Chapter 8
English as a medium of instruction in Singapore higher education

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Abstract

This chapter situates the origins of English-medium instruction (EMI) in the promotion of English-medium education and the foundation of the University of Malaya in the years immediately following the Second World War. An important argument in this context is that the post-Independence policy of promoting English within education had strong roots in the colonial language policies of the 1950s. The later sections of the chapter focus on the contemporary context of higher education and the sociolinguistics of English-medium instruction at tertiary level in Singapore. In this context, the use of English for scientific, technological, and vocational education has been motivated by the pragmatic concerns of governmental planning that has sought to maintain the success of the Singaporean economy in an era of global competition.

8.1 Introduction

Higher education has made an important contribution to the national development of Singapore, which has combined rapid and sustained economic growth with a key role as a regional hub for finance, technology, trade and education. This chapter sets out to discuss the history of English-medium higher education in Singapore from the colonial period through independence to the contemporary present. One important conclusion that emerges from this study is that the pre-eminence of English in education cannot be fully understood without reference to the history of language policies in the late colonial and early post-colonial periods, the multilingual ecology of the society, and the economic and social priorities of the Singapore government.

8.2 The historical background

8.2.1 From Raffles to World War Two

Today, it is almost unquestioned that the default option should be the use of English as a teaching medium for all levels of education, but throughout Singapore's development the issue of English-medium education has had a complex history dating back to the early years of British colonialism. Although abbreviated accounts of Singapore's history typically begin with Stamford Raffles' annexation of the island in 1819, the pre-colonial history of *Singapura* ('Lion City' in Malay) indicates that a trading community existed on the island in the fourteenth century. Its role as a regional centre for trade was superseded by Malacca from the fifteenth century onwards, and when Raffles arrived the island was under the control of the Johore Sultanate. The history of the pre-colonial period suggests that the island had served as a meeting place for Arabs, Chinese, Malays, and traders from the Indonesian islands and elsewhere long before the British arrived. During this period, 'contact varieties of Malay' functioned as regional linguae francae (Lim 2008, p. 452). After the arrival of the British, the population expanded very rapidly, as the city attracted a diverse population of Arabs, Armenians, Balinese, Bugis, Chinese, Siamese, as well as Europeans, Jews, and Parsees. In the early years of development, Malays formed the largest ethnic group, but by 1891 these had been overtaken in number by the Chinese who then accounted for 66 per cent of the population, compared with 12 per cent for Malays, 9 per cent for Indians, and some 3 per cent for Europeans. By 1931, the percentage of Chinese citizens had risen to around 74 per cent, compared with 13 per cent for Malays (Merewether 1892; Vlieland 1932). By the early twentieth century the port of Singapore was trading with Malaya, the Dutch East Indies and beyond, and continued to attract immigrants and sojourners from the region and further afield.

From 1826, Penang, Singapore and Melaka were joined together to form the Straits Settlements, which were administered in turn by the East India Company, the Presidency of Bengal, the Governor-General of India, and finally, from 1867, by the British Colonial Office (Teoh 2008). English-medium education in the Straits Settlements began in Penang in 1816, and was in operation in Singapore by the 1830s, alongside other schools that taught through either Chinese or Malay. The first English-medium boys' school in Singapore dates from 1834 and the founding of the Singapore Free School, which five years later took the name of Raffles Institution. This was later followed by a number of other schools for boys, including St Joseph's Institution (1852), the Anglo-Chinese School (1886), and St Andrews School (1871), and by 1899 there were eleven government-aided and three government boys' schools in operation. These were complemented by a number of English-medium girls' schools including St Margaret's (1842), Raffles Girls School (1844), the Convent School (1854), and by 1899 half a dozen such schools were in existence, catering to Europeans, Chinese and Indians (Lim 2008, p. 66–67). Gupta (1994) notes that the numbers of children attending English-medium schools remained rather small throughout the nineteenth century, and only began to substantially increase from the 1890s onwards, mainly as a result of the growing popularity of such schools with the Chinese community. The popularity of English-medium education created an English-speaking section of the community, and in the 1921 Census it was reported that while Europeans and Eurasians accounted for 28 per cent of English speakers, some 55 per cent of English speakers were drawn from the Chinese community. However, while Straits Chinese children were taught officially through English, Malay was also extensively known and used, and this group contributed to a 'Malay-speaking nexus in the English-medium schools'. The teachers in the English-medium schools were from diverse backgrounds, and in the early decades of the twentieth century included Eurasians, Indians, and Europeans. Of the 'European' teachers in 1935, 12 were American, 15 were French, and 14 were German, Italian,

or Portuguese (Gupta 1994, p. 39–43). Given the high degree of multilingualism and language contact outside the bounds of formal education, there are also interesting questions concerning exactly what forms of 'English' were actually taught and learnt in such schools:

> Thus the initial teaching of English was unlikely to have been a British version of English. It may not have been entirely Standard English either. Those numerous children who never reached the higher grades may never have been taught by a 'European' teacher. Historically, the starting point of English was never in a deviation from a British norm, as it is often presented in writings on the 'New Englishes'. A contact variety was actually taught from the very start. (Gupta 1994, p. 44)

