to become a "*top notch university in a relentlessly changing and global world*" (NLB Archive, Goh 2005).

In this connection, the term "internationalization" may also be seen to be interpreted as "globalization" by the Singapore government. This is not surprising. The literature review in Chapter two reveals that the terms "internationalization" and "globalization" are often used interchangeably and are interpreted to be the same. However, Knight (1997) and Yang (2002) argue that globalization is not the same as internationalization. Gacel-Avila (2005:124) further asserts that '*the concept of internationalization differs dialectically from that of globalization because it refers to the relationship between nation states, which promotes recognition of and respect for their own differences and traditions*'. On the other hand, Scott (2006) cautions that both internationalization and globalization are complex phenomena with specific strands, and that the distinction between internationalization and globalization, although suggestive, cannot be regarded as categorical. They overlap, and are inter-twined in all kinds of ways. This researcher will take this contrivance view and prefer to take a more liberal and broader perspective for the Singapore case. The move by the Singapore government to 'internationalise' the universities may also be interpreted as a response to the globalization of the world economy, in which Singapore desires to be keenly competitive. Internationalization and globalization are inter-twined in both the economic and university development sense.

The interpretation of the Singapore government and universities of the term internationalization as '*going global*' or '*to be global universities*' is unique, and not found in literature to the best knowledge of this researcher. However, such an interpretation may be supported by the definition or perspective adopted by Soderqvist (2002:29) in his conceptualization of internationalization of higher education, where he asserts, "*Internationalization of higher education is*

a change process from a national higher education institution to an international higher education institution leading to the inclusion of an international dimension in all aspects of its holistic management in order to enhance the quality of teaching and learning and to achieve the desired competencies". The internationalization of Singapore universities is clearly an on-going change process. The National University of Singapore (or NUS), for example, is first, a national university. In the face of changing internal and external environments, NUS has had to transform itself into an institute of *international* higher education, or in its own terms, '*a global university*'. The process of internationalization or becoming a 'global university' is (to be) achieved by integrating or infusing *international* and *intercultural dimensions*, such as overseas exposure and immersion programmes into the teaching, research and services of the university [a process definition of 'internationalization by Knight (2003)], as well as through strategic alliances and partnership programmes with leading universities globally.

(1.2) SRQ 2: First emergence of the term 'internationalization' of universities in Singapore

Although it may be claimed that an 'international character' or 'internationalization' (albeit in a narrower classical or 'medieval era' manner) was already evidenced since the establishment of the predecessor of the National University of Singapore (NUS) – The University of Malaya in Singapore since 1949, the term '*internationalization*' in a university context was not found in any of the Singapore university or government documents until the year 2000. The term first emerged in the NUS 2000 Annual Report, at which there was a 2-page write-up under the heading "Internationalization". The report articulated the rationale for the internationalizing of the University as well as the various internationalization activities or programs NUS had undertaken during the year under review. The internationalization drive was described then in the report as a "*fresh impetus*", which aptly describes the 'freshness' of internationalization in NUS (and in Singapore) and the sentiment of the day. The finding or the relatively late emergence of the term "internationalization" in a Singapore university context is consistent with the phenomenon elsewhere, namely, that

internationalization gained momentum only towards the 1990s as revealed in the literature review in Chapter 2. As Teichler (2009) has described, the development of university internationalization is a “qualitative leap forward” in the 1990s.

Prior to the term ‘internationalization’ of universities, a similar term which surfaced during this research is “*internationalism*”. This appeared in 1992, during a Speech by Mr. Lee Yock Suan, Minister for Education, at the inauguration of the Master in Public Policy (MPP) Programme at the Centre for Advanced Studies in NUS on 9th October 1992. During the speech, the Minister explained the two twin concepts of “*internationalism and excellence*” as cornerstones of Singapore’s open door economic strategy on international trade, investment and on free market exchange of goods and service. Education is included as a trade under the world multilateral General Agreement of Trade Treaties (GATT). Effectively, this can be thought of as an example of the early internationalization of universities in Singapore, more specifically NUS, and its post graduate Master of Public Policy degree programme, which attracts students regionally and internationally.

Other terms that have been (and still are) commonly used include: ‘student exchange’, ‘international education’, ‘global education’ or ‘globalization’.

Table 6.2: Globalization versus Internationalization - Frequency of Occurrence

Globalization (or related words)		Internationalization (or related words)	
Words Description	Frequency	Words Description	Frequency
Global	599	International	219
Globalization	33	Internationalization	11
Globalize	19	Internationalize	2
Global University	23	International Education	3
Global Perspective or mindset	13	International Perspective or mindset	2

As indicated in Table 6.2, a word count of the frequency of selected words appearing in a sample (over 250 pages) of NUS and NTU source documents revealed that the most common adjective is ‘global’ compared to ‘international’

and the preference of the term ‘globalization’ to ‘internationalization’ in the context of the Singapore university sector. This also explains the findings of the interpretation of the term ‘internationalization’ of universities in the earlier section.

The finding is consistent with De Wit (2010)’s observation that in the literature and in the practice of internationalization of higher education, it is still quite common to use terms which only address a small part of internationalization and/or emphasize a specific rationale for internationalization. As an umbrella or generic term, internationalization is used to mean different things to different people, depending on the historical economic or social, cultural and political context of the universities. This is true in Singapore too, as analyzed in Chapter four on the evolution of the university education system in Singapore since its independence in 1965. In the current Singapore context, internationalization is an attempt by the Singapore government and the universities to address the concerns on how Singapore universities and the country as a whole could move forward and compete in a globalized world.

(1.3) SRQ 3: Rationales for the Internationalization of Singapore universities

Producing ‘*world ready*’ graduates, enhancing the competitiveness of Singapore and its universities, and talent augmentation and human resource development are the three main rationales for ‘*going global*’, or ‘to be ‘*a global university*’. They are the main drivers for internationalization of universities in Singapore.

(1.3.1) Producing ‘World Ready’ Graduates

The concept of educating Singaporeans to be a “*global workers*’ or ‘*world ready*’ was first articulated in the year 2000 by Mr Teo Chee Hean, then Minister for Education (now Deputy Prime Minister of Singapore). In a Lecture to members of Alumni International Singapore titled “*Education towards the 21st Century – Singapore Universities of Tomorrow*”, he announced that the role of Singapore universities is to “*educate Singaporeans to be global workers and to continue with their quest for excellence as global institutions*” (MOE, 2000). This message has since been institutionalised and has become a mission and vision

of the universities. As analysed in Chapter four, this strategic intent and how it could be achieved had also be reinforced in speeches by University Presidents, such as Professor Tan Chorh Chuan (NUS Tan CC 2010), and the Minister of Education in Parliament (MOE 2007). Similar terms such as '*global-ready*' or '*future-ready*' have also appeared in other Singapore government or university documents or speeches. Singapore's concept or aspiration of producing '*global workers*' has the support of Gacel-Avila (2005) who contends that universities are now expected to train new generations of graduates to live and work successfully in a *globalized world*.

