

13

Open to Talent

Higher Education in Singapore

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Preliminary

It is appropriate to close this book with a picture of student mobility in Singapore, since the meeting which generated this book was held there. Singapore also presents a unique case. It was noted in Part Three that Nigeria is almost alone in having an explicit government policy on foreign students. For that government and for most other writers in this book, the policy drives are the perceived international nature of universities and the goals of national foreign policy. In the case of Singapore, there is a third drive, related to home policy as well, since it is in its own interest, in its very unusual position and circumstances, to be open to talent.

Tertiary education in Singapore

As Singapore is an ex-British colony, its education system, and especially tertiary education system, has distinct British characteristics. However, in the more recent past, and especially with the establishment of the Nanyang Technological University, more American links and features, like the modular system, are becoming evident. Tertiary education exists at two levels, viz: the two universities; and the four polytechnics; with a number of private sector institutions that offer a combination of diploma and degree courses - the latter normally offered in collaboration with overseas universities, which award the degrees. No degree courses are offered at the polytechnics, but some 500 places are available at the universities for high-achieving polytechnic students.

The National University of Singapore, Singapore's oldest university, was established as the University of Malaya in 1949 to serve both Malaya and Singapore (see also Chapter 10). Out of the University of Malaya grew University of Singapore, established in 1962 to serve Singapore and which grew rapidly into a comprehensive university in the 1970s and 1980s. In 1980 following the recommendations of the Dainton Report (1980), the university merged with Nanyang University, a small Chinese-medium institution, to form the National University of Singapore. NUS teaches the largest number of courses and has currently an enrolment of about 17,000.

It has traditionally been, by virtue of its history, the major tertiary institution receiving foreign students, both at undergraduate and post-graduate level. Its rapid expansion also fuelled an influx of expatriate faculty and research and development scientists who work at the specialised research institutes, such as the Institute of Systems Science.

The Nanyang Technological Institute was established in 1981, at a time of rapid economic growth and when Singapore's need for highly trained manpower, especially in the engineering and business fields, was most acute. It was originally intended that it would evolve into a technological university but when the need for a second comprehensive university became apparent in the late eighties the Nanyang Technological University, based on a 'hybrid US model', was established in 1991. At the time of its establishment, the Institute of Education, Singapore's premier teacher education institution, was upgraded to the National Institute of Education and incorporated within NTU. NTU has a student enrolment of about 10,000.

The four *polytechnics*, The Singapore Polytechnic (1959), Ngee Ann Polytechnic (1963), Temasek Polytechnic (1990) and Nanyang Polytechnic (1992) concentrate on meeting Singapore's need for technician and diploma-level manpower, especially in the engineering and business fields. The polytechnics offer a wide variety of courses, for example, land surveying, polymers, courses in commerce, in health-related areas, in design and fashion and computer studies. Total polytechnic enrolment stood at 17,106 in 1991. In contrast to the universities, the polytechnics offer part-time courses for working adults, have close links with employers and industry and are generally seen as being more flexible and vocation-oriented. All the polytechnics seek to be seen as credible training and education institutions and all have various links with polytechnics and universities abroad to provide for specialised courses.

Private sector institutions In the light of recent Government

statements promising greater diversification of tertiary education we should take note as well of the Singapore Institute of Management (SIM). SIM is an independent, self-financing management organisation founded in 1964, with the aim of developing managerial skills and talent to contribute to expansion and strengthening of the economy. In 1989, SIM offered four Master's, two Bachelor's degrees and 15 Diploma and Certificate programmes, with a total enrolment in these programmes of 8,108. The Master's programmes were conducted with Brunel/Henley (500 students), George Washington (23), Royal Melbourne Institute of Technology (27) and Rutgers (16). The last three programmes were launched in 1989. The Bachelor's degree programmes, which are organised with the University of London and the Royal Melbourne Institute of Technology, have a total enrolment of 805 students in both the full and part-time modes. A new Diploma in Economics programme awarded by the University of London was launched in 1989. Offered in full-time and part-time modes, it provides 'A' level students who successfully complete the one-year programme in Singapore direct second year admission to the University of London's BSc programme.

The Singapore Institute of Management has also been identified as the organisation to link up with the United Kingdom's Open University to offer distance learning degree programmes in Singapore. Three programmes will be offered beginning 1994, viz: BA (English Language and Literature); BSc (Mathematics), and BSc (Computer Science). Annual intakes of 500 are planned and the OUDP is expected to have eventually an enrolment of about 6,000 students. One of the conditions of the agreement imposed by the Open University is, however, said to be that no non-Singapore residents be admitted to the programme.