In the colonial era of British Malaya, of which the Straits Settlements were an integral part, it seems clear from the record that access to English was not enthusiastically encouraged, but instead somewhat restricted by officialdom. In 1884, E. C. Hill, the Inspector of Schools for the Straits Settlements, asserted that 'the immediate result of affording an English education to any large number of Malays would be the creation of a discontented class who might become a source of anxiety to the community' (*Straits Settlements Annual Report*, 1884, cited in Pennycook 1994, p. 85–6). In a somewhat similar vein, Frank Swettenham, Resident of Perak and future Governor of the Straits Settlements stated that 'Whilst we teach children to read and write and count in their own languages or in Malay, the *lingua franca* of the Peninsula and Archipelago, we are *safe*' adding that he also wished 'the boys taught useful industries and the girls weaving and embroidery' (Swettenham 1893, cited in Barlow 1995, p. 375). Throughout the Malayan peninsula, the government provided free elementary education for Malay children in the Malay language, although the sons of the Malay aristocracy were educated in English at the elite Malay College in Kuala Kangsar. For their part, the Chinese had to rely on wealthy donors or their clan associations to provide the funding for schools, and by the early twentieth century, there were Chinese schools in operation sponsored by various Cantonese, Hakka, Hainanese, Hokkien and Teo Chew clan associations. The Indians mostly lived in rural areas, where children attended schools supported by plantation owners and missionaries (Chew 2013, p. 28–29). The pattern of education that emerged in colonial Malaya generally, as well as in Singapore, was a system of minimal government intervention, coupled with a patchwork of private educational endeavours, typically along ethnic fault lines.

The net effect of such policies was undoubtedly divisive, and one mid-twentieth century commentator summarized its effects in terms of separating the four major racial groups – Malays, Chinese, Indians and Eurasians – along language lines, noting that evidently: 'English education is reluctantly given to these racial groups, and it is only their own determination to enter the English schools that has tended to cause the Government to acquiesce' (Hendershot 1941, p. 144–5). Taking this argument further, Rudner (1994, p. 286) added that: 'Rather than functioning as an agency for social integration, modernization and development, English schooling served instead to create a privileged Westernized, English-speaking elite geared to administrative office-holding and free professions', an assertion that applied perhaps most obviously to the city of Singapore, given the growing popularity of an English education among the ethnic Chinese towards the end of British colonial rule. What accelerated the promotion of EMI education was nothing less than the defeat of the British army by Japanese forces under the command of General Tomoyuki Yamashita in February 1942. When the British regained control of the city in September 1945, as discussed below, there began a new era in British colonial policy; the overriding aim of colonial rule soon came to be that of engineering a smooth withdrawal from its South Asian and Southeast Asian territories (Bayly and Harper 2007).

8.2.2 Post-war English-medium education and the University of Malaya

The shift in British language policy after the defeat of the Japanese was motivated by the UK government's intention to withdraw from the Malayan peninsula, and one early step in this direction was the formation of the Malayan Union in 1946. The Malayan Union included all of colonial Malaya with the exception of Singapore, which was expected to join quite shortly, and it was this attempt to create a Malayan 'nation' out of a multi-ethnic population that moved the government to promote a form of 'colonial nationalism' that aimed at creating a multi-racial 'responsible middle class […] united by English education and the values it carried' (Bayly and Harper 2007, p. 100). Whereas previous colonial policy had recognised Malay as the lingua franca of the peninsula, the British now sought to promote English 'as the common language of the Malayan nation and an instrument for what was conceived as 'non-communal civic nationalism' (Sai 2013, p. 50). Accordingly, the colonial government then introduced a number of initiatives to promote English throughout education, including the Ten Year Plan for Education in 1947, a Five Year Supplementary Plan in 1950, and the White Paper for Bilingual Education and Increased Aid for Chinese Schools in 1953, as well as the establishment and location of the English-medium University of Malaya in Singapore 1949. A closely-related motivation for English education at this time was to promote a kind of multicultural civic-mindedness in line with pro-western and anti-communist sentiments at a time when the communist insurgency was gaining ground in Malaya (Sai 2013, p. 50–54).

The first institutions of higher education in Singapore were King Edward VII College of Medicine, founded in 1905 to train practitioners for government hospitals, and Raffles College, founded in 1929, which offered Diploma courses in the Arts and Sciences. Proposals for developing higher education in Singapore were mooted in 1936 when there emerged a local campaign for raising the status of the Medical College and Raffles College to university level. These proposals were strongly supported by members of the middle- and upper-class Anglophone community which had gained importance over the previous century or so. In response, the government was moved to set up a Committee of Investigation in 1937, which a year later issued the McLean Report, which proposed the creation of a university college, as a way stage towards a full university. Immediately after the war, the Carr-Saunders Report of 1949 went beyond this and facilitated the merger in the same year of the College of Medicine with Raffles College in order to form the University of Malaya. At its opening, Malcolm MacDonald, the British Commissioner-General in Southeast Asia, and first Chancellor of the University predicted that it would become 'the crucible of the Malayan nation' and 'a cradle where a truly non-communal nation is nurtured' (Stockwell 2005, p. 1168).