(1.3.2) Enhancing Global Competitiveness

Enhancing or achieving '*global competitiveness*' is increasingly becoming a main driver or motivation for Singapore to internationalize its universities and education system. The competitiveness applies to both university and state economic competition. The National University of Singapore (NUS) and Nanyang Technological University (NTU) in Singapore, for example are moving towards this direction as a rationale for their internationalization drive. Both the universities are positioning themselves as 'global universities' by actively promoting their international branding and engaging in numerous internationalization programs and academic cooperation projects aimed at upgrading their perceived quality, as analyzed in details in Chapter five. Their partnerships and links with overseas universities are geared to those with very high world status and ranking.

The ultimate goal is to have NUS and NTU dubbed respectively the Harvard University and Massachusetts Institute Technology (MIT) of the East as advocated by the then Prime Minister Mr. Goh Chok Tong in 1996 (MOE Goh, 1996). To achieve global competitiveness, one must compete and benchmark with the best internationally (NUS Shih 2000), and through strategic alliances and partnerships with leading world-class universities (NUS Tan CC 2010). The drive to internationalize has produced positive results for NTU too. Dr. Ng Eng Hen, Minister for Education acknowledged that NTU's international reputation as a global university has been growing steadily. The strategic networks that NTU

has established with renowned overseas universities have also led to meaningful and diverse collaboration, leading to the enhanced reputation and competitiveness of NTU in students and faculty recruitment. Both NUS and NTU has since 2006 been ranked consistently among the world top 50 universities in the World University Ranking Reports, with NUS occupying around the 25th position. Academic reputation makes up the bulk of the overall score in the ranking (The Straits Times, 11 September 2012). SMU, a relatively new university in Singapore established only in 2000, too has made significant inroad to achieve competitiveness regionally and to some extent globally to provide an American centric or brand of business and management education with its initial strong linkage to the Wharton Business School of the University of Pennsylvania.

(1.3.3) Augmenting Talent or Human Resource Development

Talent augmentation is another key theme in the internationalization of universities in Singapore. The same word search on this theme from the set of documents sourced on the internationalization of NUS and NTU produced 141 word counts, which is the second highest after the theme '*global*' and slightly ahead of the theme '*partnerships*', which has 128 counts. From an economic standpoint, Singapore is not so motivated by income generation to internationalize its universities as perhaps is the case in other countries. Singapore universities do not require international students to supplement their income. Rather, the objective in recruiting academically bright foreign students to Singapore is talent augmentation or human resource development for the future. Singapore is a small country. With a low fertility birth rate of less than 1.2, Singapore has stagnant population growth. It needs foreigners and talent to augment its labour force or human capital to maintain the rate of economic growth.

Foreign students studying in any of the three publicly-funded universities in Singapore are given a substantial tuition-fee grant regardless of their affordability. In return, these foreign students with tuition-fee grant are required to give an undertaking and enter a bond to work in Singapore for a duration

equivalent to the length of their studies. As explained by the Singapore Minister of Education in a parliamentary debate on 19 April 2005, the move is linked to the objective of *'attracting bright foreign students to study in our universities to increase our talent pool.'* The move also enriches the university education and experience of Singaporean undergraduates, and ultimately adds to the international standing of the universities. (MOE 2005)

While the rationale is sound and has served Singapore well, it has a political discourse. In view of the increase in foreign workers, including the professional levels, and the pressure on housing and transportation, the government is increasingly facing resistance to high levels of immigration from Singapore voters. This has forced the government to fine-tune the tuition fee grants for foreign students and reduce the cap on foreign students. The number of university places available for international students is also capped or reduced to ensure sufficient places for eligible Singaporeans. Many of these beneficiaries have also left Singapore for 'greener pastures' in USA or Australia after serving their bond obligations, and some even leave before completion of their obligation. In a number of political forums and interviews, the founding and first Prime Minister of Singapore Mr. Lee Kuan Yew has openly said he would be happy if 50% or more of these foreign students were to stay and become permanent citizens, as their talents will serve Singapore well.

In 2011, the former deputy Prime Minister, Dr. Tony Tan who was also a Minister for Education, and at one time concurrently a Vice Chancellor of the National University of Singapore (NUS) during its formative years and now the elected President of Singapore, also weighed into the debate. Delivering a speech on "The Futures of Higher Education" at the Singapore Management University, Dr. Tan touched on the "*Singaporeans first*" in higher education, a sentiment expressed by some segments of Singaporeans in the face of competition from foreign students and the government talent augmentation policy. He asserted,

"While whatever initiatives we launch, we must always put the interests of Singaporeans and Singapore first. But 'Singaporeans first' is different from 'Singaporeans only'".

He further explained:

Singapore is an international city, and it will be a grave mistake to close our doors. While putting Singaporeans first, we should not make it too difficult for international talent to come to Singapore. By closing our doors we would limit the talented individuals who presently contribute much to Singapore. Closing the doors would restrict our ability to engage in the kind of collaborative research that has put Singaporean universities in the very top ranks of universities in the world. (The Straits Times, 20 July 2011:A21)

It appears that despite its pro-globalization stance, the side effects of internationalization and the 'ugly head' of protectionist attitudes cannot be avoided in Singapore, as one of the most highly globalized economies in the world. Dr. Tan admitted that finding a balance is not easy. The debate on the subject is still going on, a potential for further research study.

(1.4) SRQ 4: Approaches and Strategies Adopted by Singapore government and universities

The various approaches, organizational and program strategies that the Singapore government and the three case universities, NUS, NTU and SMU have adopted in their internationalization drive have been analysed and discussed in detail in Chapter Five, under section one, "Developing Global Competitiveness – *In the Quest to be Global Universities*". It is evidenced from the analysis that the approaches and program strategies have been implemented relentlessly in accordance with the vision, mission and strategic direction of the universities; the organizational positioning, thinking and beliefs, and leadership style of politicians and university administrators, as well as the intended outcomes.

It can be concluded from the intensive analysis of the university documents, such as the university annual State of University reports and government documents and ministers' speeches that '*going global*' or 'internationalizing' has become strategically important and central to the overall institutional strategy or strategic plan of NUS, NTU and SMU today, instead of the more ad-hoc, activity-based and marginal approach adopted in the 1990s.

All three case universities have designed and implemented a comprehensive range of ‘internationalization abroad’ and ‘internationalization at home’ program strategies consistent with some of the best practices found in literature, such as the findings of the International Association of Universities (IAU) reports 2003 and 2011. The various approaches and program strategies are also well coordinated and linked to the rationales or motivations (discussed Chapter 4) for the internationalization of the universities as illustrated and summarised in Table 6.3 below.

Table 6.3: Internationalization of Singapore Publicly-Funded Universities

Rationales for Internationalization (Desired outcomes driven)	Approaches & Program Strategies (Institutional Level)
Producing “World Ready” Graduates	Internationalization at “Home” & Internationalization “Abroad” (including various student mobility programmes <i>through: Integrating or Infusing international / inter-cultural dimension into the teaching and research for a holistic learning and service functions within the universities</i>)
Enhancing Global Competitiveness	Collaboration Partnerships or Strategic Alliances with world leading universities for: ❖ <i>Internationalization Abroad and Internationalization at Home programmes</i> ❖ <i>Joint Degree or Double Degree programmes</i> ❖ <i>Joint Campus or Joint Institute / College</i>
Talent Augmentation or Human Resource Development	International Students and Staff Recruitment with strategies of: ○ Scholarships & Tuition Fee Grant (for students) ○ Paying International market rate (for faculty)

(1.4.1) Institutional Program Strategies – Internationalization Abroad and Internationalization at Home

As part of their move to go global, NUS, NTU and SMU have established various student mobility programmes for students to gain an international or inter-cultural exposure. Over 50% of the student cohorts in each university are given the opportunities to experience such international or intercultural programmes, a target set by the Singapore Ministry of Education.