Yet another example of privately operated tertiary education in Singapore is provided by the six or so private education centres who offer, between them, almost 1,000 places to students who wish to read for a Bachelor of Law degree from the University of London (External). The duration is three years and those who wish to practise must then go to the UK to prepare and sit for the Bar examinations set by the Council of Legal Education. The basic qualification is either two 'A' level passes or three 'O' levels plus a pass in the Associated Examining Board examination. The cost of tuition is comparable to NUS but costs go up when Bar preparation is included.

Student flow issues: The Singapore context

Before we look at specific aspects of issues related to student mobility it is necessary to understand something of the context within which tertiary institutions operate. The first is that Singapore - bereft of natural resources - has, since independence, paid great attention to human resource development. Educational investment has been high and the policy has been one of steady growth without compromising on quality, particularly regarding entry requirements. At the University of Singapore, for instance, student enrolment (excluding post-graduate) rose from 1,641 in 1961 to 9,078 in 1980 and higher still to 16,714 in 1989. The general philosophy of the government has been to avoid over-rapid expansion and to align enrolment patterns to perceived manpower needs. This policy, combined with high economic growth has resulted in a strong tertiary education system, well-resourced and credible, both at home and in the region.

The public demand for post-secondary qualifications has, however, put an increasing pressure on the government to provide yet more places. A number of reasons can be cited. Standards have risen in secondary education and more students are now deemed to be capable of profiting from tertiary education. Increasing affluence, and still favourable rates-of-return to post-secondary and specialised qualifications, add to the demand. And if places are not available locally, more and more parents are willing to invest in study abroad. About 10,000 Singapore students are said to be studying for degrees abroad.

A third aspect worth noting is that Singapore has traditionally been a major *regional* source of opportunities in higher education. Nanyang University, for instance, was established to provide Chinese-medium tertiary education throughout South-East Asia. Because both Malaya and Singapore were under British rule, there has traditionally been a flow of students between the two countries; the University of Malaya was originally intended to serve both countries. What has kept up the flow of Malaysian Chinese students in the present has been the Malaysian government's policy of affirmative action in favour of Malays to redress ethnic imbalances, and the decision to promote the use of Bahasa Malaysia in tertiary education (see Chapter 10).

Finally, there is the publicly stated policy in Singapore that since Singapore, due to its small population, has a small talent pool, it needs to remain open to talent from outside Singapore. Four objectives have been identified for allowing foreign students to study in Singapore's universities:

- 1 That this will add to the talent pool and augment expertise since some of these students will choose to work in Singapore.
- 2 That, even if such students return to their countries, they will take with them a good impression of Singapore, its ethos and ideals, and generate goodwill for Singapore.
- 3 Singapore students benefit from interacting with foreign students since this enables them to broaden their intellectual and social horizons.
- 4 Future political and economic co-operation can be enhanced since the political leadership is likely to be drawn from the tertiary education elite.

At present there are attempts to recruit qualified persons from the People's Republic of China, Taiwan, Hong Kong and India to add to Singapore's pool of expertise. Allied to this is the view that Singapore's economy is global-oriented and will become increasingly so. Talent shortage and economic imperatives thus impel Singapore to remain open to foreign students. Accordingly, the current policy is to set aside up to 20 per cent of first year places at the universities for non-Singaporean students. Though this policy has been clearly stated and defended, it is not without its detractors. The complaint has been principally that:

... foreign students deprive Singaporeans of places in the 2 universities, driving some of them abroad to study. (*Straits Times* 2/6/1991)

Others feel that the supposed benefits may be overstated, and outweigh the disadvantages arising from admitting foreign students.

Foreign students at Singapore's tertiary institutions

We noted earlier that the Singapore government had set aside a quota of 20 per cent of first year places for foreign entrants at the two universities. In practice, this figure has never been reached. According to a *Straits Times* report 2/6/1991 about 17 per cent of students at the NTU are non-Singaporeans while at NUS the figures vary from four per cent in the Arts and Social Science faculty to 14 per cent in the Engineering faculty. The largest number of undergraduate places is taken up by students from Malaysia, with a few from the other ASEAN countries. Students from the People's Republic of China and from South Asian

countries, notably India, are found mostly in postgraduate programmes. At NUS, foreign students from Hong Kong and Australia are found in the medical-clinical programmes, and there are undergraduates as well from Mauritius. The figure for the polytechnics is smaller, around five per cent of total intake at the Singapore Polytechnic. At Temasek Polytechnic the figure is 3.6 per cent with the largest number coming from Malaysia.