As noted above, from the late 1940s onwards, the colonial government began to promote English rather than Malay as the lingua franca of Malaya, and simultaneously extended free primary education to all language streams, in contrast to its pre-war stance of providing free education to only Malay-medium schools. In somewhat complex fashion, the new system also privileged English, as these plans required vernacular-medium schools to teach English as a subject in the curriculum. This plan was soon rejected on the peninsula after the formation of the Federation of Malaya in 1948, but nevertheless greatly influenced developments in Singapore, which remained autonomous outside the Federation until 1963 (Sai 2013, p. 62). Another factor of immediate concern was the banning of the Malayan Communist Party and the declaration of the Malayan Emergency, which was to involve a ten-year anti-insurgency campaign against communist groups

throughout the Federation and Singapore. In 1950, the Education Department launched its Five Year Supplementary Plan (FYSP) to massively expand free primary education, part of a 'hearts and minds' campaign to promote such anti-communist non-communal values as 'interracial mingling, democracy, civic-mindedness and a loyal citizenry' (Sai 2013, p. 66). Thus, Singapore's post-independence policy of promoting English-medium education may be directly traced back to these policies of the early 1950s, despite the perceived desirability of mother-tongue education at the time:

> The government realised the desirability of using vernacular languages as languages of instruction, but argued that 'the need of literacy in English in a polyglot population, such as Singapore, (had become) overriding'. What the FYSP put in place was thus an English-plus-vernacular language education model, one strikingly similar to the English-plus-Mother Tongue model currently adopted in Singapore's schools today. (Sai 2013, p. 66).

In response, many members of the Chinese community reacted strongly against this policy, and the unequal funding of Chinese-medium schools, and in 1953 the government announced a 'Memorandum on bilingual education and increased aid to Chinese schools', which affirmed a new 'bilingual' policy, and provide increased support for Chinese-medium schools, as long as they fulfilled certain conditions including an increased commitment to the teaching of English. This policy again drew much criticism, including the charge that it was aimed at the 'anglicization of Chinese schools' and the 'elimination of Chinese-medium education and culture' (Sai 2013, p. 71). As a result of this policy, bilingual vernacular schools continued to exist in Singapore until the late 1970s, and it was not until 1987 that a unified language policy was firmly in place, with English as the official medium in all schools, and where the three other major languages, Mandarin, Malay, and Tamil were taught as 'mother tongues'. This is a policy that has been vigorously promoted by the post-colonial Singapore government and the People's Action Party (PAP), which came to power in 1965.

The development of higher education in Singapore was affected by the same set of political events that influenced elementary and secondary education in this period. The newly-founded University of Malaya drew many of its staff from Britain and the Commonwealth, and soon provided programmes of study in not only arts, sciences and medicine, but also agriculture, education, engineering and zoology, and in March 1954 a second branch of the institution was established in Kuala Lumpur (Stockwell 2005, p. 1171). However, almost from the beginning there were concerns that the system strongly favoured the children of wealthier families from the cities and that 'the colonial education structure which offered secondary education only in urban English schools resulted in a situation where geographic and language barriers kept most Malay students from higher educational achievement' (Hirschman 1972, p. 500). Another group that felt excluded from higher education were the graduates of Chinese vernacular schools, for whom the medium of English was a major hindrance in gaining access to the University of Malaya. In 1953, the prominent Chinese merchant Tan Lark Sye proposed the establishment of a Chinese-medium university. This suggestion drew massive public support and donations from all sectors of the Chinese population, and resulted in the opening of Nanyang University ('Nantah') in 1956, despite official fears that 'Chinese-medium instruction would undermine the use of English in the colony' and that 'this all-Chinese institution might aggravate communal differences or encourage the Chinese youth of Malaya to seek inspiration from the People's Republic of China' (Stockwell 2005, p. 1174).

The development of the University of Malaya also had its problems throughout the 1950s, with numerous conflicts between professors and other faculty, locals and foreigners, and related demands for increased 'Malayanisation' of positions. In 1957, the University was reviewed by a Commonwealth committee, the Aitken Commission, which recommended (a) the increased admission of children from vernacular schools, (b) the employment of increased numbers of local staff, and (c) the expansion of the Kuala Lumpur branch in order that it become a separate university. In addition the Commission expressed some concern at the division between the English-educated and Chinese-educated in Singapore, and the role of Nanyang University in the community. Aitken himself believed that, at Nantah, loyalty to China was 'more an allegiance to China as China, than an allegiance to communism,' but the colonial governor of the time, Sir William Goode, was less generous, and in 1959 described Nanyang as likely to produce 'Communists of high quality' (Stockwell 2005, p. 1183). Meanwhile, in the peninsula, higher education moved towards a separate path and in January 1962 the two branches of the institution became autonomous, with the formal establishment of the University of Singapore and the University of Malaya. Despite this split, which ironically came at a time when Singapore was about to join the Federation of Malaysia, the University of Malaya had achieved a great deal educationally, and, by the standards of the day, 'on all counts compared favourably with other institutions of higher education in Britain's colonial empire' (Stockwell 2005, p. 1187).