One of the most common and significant internationalization programmes is the student exchange programmes, where local students have the opportunities to study for up to two semesters in overseas partner universities or work as interns sponsored by a partner university to gain an international experience. Student Exchange programmes are two-way – beside local students going overseas, they help bring the best and brightest from around the world to NUS, NTU and SMU to interact with the student community in Singapore; which is part of the 'Internationalization at Home' effort in Singapore. Other internationalization programs include: strategic partnerships or alliances with overseas universities or groups of overseas universities for the student mobility programs as well as agreements to offer joint degree or double degree courses, joint research, faculty exchange among others. All the three case universities taken together have an impressive list of between 200 to 400 partnerships and strategic alliances. These partnerships are institutionalized in the form of time-specific Memorandum of Understandings (MOUs) or Agreements. The partnership model is relatively low risk from the perspective of the foreign university as well as the local sponsor (Olds 2007).

(1.4.2) Partnerships and Strategic Alliance

In Singapore, university partnerships go beyond teaching and learning in regard to internationalization abroad and internationalization at home. Partnership also involves research and development. Both NUS and NTU have significant numbers of joint research projects with leading world universities, detailed in Chapter 5. As a research-intensive university, NUS for example, has three autonomous national Research Centres of Excellence and 22 university level research institutes and centres. It has over 2,600 research staff. These institutes and centres provide tremendous opportunities for joint research and learning with overseas universities and industry leaders for faculty staff and students. As predicted by de Wit (2004) strategic partnerships in research, teaching and transfer of knowledge between universities, between universities and business and beyond national boundaries, will be the future for higher

education, in order to manage the challenges that globalization will present. NTU has termed this “partnerships beyond geography”.

(1.4.3) Unique Approaches and Internationalization of Singapore Universities

NUS has also set up seven NUS Overseas Colleges since 2001 in Silicon Valley and Philadelphia in the United States, Shanghai and Beijing in China, Stockholm in Sweden, Bangalore in India, and the latest in 2011, Tel Aviv/Haifa in Israel. The NUS Overseas College programme is a unique feature of its internationalization abroad programme. These colleges are for NUS students. They are not the traditional branch campuses of a university in an overseas country, which recruit students and conduct classes in the host country. Under the prestigious NUS Overseas Colleges (NOC) programme, NUS undergraduates spend up to a year working and studying in one of its Overseas Campuses located in the leading entrepreneurial hubs in collaboration with a partner university. While at these Colleges, the students engage in internships with start-up companies while taking courses at NUS’ partner universities, such as Stanford University, and the University of Pennsylvania, Fudan University and Tsinghua University and the Royal Institute of Technology in Sweden. The concept of the NUS Overseas College is again unique, not found in any literature on the internationalization of universities.

The ‘NUS University Town’ concept is another unique ‘internationalization at home’ program strategy of NUS. A distinctive feature of the NUS University Town is its rich intercultural and international diversity. These residential colleges house some 6,000 students, both undergraduate and postgraduate, with 40% of the residents coming from abroad (NUS Shih 2007). Modelled on the Oxford and Cambridge universities with teaching and learning integrated into the residences, the residential colleges in NUS University Town (or UTown in short) create a highly interactive environment with an engaging collegial culture among a diverse mix of students, thereby enhancing the global or intercultural experiences of the students.

NTU too has its own Overseas Study Centres. In 2005, NTU boosted its overseas presence with offices in Beijing and Shanghai, both in China, near top Chinese universities and hubs of business and finance. In addition to its overseas centres in Beijing and Shanghai, China, NTU has other centres in the USA, Europe and India hosted by well-known partner universities, such as the Georgia Institute of Technology in the United States, University of St Gallen in Switzerland and the Indian Institute of Technology and Peking University in China. NTU has a significant strength in China. Building on its unique strengths in delivering effective programmes for the China market, NTU launched the Nanyang Centre for Public Administration to further enhance the training of the top civil servants from China in 2009. On 24th July 2011 by the newly appointed NTU President, Professor Bertil Andersson announced that NTU will open its first campus in China, the NTU Tianjin College (Straits Times, 2011)

Overseas Study Missions in SMU, as quoted by Mr Gan Kim Yong, then Minister of State for Education and Manpower at a Conference is a unique feature of SMU's 'internationalization abroad' initiative (MOE Gan 2007). These Overseas Study Missions cover a host of site visits to multi-national companies in countries, such as Argentina, Chile, China, Germany, India, Qatar, Russia, Spain, UAE, USA and Vietnam. The visits enable students to 'gain insights into the real world operations of a variety of industries in different cities within a short span of time, and often afford the opportunity of interacting with their CEOs.

The lists of internationalization abroad and internationalization at home programmes and partnership in all the three case universities are impressive, although they may differ in breadth and depth as demonstrated in Chapter 5, Section 2 Figure 5.2, (Page 184) a Comparative Study on the different Level of Internationalization among three publicly-funded Singapore Universities, developed by this researcher during the course of this study. The progress that Singapore has made in its university sector and its internationalization programmes is a result of the strategy of keeping Singapore's society and economy open, flexible and adaptable. Singapore's openness to global talent

advocated by the Singapore government and its leadership is a key competitive advantage and factor for success.

(2) Conclusion and Implications

This study has traced the internationalization of the three publicly-funded Singapore universities from a historical, social, and economic development perspective. It has addressed the main research question: “*Why and how have Singapore universities internationalized since the beginning of nationhood in the early 1960’s?*” It has specifically addressed all the four specific research questions in Chapters four and five and in this Chapter. Documentary analysis of data obtained from published documents and archival materials has enabled this researcher to map, understand and interpret the major historical developments and policies that explain the *internationalization of Singapore universities* and the development of the university education system as a whole. The result of the study is a Singapore story on the internationalization of Singapore universities within the context of university development and nation building in Singapore. The major findings which may be uniquely Singaporean and which differentiate the internationalization of Singapore universities from that elsewhere are summarized as follows:

(2.1) Linkage between university education development and nation building

A key finding of this study is how university development is closely linked to the different stages of economic and social development In Singapore nation building. University education has been seen as instrumental to Singapore’s economic development. Throughout Singapore’s short history, the nation’s university education system has evolved to meet the societal needs and to support the country’s economic progress. It is still the case today, as the former Minister for Education and Deputy Prime Minister, Dr. Tony Tan has described, building Singapore’s university education system is an on-going ‘work-in-progress’ (Tan 2008).

In 1960s and 1970s, as Singapore was facing the challenge of weak economic fundamentals with high unemployment rates and a poorly educated labour force,

the focus was on building a national education system. The emphasis at the university level was to rapidly expand enrolment in order to produce the professional manpower needed to staff a growing economy and to meet the social needs.