All respondents to my questionnaire on student mobility were agreed that the *socio-political and educational contexts* were supportive of enhanced student flows. All referred to the reasons advanced by the government in encouraging foreign student flows. It was noted that individual faculties had introduced a limited number of schemes for exchange students. When asked what might be considered a deterrent to student mobility, two issues/aspects were identified, both of which are also prominent in other Commonwealth countries, according to the evidence of earlier contributors to this book. It was noted that tertiary institutions in Singapore tended to have a rigid course structure and therefore found it difficult to assess equivalences of courses and programmes taken at other overseas universities; exemptions for courses taken at other institutions were therefore difficult to obtain. A second difficulty arose from the commitment to provide Singaporean students with experience of hostel life, though it was recognised that foreign students were most in need of reasonably-priced accommodation, especially if they came from poorer countries. Though some hostel places were in fact set aside for them, it was difficult in practice to meet all their requirements.

Sensitive aspects of policy As was to be expected, the perception that deserving Singapore students would be denied places as a result of admitting foreign students, and that this would create difficulties for the university, ranked high. A second concern had to do with the financial cost of admitting foreign students to the universities. Though in practice foreign students pay a higher rate of fees, this would not meet the full cost of a tertiary education and the problems of using taxpayers' money to subsidise the costs of foreign student study in Singapore was noted. It was also observed in one submission that although the foreign student was often a high achiever in his/her home context, not all of them were able to cope with the rigorous academic programme in Singapore's institutions, so that Singapore's experience matches that of the Indian Institutes of Technology reported by Dr Indiresan in Chapter 12.

Sometimes, this had to do with the students' command of English,

Singapore's tertiary medium of instruction, sometimes with study and work practices – two to three hour written end-of-year examinations, which are common in Singapore's universities, are daunting challenges to many foreign students – and the inability to overcome quickly the disorientation that comes with living and competing in a different academic and social milieu. As in India, failures or referrals among foreign students posed administrative and academic problems for the university authorities, and made it difficult to make a case for steady expansion. Finally, it was also pointed out that as many students considered Singapore a good study destination, and the Singapore government would be pleased to have the best of them work in Singapore after graduation, there was a clear recognition on the part of both government and university officials that the 'recruitment' of foreign students into Singapore's institutions was a sensitive matter, since other governments rightly feared a 'brain drain'.

An interesting feature of the Singapore situation with regard to foreign students is the mechanism by which such students are admitted. Singapore actively seeks well-qualified foreign students to enter its tertiary institutions, since official policy is thereby to widen Singapore's talent pool. This is clearest where postgraduate students are concerned. Singapore sees its future economic prosperity to lie in a knowledge-based economy with a strong indigenous R & D component.

Thus a national goal is to increase the number of research scientists and engineers from 29 out of every 10,000 workers to 40. Singapore, at the moment anyway, does not have the numbers to reach this goal and must recruit abroad. One mechanism is the offer of places in postgraduate programmes at the two universities. There is active recruitment for and encouragement of qualified students to study in Singapore, some of whom are funded by a five-year S\$158 million Manpower Development Programme. This plan includes 100 Industrial Fellowships a year, awarded for Master's and Doctorate studies. The other avenue is through the award competitive government scholarships for ASEAN and Hong Kong students to study at secondary and sixth form levels and upon successful completion of studies to apply to local universities. Both these programmes are likely to continue for some time to come and can be seen as positive, state-level mechanisms to increase student mobility.

As it is to be expected, institutions, in line with government rationales, welcomed the prospect of having foreign students in their midst; they recognised, in particular, the acute challenge faced at the postgraduate level if the government's ambitious targets were to be met. As

we noted earlier, since the permitted level of 20 per cent had not been met, there was excess capacity available in terms of foreign students. It is likely, however, that universities will wish to be more accommodating only if standards are not compromised; by their very nature university places are intensely competed for.

Tertiary education officials are clear that admission would only be possible if the quality of the foreign student is 'much superior to the local average'. The establishment of two new polytechnics in the last three years will mean an eventual increase in places and thus further expansion of foreign student intake in these institutions should be possible. According to one respondent, at the university level, foreign students are less likely to benefit if they move into Humanities and Social Science courses, and more likely to benefit in the Engineering, Computer Science, and Business Studies courses, for instance. This view was based on the belief that equipment and facilities were superior in Singapore's tertiary institutions in these areas; besides, it would appear that more university places were available in these areas.