8.2.3 Language policies since 1965

Singapore's membership of the Malaysian Federation lasted two short years from 1963 until 1965, when Singapore became a separate independent nation. Although Singapore's independence dates from 1965, self-government was initiated in 1959, towards the end of the colonial period, when one of the first acts was to endorse the principle of equal treatment for the four types of school then in existence, i.e. English, Chinese, Malay and Tamil (Lee 2008, p. 295). Since that time, language policies have continued to play an important role in nation building, and remain a matter of official concern up to the present. Four major language policy initiatives in the post-colonial period have included (i) the Official Languages and National Language policies (1950s–1960s); (ii) the Bilingualism Policy (1966); (iii) The Speak Mandarin Campaign (1979 to present); and (iv) The Speak Good English Movement (2000 to present). At the time of independence, most schools were English-medium, but there were also a number of Tamil, Malay and Mandarin medium schools in existence. By 1987 all of these were closed by the Singapore government, since when Mandarin Chinese, Tamil and Malay have been taught as a second language or 'mother tongue' in primary and secondary schools. For a short period, Malay was also a compulsory language for those who wanted to join the public service, and this policy was maintained until the mid-1970s. Since then, Malay has had the official status of a 'national language' in Singapore, and the national anthem continues to be sung in Malay, although today a knowledge of Malay is generally limited only to Malay 'mother tongue' speakers (Bolton and Ng 2014, p. 309).

The four sets of language policies mentioned above have been promoted by the dominant political party, the People's Action Party (PAP), who have held political power in the nation from the 1960s to the present. In particular, the direction of such policies was specifically shaped by the thinking and decisions of Singapore's post-colonial leader, Lee Kuan Yew, who took a particular interest in such language issues from the very beginning. In his 2012 volume on 'Singapore's bilingual journey', Lee provided the following rationale for the broad sweep of such decisions:

> We had 75 per cent of the population Chinese, speaking a range of different dialects; 14 per cent Malays; and 8 per cent Indians. But making Chinese the official language of Singapore was out of the question; the 25 per cent of the population who were not Chinese would revolt. [. . .] For political and economic reasons, English had to be our working language. This would give all races in Singapore a common language to communicate and work in. At the same time, we knew we had to provide equal opportunities for people to study their respective mother tongues […as] knowing one's mother tongue was a must. It gives one the sense of belonging to a culture, and increases self-confidence and self-respect. Hence, we decided that we must teach each student two languages – English and the mother tongue. (Lee 2012, p. 59–60)

Thus, the essential formula for language policies and planning became established as a combination of English and the 'mother tongue', with the mother tongue designated as Mandarin for the Chinese community, Malay for those of Malay ethnicity, and Tamil, as historically the majority of South Asian immigrants had come from Southern India. Prime Minister Lee was also active in promoting Mandarin from the late 1970s onwards through the 'Speak Mandarin Campaign', a policy considered important not only both for educational and cultural reasons, as in Lee's view Mandarin not only 'unites the different dialect groups', but 'reminds the Singapore Chinese that they are part of an ancient civilisation with an unbroken history of over 5,000 years' (Lee 2012, p. 150). The Speak Good English Movement was introduced in 2000, amid concerns about the spread of 'Singlish' in the community and perceived falling standards of English. The effects of these policies continue today, and, following the widespread promotion of English as the dominant language of education, a large section of the population may now be regarded as 'English-knowing bilinguals', with proficiency in English as well as their ethnic language (Pakir 1991). One unintended consequence of official language policies has been the increasing spread of English as a home language and the *de facto* 'mother tongue' for increasing numbers of Singaporeans across ethnic groups, whose designated mother tongues, in many cases, are now becoming 'second languages'. Another, albeit intended, outcome in the Chinese community has been the rapid shift from Chinese dialects such as Hokkien, Cantonese, and Teochew towards Mandarin, so that today very few young people are truly conversant with the dialects of their grandparents' generation.

8.2.4 Higher education since 1965

After the foundation of the modern Singapore nation in 1965, the policy of promoting English-medium education throughout all levels of education, including the tertiary sector, became increasingly important as the new nation developed, economically, politically, and socially. The test case for higher education during this period was that of Nanyang University ('Nantah'), which (as noted above) had opened its doors in 1956, in order to cater for the graduates of Chinese-medium schools in Singapore, and elsewhere in Southeast Asia. For many Chinese in Singapore, Nantah was seen as an idealistic and worthy enterprise, and drew a great deal of community support, but, as Lee Kuan Yew himself has explained, when the People's Action Party (PAP) came into power (pre-independence), Nanyang University was from the outset 'a prickly political problem' that required delicate handling. Nantah soon came under scrutiny from a number of quarters, including the Prescott Committee of 1959, and the Gwee Ah Leng Committee of 1960, both of which expressed concerns about the quality of instruction and its Chinese-medium language policy. Other concerns included the extent to which the students might be influenced or recruited by the Communist Party of Malaya, and the danger of the University provoking a racially-chauvinist reaction from the Malay community (Lee 2012, p. 81–96). A few years later, after a number of Nantah graduates contested the 1963 elections as members of the Barisan Sosialis Party,

Malaysian security forces arrested a number of Nantah students and alumni, and closed the student newspaper. In 1965, another committee was set up under the chairmanship of Professor Wang Gungwu, whose recommendations included the suggestion that Nantah should 'produce graduates who are at least bilingual, if not trilingual, in the languages relevant to the development of the country' (Lee 2012, p. 100).