The 1980s and 1990s was a period of industrial restructuring and upgrading in Singapore. In 1980, National University of Singapore was established with the merger of the old University of Singapore and the Chinese-based Nanyang University to create a larger teaching university with the Minister for Education as the concurrent Vice Chancellor of the University to raise the overall academic standard of the enlarged university. A Minister for Education as Vice Chancellor indicates the degree of political control considered important to ensure that the beginnings of the new enlarged University would meet the interests of Singapore. This is perhaps the first instance in the world where an Education Minister is also the Vice Chancellor of a national university. In 1981, Nanyang Technological Institute (NTI) was established to train practice-oriented engineers for the burgeoning Singapore economy. The strategic focus during this phase of economic development was to upgrade Singapore's capabilities and diversify the economy. In 1991, NTI was upgraded to Nanyang Technological University (NTU), which was subsequently developed into a research university with a focus on science and technology.

In 1997, the International Academic Advisory Panel (IAAP) comprising of world eminent academics and businessmen was established to advise the Singapore government in the future directions of university education in a fast changing global university landscape. In the same year, the government mooted the idea of setting up the third university, the Singapore Management University (SMU) to provide more choice for Singapore parents and students, and to cater to the developing and diversifying economic structure of Singapore as a tertiary education services, financial and business centre. SMU was envisioned to be different from the two established universities, NUS and NTU as it would adopt the American-style of broad-based education in contrast to NUS and NTU's British-style system. SMU enrolled its first batch of students in 2000.

(2.2) Emergence of the Internationalization of Singapore Universities

Internationalization of Singapore universities too has evolved not only in tandem with the education development of Singapore but the changing global economic environment. Internationalization is a sub-set of the larger university system and an evolving process. The setting up of the International Academic Advisory Panel (IAAP) in 1997 was a catalyst in the internationalization of Singapore universities. The establishment of SMU created intense competition among all the three publicly-funded Singapore universities for best people – faculty, management and students. The pace of internationalization has also accelerated in response to this competition locally and internationally in an increasingly globalized economy. The term “internationalization” first emerged only in year 2000, although activity-based internationalization and other terms, such as internationalism and international students already existed by the 1980s and 1990s.

SMU was an experiment in diversity. Modeled after the Wharton Business School, University of Pennsylvania, SMU enjoys wide autonomy in its operations, hence enabling it to respond more quickly to a rapidly changing world. With the success of SMU, NUS and NTU were corporatized in 2006 with continued government funding and given the same level of operational autonomy. With that the internationalization of Singapore universities was taken to the next level, as depicted in [Figure 5.4](#) [Chapter Five, Section (2.2)]. Indeed, Figure 5.4, titled, “University Internationalization Maturity Model” represents a major original and conceptual contribution of this thesis. The boldness of Singapore government to learn from others and establish strategic alliances with leading world-class universities and its decisiveness in implementation are key reasons of success. University leadership also enabled these successes.

In Singapore, universities are viewed as *key centres of excellence* to foster local talent and to attract foreign talent to the country. This also explains the three rationales for and the motivations behind the internationalization of Singapore universities, namely: producing ‘*world ready*’ graduates (local talent), enhancing

'global competitiveness', and *talent augmentation* (attracting foreign talent) or human resource development as analyzed earlier in Chapter Four.

(2.3) A Differentiated University Sector – Different Niches and Different Peaks of Excellence

Another significant feature of university system development and internationalization in Singapore is the '*differentiated university sector*' approach envisioned by the government, as a policy of creating healthy competition among the various universities, as well as to provide opportunities for these universities to create *different niches* and *different 'peaks of excellence'*.

During the last decade or so, the Singapore government has gone a considerable distance to reform the education system at all levels, including the university sector to achieve twin goals: (a) cater to the diverse spectrum of learning and academic abilities in the students; and (b) meet the growing high expectations of Singaporeans, students and parents; as well as increased competition in a globalized world. In a speech by former Deputy Prime Minister Dr. Tony Tan (now President of Singapore) at the graduation ceremony of the University of Chicago, Graduate School of Business held in Singapore on 9th February 2002, Dr. Tan said: "*the expansion of the university sector gives us a unique opportunity to shape our university education landscape. To meet national and individual needs, every good national higher education system must provide a broad spectrum of institutions to achieve multiple goals*" (MOE 2002)

Table 6.4 gives a summary of the different niches and areas of focus envisioned for each of the four publicly funded universities. NUS, the largest and most established is (to be) developed as a comprehensive teaching and research global university; NTU with a shorter history is to be developed as a world-class research technological university founded on science and technology, and SMU is a niche university in business and management; and SUTD – the newest kid in the block is developed as a niche university focusing on technology and design.

Table: 6.4: Singapore Universities - Different Niches and Areas of Excellence

	Year Established*	Niche or Targeted Areas of Excellence
NUS	1980	A Comprehensive Teaching and Research University with a Vision: “ <i>Towards a Global Knowledge Enterprise – A leading global university <u>centred in Asia</u>, influencing the future</i> ”
NTU	1991	A <u>Research-intensive Technological University</u> with a Vision: “ <i>A great global university founded on science and technology</i> ”
SMU	2000	A <u>Business & Management University</u> – with a strategic goal: “ <i>Become an Asian knowledge Hub for research centred around the world of business and management</i> ”
SUTD	2009 (1 st intake in 2012)	Established in Collaboration with MIT in USA and Zhejiang University in PRC, with a <u>focus in Technology and Design</u>

[Note: * Year of Establishment did not take into consideration its predecessors

Surprisingly, the differentiated university sector approach with different niches and specialization, however, does not have significant impact on the pattern and paths of their internationalization or effort to ‘go global’. While, during the 1980s to early 2000s, NUS was adopting a more western-style of internationalization and establishing significant in-roads by building partnerships with universities in USA, UK and other European countries, and NTU tended to establish stronger partnerships in the early years with universities in China and Japan, partly of its heritage and adopting an Asian centric approach, today, all the three case Universities have adopted almost the same internationalization programmes and partnerships around the world. Both NUS and SMU too have adopted an Asian-centred strategy within their overall global strategy as evidenced in the findings and discussion in Chapter Five. The line between a technological university, like NTU and that of a comprehensive university, NUS, has also blurred over time. Today, NTU also offers accountancy, business and humanities degree courses. Similarly, SMU has begun to offer information technology and law courses, although it was intended to be a university focused on business and management. It is yet to be seen whether SUTD will take the same route.

More recently, on 28th August 2012, MOE announced the establishment of two more publicly funded universities to provide even more opportunities and choices in a diverse university sector (MOE Press Release 28 August 2012). The fifth university is the Singapore Institute of Technology (SIT) to offer applied degree pathways for polytechnic graduates, although traditional GCE “A” level students will be accepted too. The sixth University, SIM University (UniSIM) will provide applied degree programmes for working adults.

It appears that massification of university education in Singapore is accelerating. With the establishment of two new universities, the Singapore government plans to increase the Cohort Participation Rate (CPR) for full-time degree places in the publicly funded universities from the current 27% to 40% by 2020. However, the government is also mindful of the risk of expanding the university sector at the expense of quality. At the FY2010 Singapore Parliament Committee of Supply Debate, Minister for Education, Dr. Ng Eng Heng said: *“Universities and institutes of higher learning are increasingly viewed as a “strategic asset” in Singapore as the country moves towards a knowledge and innovation driven globalized economy”* (MOE 2010). Dr. Ng added, *“In building this strategic asset, we must be careful that we do not expand to meet aspirations, but at the expense of quality. The prevailing benchmark set by the government is that all Institutes of Higher Learning must strive to be the best in their class globally”*.