All respondents recognised that the student from abroad, often ill at ease in a foreign social and academic environment, needed assistance and guidance. At the institutional level, it was noted that there was a need to ensure successful integration and programme completion if the objectives of foreign student mobility were to be met. It was pointed out by one respondent that while institutions tended to concentrate on assessing the prospective foreign student's academic qualifications little attention was paid to the student's ability to adapt, an ability that would be crucial to academic success. In particular, female students from less urbanised countries faced a daunting challenge in adjustment and adaptation. Many of the other concerns expressed by staff of institutions on the reception of foreign students were similar to those reported from other countries in earlier chapters. Some which only emerged from the Singapore study are given below.

Respondents expressed a need for more systematic institutional development of infrastructure to cope with the needs and problems of foreign students. One suggestion was for the establishment of a *Foreign Student Advisory Service* as a separate autonomous unit. Such a unit, and the autonomy this would provide would enable planning and services to be organised in a pro-active manner and lead to better integration of foreign students.

There was also recognition that flexible, short-term attachments or even exchange schemes would be desirable. It was posited that the crucial variables in the success of these programmes were *duration of*

attachment, with one academic year considered ideal, the availability of hostel accommodation to encourage better student-student interactions, strong official recognition at the institutional level and a good degree of staff interest and involvement.

In addition, attention was given to the role of academic staff in promoting both student mobility and the cause of student mobility. It was noted that there was often no incentive for staff to deal with foreign students, and some staff might feel the demands of catering to the needs of foreign students took up too much time. Time-off on workload would be a feasible option. However, the point ought to be made to academics that they are part of a global scholarly network with an obligation therefore to promote the cause of student mobility. Also, academic staff were more likely to travel abroad on sabbatical and on conferences than university administrators or student liaison officers and thus were in a better position to judge quality and standards and indeed, at the postgraduate level, to act as recruiters of students. Academic staff are a potential valuable resource and policy making to improve student mobility should include a bigger role for them.

The financial burden on foreign students was emphasised and institutions have no power to vary fee regimes or provide subsidies. Current practice at the universities was to charge ASEAN foreign students one and a half times the home student fees and non-ASEAN students three times more. There is, however, a *Study Loan Scheme* available to foreign students at NUS, which provides an interest-free loan, repayable by instalment over a maximum period of five years. The amount of the loan varies from S\$300 to S\$12,300 in a year.

Conclusion

Singapore is one of the few countries that has made an explicit official statement about the benefits of having foreign students intermix with its national student population, and indeed set a number/percentage that could be admitted. Yet, while foreign students are welcomed, and indeed many foreign students view Singapore as a good place to study, the quota is in all respects unfulfilled (although the gap between the quota and numbers recruited is less than that reported for other countries studied in this book). This underlines the point that without a properly developed infrastructure and agreed procedures, which must involve not just university authorities but also other state institutions such as immigration, the ideal of increased student mobility cannot be successfully met.

Singapore's experience and success in attracting students from Malaysia also points to a potentially sensitive aspect of student flows. The literature often suggests or treats student flows as non-problematic in terms of nationality. Very often the benefits of cross-border study are emphasised but the flow of students from less developed to more developed countries in the South raises fears of a brain drain. This issue will have to be dealt with sensitively if relations are not to be muddled.

Another major aspect of the Singapore experience is that of the 'problem' of credit recognition or equivalences. One of the reasons why students seek to study abroad is the perception that standards are higher and therefore international recognition of degrees earned is more assured. But high standards in the host country are often jealously guarded and a lack of knowledge and/or perception of lower standards in the sending countries then acts as a barrier to increased mobility. At the very least there should be Commonwealth Secretariat initiatives to make standards more widely known and objectively to establish equivalences.

Finally, the issue of language standards must be addressed. It is often assumed that the use of the medium of English in tertiary education eases student flows within the Commonwealth. That it certainly does, but the bland observation hides problems related to levels of language competence appropriate to tertiary studies. In our experience, some foreign students find the challenge of writing demanding examination papers within time constraints difficult. Attention therefore needs to be paid to this issue to ensure successful completion of programmes.

Three positive features in the Singapore socio-educational environment promise a better environment for increased student mobility. Increasingly, the government is pushing the idea of a global orientation for Singapore's economy and citizens. Large Singapore companies are being urged to set up offices abroad and Singaporeans in professional occupations like law are being urged to set up abroad. Increased attention is being paid to subjects like European Studies at the University, and the teaching of foreign languages at the school and tertiary level. This opening to the foreign will further improve the conditions for increased student flows. Secondly, as a result of indigenous pressure and needs, post-secondary education and post-graduate education is being expanded. Such expansion also improves prospects for increased student mobility. Finally, both universities are expanding hostel facilities, which should also help the cause of mobility.