From the mid-1960s the University received increasing support from the government, but, acccording to Lee's account, continued to resist attempts to reform Nantah into a bilingual institution throughout the 1970s, at a time when increasing numbers of Chinese school graduates were applying to the University of Singapore. In April 1980, after a good deal of discussion with various stakeholders, the decision was taken to merge Nantah with the University of Singapore in order to form the National University of Singapore (NUS). Nanyang University's Jurong campus in the west of the island was remodelled to host the Nanyang Technological Institute in affiliation with NUS. Eleven years later, this then became the disciplinary core of a reconstituted Nanyang Technological University (NTU), which then incorporated the National Institute of Education. The Nantah story continues to evoke discussion among Singaporean educators and historians, but, from the record, it seems clear that Nanyang University's failure was not simply due to questions of educational philosophy or language choice *per se*, but rather because of the crucial political significance of such choices at that time, as Lee Kuan Yew himself pointedly explained:

> From the start, it [Nantah] was doomed to fail. The tide of history was against it. […] Tan Lark Sye was a passionate believer in education, but he did not understand the larger geopolitical environment. He did not understand that Britain and the United States […] were not going to let pro-left-wing Chinese open up other young Chinese to the influence of their enemy, communist China. A university producing a generation of pro-China youths would facilitate China's advance into Southeast Asia. (Lee 2012, p. 79–80)

The choice of name for the new institution of the National University of Singapore, which came into being in 1980, was likely decided by founding Prime Minister Lee, who from the outset was mindful of the challenges of nation-building in the post-colonial context of the time. In a 1966 speech on 'The role of universities in economic and social development', Lee argued that in the post-independence era the role of the universities was:

> to produce the teachers, the administrators, the men to fill the professions -- your accountants, your architects, your lawyers, your technocrats, just the people to do jobs in a modern civilised community. And next and even more important, it is to lead thinking -- informed thinking -- into the problems which the nation faces. This university has fulfilled the first requirements it has produced teachers; it had produced administrators; it has produced some of the people required in the professions and some of the technocrats. But it has not fulfilled its second role: definitive thinking; the definition and the exposition of your problems and the tentative search for solutions. (Lee 1966)

The challenge for Lee, and Singapore, was for universities to produce leaders who could deal with the problems of the *nation*. Lee then went on to note that in many other similar contexts in Africa and Asia, preference was shown for establishing Faculties of the Arts and Humanities, rather than Science and Technology, despite the obvious need for industrial and technological skills. In addition, Lee asserted, there was little use for studies 'in vacuo' and that *national* universities should also produce 'politically complete' citizens able to contribute to the development of society:

> When the university is able to creatively pursue the problems of our society, define them, and then set out to attack them and provide solutions, then I say the university has been established, it has become a national

> university. […] It means an organism which responds to the needs and the challenge of our time in this particular part of the world and in this society. (Lee 1966)

The need to establish national priorities for the University of Singapore occupied the PAP government for some years in the 1960s, and is documented in some detail by Lee (2008). One major turning point here was the appointment of Deputy Prime Minister Toh Chin Chye as Vice-Chancellor of the University of Singapore from 1968–75. Toh was committed to the notion that 'the university should have a national self, an identity rooted in Singapore and in the Southeast Asian region'. He also favoured the promotion of 'value free' subjects such as administration, architecture, business, medicine and science, while regarding the arts and social sciences as 'not value free', and thus demanding special treatment, not least with reference to local values (Lee 2008, p. 408–11). During the era of Toh Chin Chye, the terms of employment of expatriate staff were substantially changed in the apparent move to remove a number of their previous privileges. At the same time, overseas faculty also became the focus of scandalous articles in the local press, and various government spokesmen argued that such expatriate faculty were encouraging students 'to ape degenerate Western ways' (Puccetti 1972, p. 238).[1]

Five years after Toh Chin Chye stepped down as Vice-Chancellor of the University of Singapore, the National University of Singapore (NUS) was inaugurated under the leadership of Tony Tan Keng Yam, but the enduring commitment to university education in the service of society, in the service of the nation, remains as a continuing theme in higher education, not only in the case of NUS but in the development of all of Singapore's universities. The establishment of NUS in 1980 was followed by the foundation of Nanyang Technological University in 1991, as well as four younger universities in the 2000s (see Section 8.3.1 for an overview). It is important to note that English is the medium of instruction at all of these institutions, as is the case at all other levels of public education in Singapore. Over the past five decades, educational policy has been guided by two key objectives of Lee Kuan Yew and the PAP, that is 'to build a modern economy and to create a sense of Singaporean national identity' and as Singapore's economy has developed, educational priorities have shifted accordingly (OECD 2011, p. 160). In the 1960s, the emphasis was on labour-intensive manufacturing, in the 1970s and 1980s on skill-intensive production, while from the 1990s onwards Singapore has set out to excel in the global knowledge economy and to attract innovative engineering and scientific companies to establish themselves here. Today, at all levels of education, there is a strong focus on mathematics, science and technical skills, and mathematics and science are core subjects for all primary and secondary students, while in higher education more than fifty per cent of programmes are devoted to science and technology (OECD 2011, p. 168).[2]

[1] Puccetti's (1972) article provides a fascinating window on the academic politics of the time, which in the author's (albeit partial) view were characterized by an increasingly authoritarian government control over university education, particularly in the humanities and social sciences.

[2] Lee Kuan Yew has been repeatedly quoted for a throwaway remark made in 1968, where he made the point that 'Poetry is a luxury we cannot afford', as, in his mind, technical education was far more important for national development (Koh 2014).