Speaking at the official opening of the new home of NUS Business School, The Minister, Dr. Ng said that Singapore’s response to the challenges of increasingly highly competitive higher education sector, where degrees are becoming more expensive and seen as ‘commodities’, needs to be one of differentiation. He urged the Singapore universities to do likewise. (Straits Times 25th September 2010).

In response to the government strategy of developing different niche and different peaks of excellence, NTU, for example has unveiled in 2010, a 5-Year Strategic Plan, NTU 2015, that maps out how the university will become a global university by 2015. Under the blueprint termed as “Five Peaks of Excellence”,

NTU will build on its current strengths in science and technology, and its heritage to make its mark globally in sustainability, healthcare, new media, the best of the East and West, and innovation (NTU 2010)

While a diverse university sector strategy with different niches and different peaks of excellence is a sound one, this researcher is not sure of the implication of the massification of university places. While the academic quality may be maintained, and jobs are still aplenty in the near future, the 'quality' or level of jobs available may not match the skills and knowledge of the graduates trained, resulting in under-employment for some degree level job seekers. Ultimately, it may also result in a two-tiered university system in Singapore; the truly global well established universities, such as NUS, NTU and probably SMU (and SUTD in 10-years' time?) in one league and the two newest universities, SIT and UniSIM in the second league or merely as national universities. The differentiated university sector strategy encouraging different peaks of excellence will help the top two or three universities to move even faster up the internationalization ladder by aggressively fostering more strategic partnerships with world leading universities. The 'second league' universities would have to find their own niche and "best-in-their own class" universities for partnership.

(2.4) Embryonic Relationship between the Government and Universities

Singapore's experience in internationalizing university education shows that government can play a significant and constructive role in talent or human resource development to meet the country's economic development needs as well as developing Singapore into a regional education hub. The hallmark of the Singapore government is that it responds decisively and pragmatically to the changes in the regional, international and global environment to make what it conceives as a better Singapore for its citizens. The decisiveness of the government and the dramatic economic growth from a Third World economy to a First World economy within 40 years of its independence is the envy of not only the developing, but many developed economies as well.

The British High Commissioner to Singapore, Anthony Phillipson, for example was reported to have said: *“What is interesting from a British perspective is that there is a sense of ambition here (in Singapore) which is hugely impressive, and when you consider our challenges, generating growth in the economy, there is a lot we need to look at here and how they have done it.”* He added, *“Britain left a positive legacy here, whether it was the language, the legal system, education system, the civil service. And what I think is interesting is that all these systems have evolved over the last 50 years in ways we can now learn from”* (Today Newspaper, 8th August 2011, page 14)

The degree to which the government controls education policy and practice in Singapore is greater than in many other countries, it being noted for its strong centralisation, although more recently universities in Singapore are given more autonomy through corporatisation. Public universities in Singapore are well funded too. However, a key question is: *‘Would the Singapore universities have achieved the same level of success in the internationalization or ‘go global’ strategy, had the government not actively been involved by setting the tone or strategic direction?’*, and *“Will the government ever loosen or give up its control?”*

Professor Wang Gungwu, a prominent historian and academia, and former Director, East Asian Institute in NUS wrote

The use of centralized power to decide on the fate of university-wide initiatives can only be damaging to the intellectual life on any campus. It places great restraint on the spirit of enterprise and on the imagination of both the staff and students and is fundamentally inimical to the idea of a modern university” (Wang, 2006: 25)

The Singapore government sees this too. The operational autonomy given to SMU during its formation in 2000, and the corporatization of NUS and NTU in 2006 was an attempt by the government to give more autonomy to the publicly-funded Singapore as discussed in details in Chapter 5, Section (1.1). It is a shift of “control” or power of directing, to “governance” or a function of governing.

Although one may argue that the difference between “control” and “governance” is semantic, the move is significant. It signals the desire of the current generation of political leaders to engage more with the people, be it in university and economic development, or social transformation.

This researcher’s assessment is that given the fact that universities are considered as “strategic assets” to Singapore, the government will continue to exercise its “governing” functions and guidance on the publicly funded Singapore universities. This researcher is also of the view that government leadership is still important and required in the next phase of university and internationalization development given the increased global competition, although it should not micro-manage. It should be noted that many of the negotiations of strategic partnerships with leading universities, such as Yale-NUS College of Liberal Arts, Imperial-NTU Medical School, and SUTD’s collaboration with MIT, involved the active participation, and most importantly the commitment of the Singapore government.

The rapid pace of internationalization, especially on strategic collaborative projects, would not have been achieved without the government’s involvement. In contrast, even if the government were to loosen its ‘control’ over the universities, this researcher is of the view that all university leaders in Singapore will continue to work closely with the government to form a united stand to achieve the desired outcomes, be it internationalization or other issues of strategic importance to Singapore.

As evidenced from the findings and analysis, the Singapore government and the three case universities have a common view and united approach towards the internationalization of universities in Singapore. This is unlikely to change. University leadership too plays a significant influence in the pace of university internationalization. The Vice Chancellors and Presidents of the four publicly funded Singapore universities are prominent world-class academics.

(3) Significance of the Study and Contribution to New Knowledge

(3.1) Significance of the Study

The significance of this study is that according to the present researcher's knowledge, this is the first study of the internationalization of Singapore universities from a historical and developmental perspective. The new knowledge and insights that emerged from this research study will be useful not only to other educational researchers interested in this contemporary global issue, but also to policy and decision makers and practitioners involved in the internationalization strategies, processes and/or programs themselves. Singapore's experience in the internationalization of its universities and international education policies or strategies, such as the regional education hub or global school house, looked at from a historical and developmental perspective should provide some useful insights and *policy learning* for other systems embarking on an internationalization program.

Secondly, this study is significant too in that it may also be the first attempt by a researcher to embark on a study of the internationalization of universities relying solely on a documentary analysis methodology. Such an approach is made possible through an abundance of documentary records, including original sources and archival materials which this researcher has collected during the course of this study. These materials have enabled the researcher to analyse them as a collective record and to put a historical perspective on a long term and changing landscape of higher education development in Singapore since its independence in 1965.

(3.2) New Theoretical Contribution

Besides generating a new body of knowledge on the internationalization of Singapore universities, one of the most significant outcomes of this research study is the original and theoretical contribution in term of two models developed by this researcher to conceptualize the outcomes of internationalization as articulated in Chapter Five, Section (2), in Figures 5.2 and 5.4.

The internationalization of universities requires significant resources. A university senior administrator or a government officer may wish to assess (a) the level or stage of internationalization an institution has achieved and (b) the current level of internationalization achieved against the desired or targeted level of internationalization using a set of criteria measuring internationalization. However, the number of instruments, which can be used to operationalize and visualize the outcomes of internationalization, is few. In this connection, this researcher has developed the following two models:

(A) Figure 5.2: Internationalization Comparative Analysis Model, used to conceptualize the Comparative Level of Internationalization among the three Case Singapore Universities

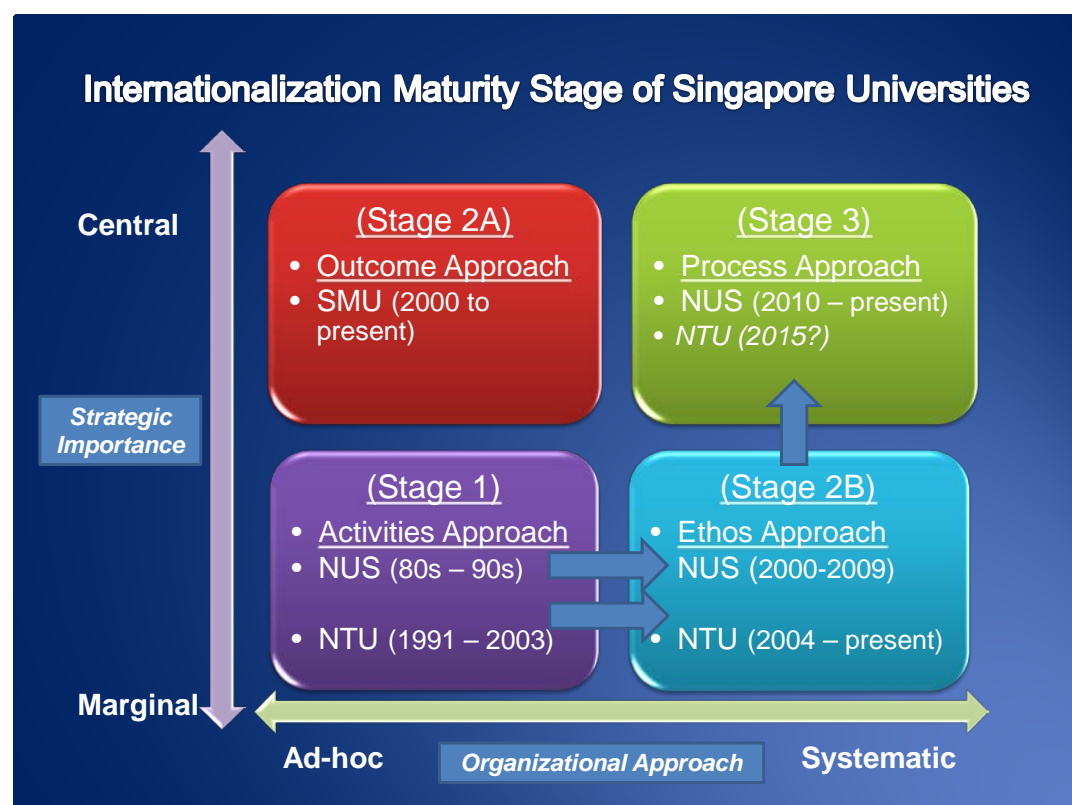
(B) Figure 5.3: Internationalization of University Maturity Model, which can be used to analyse the stage of maturity of the internationalization initiative within a university.

The *first* model is a comparative measure model. It is useful for analysing the comparative level of internationalization achieved using a set of factors relevant to the internationalization initiative of the universities being studied, as illustrated in Chapter 5, Section (2.1). The resultant “Radar” Chart gives a graphical representation of the level of internationalization for each university.

The *second* model, derived from a study of the typology of Internationalization Strategies and Approaches, is a useful framework to analyse the internationalization ‘*maturity stage*’ of a university by identifying and analysing the ‘organizational approaches’ (i.e. activities, outcomes, ethos, or process) and the level of ‘strategic commitment’, i.e. whether internationalization is marginal or ad-hoc to the entire strategic goals of a university. Internationalization is an evolving process. One of the attractions of this model is that it can be used to trace the evolving stages of internationalization development of a university as illustrated in this study on the internationalization of the three case Singapore universities (re-produced below for ease of reference). NUS, for example has progressed from Stage 1 during the period 1980s to 1990s, and Stage 2 during

the 2000s, and is currently at Stage 3 with its full range of internationalization strategies and programmes, in term of breadth and richness. Internationalization or “going global” is central to the overall vision, mission and strategic goals of NUS. NTU is now at Stage 2B relative to NUS. It may reach Stage 3, with the successful implementation of its NTU Strategic Initiative – NTU 2015, illustrated in Figure 5.4 below (re-produced from Chapter 5).

Figure 5.4: “Topology of Internationalization Strategies and Approaches”



(4) Limitations of the Study

(4.1) Limitations of Documentary Analysis as a sole research method

The use of documentary analysis as the only method of data collection has been justified in Chapter 3, Section 4.1. The first justification concerns the nature and objectives of this study, which aims to trace the internationalization of Singapore universities from a historical and developmental perspective since its independence in 1965 to the present day globalised economy. Documentary research and analysis provides a systematic procedure for reviewing and

evaluating documents, both public and private documents, in printed and electronic formats (Scott 2006 and Bowen 2009) and is thus an appropriate methodology. Like other analytical methods in qualitative research, documentary analysis allows data to be examined and interpreted in order to elicit meaning, gain understanding and develop empirical knowledge (Corbin & Strauss, 2008), in line with the intended outcomes of this study. *Secondly*, the word limitation for a Doctorate in Education thesis, and the availability of sufficient documents from which data can be collected and analysed, are other significant and practical reasons for the choice. Given the word and time constraints and the scope of this research covering the internationalization perspectives of the Singapore government, three case universities, with four specific research questions, it proved impossible to conduct in-depth interviews to supplement the documentary analysis. And getting access to key people in conducting interviews would not only have proved difficult, it may not have yielded the same breadth of historical information as the documentary sources.

However, a significant limitation in this documentary analysis approach is that it does not allow triangulation of data from other different data collection methods, such as in-depth interviews. Nonetheless, data cross referencing or checking for representativeness and authenticity of comment is still possible from data obtained from different documentary sources, including archive materials from the Singapore National Library Board (NLB) and the major newspapers, such as the Singapore Straits Times. Hence, it is argued that the validity of the research method has not been compromised. Other inherent limitations in documentary analysis, such as document selectivity, and risk of bias, are mitigated by applying the quality criteria of handling documentary sources advocated by Scott (2006) of authenticity, credibility, representativeness and meaning discussed in details in Chapter 3, Section (4.3).

(4.2) Limitations of Qualitative Research and Generalizability

This researcher is fully aware that a qualitative study approach involves a “trade off” between “empirical generalizability” and “accuracy and detail” when compared with say, quantitative methodology, such as surveys. However, generalizability is not the goal of this research. Instead, this researcher has

provided 'thick description' of the Singapore case Universities, as well as the research settings and contexts, including the characteristics of Singapore and the dominant roles of the Singapore government in the development of universities in relation to the economy. Contextualization enhances understanding and provides insights on the internationalization phenomenon of Singapore universities from a historical and developmental perspective, so that readers can compare and decide for themselves the applicability of the findings in their own situations, as contended by Lincoln and Guba (1985).