8.3 Higher education in contemporary Singapore

This section of our chapter presents a brief overview of higher education in contemporary Singapore, with a specific focus on accredited universities, as opposed to such other tertiary institutions as the polytechnics, and the three colleges of the Institute of Technical Education (ITE).[3] This section also discusses Singapore's role as an educational hub and the 'Global Schoolhouse' initiative of the early 2000s.

8.3.1 Singapore's contemporary university system

There are currently six local universities in Singapore, providing degree programs to some 90,000 students. In the 2010 census, some 22% of the resident non-student population in Singapore have obtained a university-level qualification, up from just over 11% a decade earlier (Department of Statistics 2010, p. 8).[4] The six local universities are: the National University of Singapore (NUS), the Nanyang Technological University (NTU), the Singapore Management University (SMU), the Singapore University of Technology and Design (SUTD), the Singapore Institute of Technology (SIT), and the SIM University (UniSIM) (see Table 8.1). In addition to these universities, there are five institutes in Singapore, known as polytechnics, providing three-year diploma courses to over 70,000 students (Ministry of Education, 2015). The five polytechnics are: Nanyang Polytechnic (NYP), Ngee Ann Polytechnic (NP), Republic Polytechnic (RP), Singapore Polytechnic (SP) and Temasek Polytechnic (TP). A number of foreign universities have also established branch campuses in Singapore, as discussed in Section 8.3.2 below.

Table 8.1 Universities in Singapore

University	**Date of foundation**	**Type**	**Student enrollments[5]**
National University of Singapore (NUS)	1949 (as University of Malaya), 1962 (as University of Singapore), 1980 (as NUS)	Public-Autonomous	37,972

[3] In addition to Singapore's six universities, the Ministry of Education's Higher Education Division (or HED) also oversees nine other institutions, including five Polytechnics, the Institute of Technical Education (ITE), the Science Centre Singapore (SCS), the Institute of Southeast Asian Studies (ISEAS) and the Council for Private Education (CPE) (MOE 2015).

[4] The 2010 census also reported on the resident student/non-student population by ethnic group and highest qualification obtained, where it is interesting to note that at that time, 22.6% of Chinese, 35% of Indians, and only 5.1% of Malays had obtained a university-level qualification.

[5] The enrolment figures listed are for full-time undergraduate and postgraduate degree students and are taken from the following: NUS (2015); SMU (2015); The Straits Times (2013, 2015); and UniSim (2015).

Nanyang Technological University (NTU)	1956 (As Nanyang University), 1981 (as Nanyang Technological Institute), 1991 (as NTU)	Public-Autonomous	31,580
Singapore Management University (SMU)	2000	Public-Autonomous	9300
SIM University (UniSIM)	2005	Private	13,369
Singapore University of Technology and Design (SUTD)	2009	Public-Autonomous	1,341
Singapore Institute of Technology (SIT)	2009	Public-Autonomous	Approx. 3,000

The two largest comprehensive universities in Singapore are NUS (with some 38,000 students), and NTU (32,000 students). These two institutions have a relatively long history compared with the other four institutions (SMU, SUTD, SIT, and UniSIM), and are the only local universities in Singapore that were founded before the 2000s. As noted above, the history of NUS can be traced back to 1905 and the King Edward VII College of Medicine, but more specifically to the merger of the University of Singapore and Nanyang University in 1980. NTU's history may be dated from 1956 and the original Nanyang University, and, more recently 1991, when it officially became Nanyang Technological University (see above). SMU primarily focuses on entrepreneurship and business education, aiming to contribute to Singapore's so-called 'knowledge-based economy' (SMU 2015). SUTD, SIT and UniSIM focus on providing a more technologically-informed education that serves societal needs through integrating education and industry (SUTD 2015; SIT 2013; UniSIM 2015). The four newest universities generally share an 'applied' and 'practical' orientation to tertiary education which aims to meet the economic and social needs of the future, in line with government policies for developing a knowledge-based economy.

8.3.2 Singapore as an international educational hub

In addition to the local universities listed above, a number of foreign universities established themselves in Singapore from the early 2000s, with the encouragement of the government, which at the time envisioned higher education as a potential growth market for economic expansion. This initiative, which aimed to make Singapore a 'Global Schoolhouse', by attracting overseas universities to establish themselves and to increase the number of foreign students at school and university level from around 50,000 to a total of 150,000 by 2015. The high hopes for this initiative were set out in a speech by George Yeo, the Minister for Trade and Industry in August 2003, who explained the policy move in terms of the growing demand for education in the Asian region:

> Asians know that a good education can alter decisively the life chances of a child. Many are therefore prepared to pay large amounts to secure the best education for their children. […] Because of Singapore's position between the First and the Third World, our multilingual facility and our excellent public education

> infrastructure, this growing education market in Asia is a major economic opportunity for us. We can play a major role in providing a wide range of educational services both in Singapore and in other parts of Asia. (Yeo 2003)

The Minister then proceeded to explain the economic motivation for this policy move, arguing that 'If we can double or triple the number of international students in Singapore to 100,000 or 150,000, there will be all kinds of spin-offs for our economy' and that 'Our shops, restaurants and housing rental market will all benefit [… and] these students when they return home will expand our international network' (Yeo 2003).

By 2010, a number of international universities had been attracted to set up branches in Singapore, including INSEAD (Institut Européen d'Administration des Affaires), the University of Chicago Graduate School of Business, the University of Pennsylvania's Wharton School, Massachusetts Institute of Technology, Technische Universiteit Eindhoven, Technische Universität München, the Georgia Institute of Technology and Johns Hopkins University (Ng and Tan 2010, p. 180). Other overseas universities with teaching programmes in Singapore at present include Curtin University (from Australia), DigiPen Institute of Technology (the US), James Cook University (Australia), Queen Margaret University (Scotland), Temple University (the US) and the University of Nevada (the US). In addition, local universities have also established joint-degree collaborations with overseas institutions, including a PhD programme run by the National Institute of Education and the UCL Institute of Education; a joint Master's programme offered by NUS's Lee Kuan Yew School of Public Policy, in collaboration with Columbia University, the London School of Economics, and the Institut d'Etudes Politiques de Paris; and a Yale-NUS programme in the liberal arts, which was founded in 2011 (Ng 2013, p. 283).[6]

In recent years, however, there have been a number of problems with the 'Global Schoolhouse' project. In 2004, the University of New South Wales launched its plan to establish a full-scale campus in the city-state, which would go into operation in March 2007. In the event, the campus was closed after only two months in May 2007, with the University citing unexpectedly low enrolments and an 'unsustainable financial position' as the reasons for its withdrawal (Ng and Tan 2010). Other universities have also closed operations in the last few years, including New York University's Tisch School of the Arts, and the University of Chicago Booth School of Business. In the early and mid-2000s, foreign student numbers rose to reach 97,000 in 2008, but this total then started to fall in the following years, and was down to some 75,000 in 2014. In 2011, the government announced a cap on the numbers of foreign students in universities, which was set at

[6] It is unclear from official websites and other sources exactly how many foreign universities are operating in Singapore. Various listings are posted on websites such as the following: Internations (2015), Universities in Singapore (2015), Digital Senior (2015), but one problem here is that such listings seem to conflate both private Singaporean universities and branch universities of overseas institutions, a situation further complicated by multiple collaborations between local educational players with overseas providers. In addition, there are also multi-national educational entrepreneurs such as Kaplan operating locally and providing a platform for degree courses from such Australian universities as Murdoch and RMIT, and UK institutions such as Essex, Northumbria and Portsmouth. The official government list of private colleges and universities lists a few hundred such organisations, but many of these appear to be lower-level vocational institutes, and little hard information about the enrolment and operation of these institutions is provided (Council for Private Education 2015).

a target of 15 per cent of the cohort by 2015.[7] For the present the Global Schoolhouse initiative is receiving somewhat less emphasis from the government, with little talk these days of Singapore as the 'Boston of the East' (Davie 2014). Despite this, Singapore's educational ambitions have spurred its two major universities to increasing recognition in the global university rankings. In the latest QS World rankings for 2015/16 NUS is ranked 12th in the world, with NTU close behind in 13th place.

8.4 The sociolinguistics of EMI higher education in multilingual Singapore

Although English is the sole official language of higher education, and public education generally, in Singapore, the bilingual policy of the government has contributed to a complex patterning of multilingual language use in relation to the four official languages English, Mandarin, Malay, Tamil, as well as patterns of language contact and code alternation. A recent study of the linguistic ecology of college and university students (Siemund, Schulz and Schweinberger 2014) highlighted some of the complexity of multilingualism in Singapore thus:

> [L]anguage use is no either/or-matter, but the product of a complicated mesh of factors comprising speaker competencies, preferences, attitudes and motivations, parameters of the communicative situation, and the topic of conversation. Singaporeans do not speak English *or* Singlish, Mandarin *or* Cantonese, Malay *or* Mandarin, or Mandarin *or* English. They typically command several codes. […] Multilingualism may be regarded as a process not a state. This, however, makes it difficult to assess the extent of multilingualism. (Siemund et. al. 2014, p. 341, italics in original)

In attempting to get to grips with multilingualism in Singapore in general, and the sociolinguistic realities of the use of languages on Singapore university and college (that is, polytechnic) campuses, Siemund et al. (2014) investigated the language use, language background and language preferences of some 300 students. The results of this study indicate that English plays an important role in the lives of these students, that Colloquial Singapore English (or 'Singlish') is an identity marker for these students, and that most university students are either bilingual or trilingual. Another study by Chong and Seilhamer (2014) suggests that Singaporean Malay university students retain a strong sense of Malay identity, partly through the Malay language, even though English has become an integral part of their lives.