(4.3) Constraints imposed by the Scope and Approach of the Study

In hindsight, the topics covered in this study are wide-ranging. They include – the interpretation of the term “Internationalization” of universities or higher education from the Singapore government's and universities' perspectives, the rationales for and motivations behind the internationalization drive, and the resultant organizational approaches and institutional programmes advocated by the government and adopted by the three case Singapore universities. Effectively, it incorporates the entire Singapore case of the internationalization of the publicly-funded Singapore universities. The analysis covers the national, sector and individual institution levels from a historical and developmental perspective since Singapore independence in 1965.

Given the nature and wide-ranging scope of the study, and the word limitation for a Doctor of Education degree thesis, in-depth analysis of every theme or sub-themes that emerged from the data analysed from the documentary sources, has not been possible. Pursuing an in-depth analysis of every theme or sub-theme related to the internationalization phenomenon being studied would have been unwieldy. Future researchers on the internationalization of universities may wish to bear this in mind. The number of case universities may also have been better limited to two, assuming a qualitative case research approach is used.

(5) Recommendation for Future Research

While this study has provided significant new insights in terms of the richness, depth and complexity of the internationalization of Singapore universities from a historical, economic and social development perspective, there are still significant aspects of internationalization which are not covered in the study. Hence, these provide potential for further research. One of the potential areas for further research is the students' experience of internationalization in Singapore universities, and the extent to which the universities have achieved their objectives of producing "global ready" graduates. Acknowledging the limitation of using documentary analysis as the sole research methodology for this study, there is also potential for further research on the same topic which would focus on why and how Singapore universities have internationalized from the university administrators and faculty staff. This potential study might use interviews to see if there are significant differences or discourses in the interpretation of the term internationalization and the rationales for doing so. Other potential studies include a comparative study of the internationalization of Singapore universities with that of other advanced Asian economies, such as Hong Kong, Korea, Japan or China.

(6) Concluding Remark and Looking to the Future – 2012 and beyond.

The internationalization of Universities in Singapore and around the world is an inevitable result of the globalized and knowledge-based economy developing fast in the 21st century. As evidenced in the Singapore case, internationalization of universities is an on-going process, and it is still evolving, although Singapore universities have achieved a heightened stage of internationalization and level of maturity comparable to the best-in-class. Competition in the university education system in Singapore, characterized by the Ministry of Education's strategic philosophy of "*building more peak of excellences*" in all levels of institutions, including the universities, and "*opportunities for all*" with more educational pathways to meet the aspirations of all Singaporeans, is expected to intensify further from 2012 and beyond.

In 2009, the Singapore government announced the setting up of the *fourth publicly-funded* university, Singapore University of Technology and Design (SUTD) with Massachusetts Institute of Technology (MIT) and Zhejiang University, one from USA and one from China as international partners – a new “East meets West” strategy. SUTD has commenced operations in 2012. On 12th April 2011, the Singapore government announced the launch of Yale-NUS College of Liberal Arts to offer an American styled Liberal Arts degree in Singapore, a joint degree of the US Yale University and the National University of Singapore (NUS). With these new developments, the internationalization of universities in Singapore is expected to accelerate and become even more complex and innovative.

As the President of Singapore said in 2011, *“in a world of tough competition and scarce resources, Singapore institutions must leverage their local, regional and global networks to attract and retain the very best students and faculty, prepare students for global career and to be at the cutting edge of research”* (Straits Times, 20 July 2011). In a nutshell, that summarizes the internationalization of Singapore universities of the 21st century. During a period of enormous change and severe competition, a deep understanding of global environment and the complexities or underlying factors affecting the internationalization of universities, is crucial. This researcher is hopeful that this research study will contribute to the foundational knowledge on, and provide new insights into, the internationalization of Singapore universities in a globalized economy. It is hoped these insights will be useful not only to other educational researchers interested in this contemporary global issue, but future policy decision makers and university leaders and administrators who will inevitably grapple with the complexities of the fast evolving internationalization strategies, processes and/or programs of universities that are increasingly serving global as well as national markets.

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Singapore Economic Development Board (EDB): <http://www.edb.gov.sg>

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The Internationalization of Singapore Universities in a Globalised Economy

(Analysis from the context of the economic and social transformation of Singapore since achieving self-government in 1959) – The development in the Internationalization of Singapore universities has evolved with changing national and global circumstances)

Years	Development of University Education	Government - Political, Economic, Social Development
1959 – 1979 (Inheritance of The British Legacy – Modelled along British System)	<ul style="list-style-type: none"> ❖ As Singapore was a colony of the British Empire, the development of education was very much influenced by the colonial administration's laissez faire policy. ❖ The ruling British then, believed imperial subjects must not be too educated because this would pose a threat to the colonial administration. They also believed that higher education and English education in general, possessed an autonomous of power and rarity; only a privileged few could enjoy it (Goh and Tan, 2008:149) ❖ Only two noteworthy developments in tertiary education during the 150 years of colonial rule. These were: (1) the setting up of Raffles College of Arts and Science in 1919, and (2) the setting up of King Edward Medical College in 1921. In 1949, King Edward Medical College and Raffles College were merged to form the University of Malaya (Goh and Tan, 2008) ❖ Besides setting up Singapore Polytechnic in 1954, there were hardly other significant developments in tertiary education in Singapore. ❖ In spite of this, Lee (2000:158) acknowledged that it is "Singapore's good fortune that under the British, Singapore had been the regional centre for education". The most significant was the use of English, as the medium of instruction and curriculum. Hence, it might 	<ul style="list-style-type: none"> ○ Singapore became self-government in 1959 ○ Singapore became part of Malaysia in 1963 ○ Singapore separated from Malaysia and became an independent nation on 9 August 1965 ○ When Singapore gained its independence in 1965, the government was quick to recognise the long term economic development is dependent on a critical mass of educated and skilled workforce, university graduates included. <p><u>A period of "Survival Economics, Survival Driven Education, 1965 – 1978</u></p> <ul style="list-style-type: none"> ○ In 1965 and after, an intimate link between education and economic development of small city state was strongly emphasised (Goh and Gopinathan, 2008: 14) ○ On the economic front, the priority was to create jobs. Labour extensive-type of manufacturing industries were set up. ○ The Singapore government continued with the tight control on the intake or enrolment of university students for fear of over-supply of university graduates, resulting in unemployment. The size of student enrolment and course offerings are based on labour market needs,