Another survey by Bolton, Botha, Heah, Kathpalia, Li, See and Winder (2015) of some 8,600 students and faculty at NTU, reported on the language practices of students at the university, particularly in the students' formal education. The sample for the survey, which was conducted in late 2014 and early 2015, consisted of 8,463 students (28.4% of student population), of which 705 were postgraduates, and 7,717 were undergraduates. A total of 222 teaching staff completed the survey (19.8% of teaching staff population). One interesting finding from this survey is the obvious gap that exists between the undergraduate and postgraduate student populations at NTU. For

[7] Ng (2013) reports that this cap was introduced in response to increasing concerns in the community concerning the provision of university places and scholarships to foreign students. He further explains that the Ministry of Education is currently increasing the number of places for local students, and that by 2015 an estimated 30 per cent of the cohort will be admitted to state-funded universities (Ng 2013, p. 289).

example, and as can be seen in Table 8.2, when students were asked to report on the language in which they had the greatest proficiency, 59% of the undergraduate students reported that they were most proficient in English; among postgraduates, 42% reported to be most proficient in Mandarin, compared with 29% in English, and 27% in 'other' languages as Bahasa Indonesia and Hindi. This gap between the reported undergraduate and postgraduate students in terms of their reported language proficiency can be explained by the fact that a majority of the undergraduate student population at NTU are Singaporean citizens and 'permanent residents' (approximately 77% and 6% respectively). In direct contrast, the majority of postgraduates are non-Singaporean students (approx. 65%), including many students recruited from the People's Republic of China (PRC), for whom English is a foreign language.

Table 8.2 The languages in which NTU students claim greatest proficiency

Language	**Undergraduate students**	**Postgraduate students**
English	59%	29%
Mandarin	31%	42%
Malay	1%	1%
Tamil	1%	1%
Other	8%	27%
	N=7575	N=705

There was also reported variation in the English communication abilities of students according to College affiliation at NTU. Table 8.3 sets out the responses from students of the four major Colleges at NTU concerning their self-reported difficulties ('Some' or 'A lot') in understanding, speaking, reading and writing in English. From this table, it can be seen that there are clear differences between students from the so-called hard sciences, that is, Engineering, and Science, and students from Business and the Social Sciences. Students from the College of Engineering and the College of Science expressed higher levels of difficulty with understanding, speaking and writing in English in comparison with students from the College of Business and students from the College of the Humanities, Arts and Social Sciences (HASS).

Table 8.3 Reported difficulty in listening, speaking, reading and writing English for undergraduate and postgraduate students by College at NTU

College	**Engineering**		**Science**		**HASS**		**Business**	
Difficulty…	**UG**	**PG**	**UG**	**PG**	**UG**	**PG**	**UG**	**PG**
Listening to English	21%	27%	16%	27%	12%	14%	6%	11%
Speaking English	20%	41%	15%	32%	11%	21%	5%	18%

Reading English	16%	21%	10%	11%	10%	11%	5%	5%
Writing English	31%	40%	25%	32%	19%	23%	10%	13%

N=8280

It would be interesting to investigate the extent to which these findings may be mirrored by similar results from the other tertiary institutions in Singapore. Despite such reported difficulties, it is evident that, in relative terms at least, English medium education in Singapore has been a success story unequalled by other Asian nations in terms of promoting proficiency in the English language (Bolton 2008). Nevertheless, it is important to consider the wider multilingual ecology of the Singapore society, and the often complex multilingual worlds of Singaporean university students. At NTU, for example, it is clearly visible that students engage in complex patterns of 'translanguaging' on campus, switching from more formal registers of English in the classroom to code-mixing and code-switching (routinely involving Colloquial Singapore English, Malay, Mandarin and Indian languages) in the corridors and cafeterias (see Heugh, this volume, on translanguaging). Indeed, one interesting strand of future research would be to investigate how the home languages of students, as well as their personal language experiences in other domains, connect, or fail to connect, with their academic language needs at university.

8.5 Conclusion

Singapore is a unique multi-ethnic nation, strategically situated at the southern tip of the Malay peninsula, and it has become an economic and financial powerhouse over the last fifty years.[8] Today, it has a diverse economy based on a variety of activities, including its port and entrepot trade, its financial centre, and its exports of electronics, IT products and pharmaceuticals (World Factbook 2015). In recent years, its language policies at all levels of education have been aimed at enhancing the economic development of society, and ensuring that Singapore remains competitive in the global economy. This desire, if not need, to maintain its global competitiveness provides one important strand of explanation with reference to the role of EMI education in the Lion City, but is only part of the story, as this article has sought to explain.

This chapter began with a detailed discussion of the colonial education system which produced a patchwork of Malay, English, Chinese, and Indian schools, before moving on to a discussion of the promotion of English-medium education and the foundation of the University of Malaya in the years immediately following the Second World War. Crucially, this discussion indicates that the contemporary (post-Independence) policy of promoting English had strong roots in the colonial language policies of the 1950s. The chapter then proceeded to a consideration of the concerns in policy with 'nation-building', not merely in its ideological sense but also in a very practical sense, as the early leaders of the newly-independent nation saw the vital need for technical and scientific education geared to the needs of a newly-industrializing economy. The following sections of the chapter then focused on the contemporary context of higher education, the review of policy

[8] Singapore's GDP per capita for 2014 was an astonishing US$83,100. The comparable figure for the US is $54,400, with $46,600 for Australia, and $39,800 for the UK (World Factbook 2015).

initiatives by the government linked to the ‘Global Schoolhouse’ project of the early 2000s, and the sociolinguistics of EMI education at a leading Singapore university. One major argument that emerges from this is that the promotion of English-medium education in Singapore is perhaps best understood in terms of the dialectic between the (partly-forgotten) educational and ethnic politics of late colonialism and the pragmatic utilitarian needs of post-independence Singapore, where scientific, technological, and vocational education has been promoted to serve the needs of a knowledge-based economy that is internationally competitive on the world stage.

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