	<p>be said the internationalization of higher education started from the colonial days. The Singapore government continued with the policy after Singapore achieved self rule in 1959 and independence in 1965.</p> <ul style="list-style-type: none"> ❖ In 1955, Nanyang University (or Nantah), the first Chinese language university in South East Asia was set up with donations from people of all walks of life, from Singapore and elsewhere in the region (Goh and Tan, 2008). Nantah also accepted significant number of students from the region, especially Malaya. This could be seen as the beginning of the regionalization of Nanyang University ❖ However, Nanyang University became a centre of turbulence during the 1950s and 1960s and were infiltrated with student extremists with communist ideologies. ❖ In 1962, the University of Singapore was established. This followed the decision of the governments of Singapore and Federation of Malaysia that the Singapore division and Kuala Lumpur division of the University of Malaya should become separate national universities in their respective countries (Goh and Tan, 2008) 	<p>rather than a supply driven higher education system.</p> <ul style="list-style-type: none"> ○ In the late 1960s and 1970s, individual survival matched well with the state's ideology of survival. Singapore's economic and political fortune became inseparable. (Goh and Gopinathan, 2008:12) ○ Economically, Singapore achieved high growth and was considered as a 'newly industrialised economy" by the end of 1970s. ○ To sustain this high growth trajectory, the government felt that it was crucial to review the development of university education at this juncture. It was imperative for the economy to be supported by highly qualified people. ○ The government wasted no time in sourcing for international experts to study and produce an unbiased report. Then Prime Minister Lee Kuan Yew initiated the search himself and met four British academics in London in June 1979 to discuss how university education in Singapore could best be organised (Goh and Tan, 2008). <i>This is another example of how Singapore infuse international element into its university education</i> ○ Sir Frederick Dainton, then Chancellor of Sheffield University was invited by the Singapore government to lead the study (Dainton 1979). ○ The Dainton Report, as it became known, concluded that: "the arguments for maintaining two universities whether on two campuses or one are extremely weak whilst those in favour of a single, strong university at Kent Ridge are compelling and I recommend
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		accordingly.” (Daiton 1979 i, as quoted by Goh and Tan 2008)
1980 – 1999 (Moving toward international models)	<ul style="list-style-type: none"> ❖ On 8 August 1980, Nanyang University with University of Singapore to form the National University of Singapore (NUS) - a significant milestone in the development of university education in Singapore ❖ In retrospect, it paved the way for the rise of a world class university system here in Singapore. ❖ While the merger was generally accepted as the right decision, there was also a sense of tension and uncertainty at the ground level. (Goh and Tan, 2008) ❖ In 1981, Nanyang Technological Institute (NTI) was established to alleviate the tension, but remain an institute of NUS. ❖ <i>Internationalization of faculty staff</i> – The new university began to recruit significant number of expatriate staff as it would take some time before the university could generate from within itself the people to staff the system. By 1984, its staff doubled from 600 in 1980 to 1200. Student enrolment increased from a pioneer cohort of 8600 to 13,000 (Straits Times, July 3, 1984). Intellectual quality of its staff was lauded as one of the main reasons for such an impressive achievement. ❖ Meanwhile, NTI which leaned toward producing practice-oriented engineering graduates (as opposed to a more research oriented curriculum in NUS) was well recognised by the industry. ❖ 1991 - “Re-birth” of Nanyang University - Nanyang Technological University (NTU) was established as a 	<ul style="list-style-type: none"> ○ By the late 1980s, higher education in Singapore was well poised to meet the challenges of the 1990s - Shift to High Value, High Tech, High Wage Economic Policy ○ The 1990s saw the consolidation of the government’s effort in fine-tuning the higher education sector to support its private sector driven economic modernization strategy. The objective was to create a diversified, flexible tertiary education system capable of producing a highly qualified human resource base. (<i>human resource as a source of economic growth</i>) ○ Singapore’s drive toward a high technology economy required tertiary institutions to embark on research and development activities and to establish close university-industry links. The universities responded by accelerating their research and post graduate training to foster a more stimulating research environment and meet the growing demand for qualified research scientists and engineers. ○ The recruitment of talented staff was pursued both locally and internationally and supported with good facilities and rewards for good teaching and research performance. International recruitment for post graduate students was intensified. (Figures and source?) ○ The vision set by the government for NUS and NTU was to have both universities among the best in the world by the beginning of 21st century, which has since been achieved.

	<p>2nd full-fledged public-funded university in Singapore.</p> <ul style="list-style-type: none"> ❖ Sir Frederick Daiton, who was once again invited to review the Singapore university education concluded: “By 2000, Singapore should aim to have two strong university level institutions, one at Kent Ridge and other at Jurong, with many subjects being offered on both campuses. This would introduce a healthy element of friendly competition for students, for current and future resources and for research grants and contracts and links with industry and commerce” (Dainton Report 1989, and Straits Times, Feb 14, 1990). ❖ By mid 1990s, NUS made a strategic shift from basically traditional British model of a public university focusing primarily on teaching, to a more comprehensive research intensive university, emphasising entrepreneurship, R&D and industry links. ❖ The performance of the University Sector was evaluated by a panel of eminent academics from the USA, UK, Japan, and Europe (The International Academic Advisory Panel, or IAAP) in August 1997. – <i>Another example of internationalization of universities</i> ❖ The panel endorsed the directions the two universities had taken in their bid to become world class institutions. It also suggested that a third university be established to meet the demand for university education among Singaporeans and <i>attract international students to meet the manpower needs of Singapore</i> (IAAP, 1997) ❖ In 1999, Singapore Management University (SMU) was established with a 5-year collaboration agreement with Wharton Business School in USA. 	<ul style="list-style-type: none"> ○ Both universities responded by embarking on ambitious expansion programs in the 1990s, which included expansion of undergraduate and graduate education from the region and beyond. ○ By the late 1990s, as Singapore’s higher education was gaining a reputation for its academic excellence and research quality, and because of Singapore’s need to respond to global competition, the issue of autonomy and governance of the universities became more significant. The governance and interventionist style has also began to change, especially as the government realised that its model was increasingly inappropriate in the globalised context (Goh and Tan, 2008:157) ○ SMU was set up a private limited company and governed by the Singapore Companies Act, but funded by the government. ○ To encourage competition, avoid wasteful duplication, and enjoy greater autonomy, the three universities, NUS, NTU and SMU were urged to develop their own unique characteristics and niches (Goh and Tan 2008 and the Straits Times, July 22, 2009)
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<p>2000 – Present (Internationalization in Momentum)</p>	<ul style="list-style-type: none"> ❖ In 2000, SMU received its first class of business students – beginning of competition and <i>intensifying of internationalization</i> of Singapore universities ❖ Internationalization has become an important direction for the development of university education since mid-1990s. In 1996, Singapore then Prime Minister Mr Goh Chok Tong put forward the notion of making Singapore the “Boston of the East”, which would be achieved by developing the NUS and NTU as Harvard and MIT respectively (Goh, 1996). The momentum of internationalization intensifies since the beginning of 2000 with stronger competition brought about by SMU. ❖ In 2009, Singapore government announced the setting of the 4th publicly funded University, Singapore University of Technology and Design (SUTD), with MIT and Zhijiang University from China as international partners ❖ On 12 April 2011, Singapore government announced the launch of Yale-NUS degree in Liberal Art 	<ul style="list-style-type: none"> ○ In 2007, NUS and NTU were corporatized (converting from a stator board to a private entity), but remain as publicly funded universities. ○ Corporatization provides the universities with the flexibility to recruit world class talent; manage their budgets and build a stronger sense of loyalty and ownership among students, staff and alumni. ○ With the corporatization, publicly funded universities in Singapore, namely NUS, NTU, and SMU decide what undergraduate programs to offer; enrolment targets and criteria for admission, tuition fees, terms and conditions of faculty recruitment, and how faculty, students and the university as an institution are evaluated and benchmarked. Such a move, also results in an intensifying of competition and internationalization among the universities. (<i>The latter will be studied in greater details</i>) ○ “The pursuit of knowledge in a modern world requires vast resources which are not all available in any one university, international cooperation between higher education institutions, in many cases then becomes a necessity” (Knight and de Wit, 1995:14)
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