

CHANGING EDUCATION PROFILE OF SINGAPORE POPULATION

INTRODUCTION

Over the last decade, significant gains have been made in Singapore's economic and social development. One such area in which much progress has been made is in the education attainment of Singapore's resident population.

This paper provides an overview of the education profile of Singapore residents. It highlights the changes in education attainment of Singapore residents that have taken place during the last decade and examines the extent of education upgrading among non-graduate residents. The paper also looks at how Singapore's education profile compares with that of Hong Kong.

Data are obtained from the latest round of Singapore Population Census conducted in 2000. Comparisons are made with the 1990 Population Census and 1995 General Household Survey. Data for Hong Kong are drawn from Hong Kong 1991 and 2001 Population Censuses.

HIGHEST QUALIFICATION ATTAINED

The education profile of Singapore residents had improved significantly in the last decade. In 2000, some 57 per cent of the resident non-student population aged 15 years and over had secondary or higher qualifications (Table 1). This was 15 percentage points higher than the corresponding 42 per cent recorded in the 1990 census. The share of university graduates in the population had also increased significantly – from 4.5 per cent in 1990 to 12 per cent in 2000.

TABLE 1 HIGHEST QUALIFICATION ATTAINED

Highest Qualification Attained	Per Cent					
	Singapore Residents		Citizens		Permanent Residents	
	1990	2000	1990	2000	1990	2000
Total	100.0	100.0	100.0	100.0	100.0	100.0
No Qualification	31.3	19.6	31.5	20.9	27.2	7.5
Primary	27.0	23.1	26.8	23.6	30.9	17.6
Secondary	26.5	24.6	27.0	25.3	16.7	18.5
Upper Secondary	7.3	14.9	7.3	14.5	7.1	18.4
Polytechnic	3.5	6.2	3.4	6.3	3.8	5.2
University	4.5	11.7	4.0	9.5	14.2	32.7

The improved educational attainment of the resident population reflected the expansion in educational facilities to meet the rising aspirations of the population to attain higher education. Thus, among Singapore citizens, 1 in 10 had attained university qualifications in 2000 compared with 1 in 25 in 1990. The share of those with upper secondary or polytechnic qualifications also increased from 11 per cent in 1990 to 21 per cent in 2000.

Another contributory factor was the increased inflow of well-educated permanent residents. Among the non-student permanent residents, 33 per cent were university graduates and another 24 per cent had post-secondary qualifications. The education profile of the permanent residents had improved markedly since 1990 when only 14 per cent were university graduates.

Good Progress amongst All Ethnic Groups

All ethnic groups among Singapore resident population had improved their education profile in the last ten years. The proportion with secondary or higher qualifications had increased from 43 per cent to 58 per cent among the Chinese, from 36 per cent to 50 per cent among the Malays and from 41 per cent to 62 per cent among the Indians (Table 2).

TABLE 2 HIGHEST QUALIFICATION ATTAINED BY ETHNIC GROUP

Highest Qualification Attained	Per Cent							
	Chinese		Malays		Indians		Others	
	1990	2000	1990	2000	1990	2000	1990	2000
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No Qualification	32.0	20.2	30.5	20.0	27.7	13.9	15.5	7.5
Primary	25.6	21.9	33.1	30.1	31.4	24.5	26.5	16.2
Secondary	25.7	23.2	30.0	32.1	27.8	26.4	33.9	25.2
Upper Secondary	7.6	15.0	4.9	12.9	7.7	15.6	12.2	19.9
Polytechnic	4.1	7.0	0.9	2.9	1.2	3.1	2.3	3.8
University	5.1	12.6	0.6	2.0	4.1	16.5	9.6	27.5

In 2000, the Indians had the highest proportion of university graduates – 17 per cent compared with 13 per cent for the Chinese and 2 per cent for the Malays. The Indians also had the largest increase in proportion of university graduates between 1990 and 2000 compared with the Chinese and Malays.

The jump in the proportion of Indian university graduates was partly due to the entry of Indian permanent residents possessing university qualifications in the last decade. Among the population of Indian permanent residents, 51 per cent were university graduates in 2000, up from a mere 9.0 per cent in 1990 (Table 3). In contrast, the increase was smaller among the Chinese and Malay permanent residents.

TABLE 3 PROPORTION OF RESIDENT UNIVERSITY GRADUATES BY ETHNIC GROUP AND RESIDENTIAL STATUS

Ethnic Group	Per Cent					
	Singapore Residents		Citizens		Permanent Residents	
	1990	2000	1990	2000	1990	2000
Total	4.5	11.7	4.0	9.5	14.2	32.7
Chinese	5.1	12.6	4.6	10.8	16.3	29.7
Malays	0.6	2.0	0.6	1.8	0.8	5.6
Indians	4.1	16.5	3.6	8.1	9.0	51.0
Others	9.6	27.5	5.3	11.0	31.9	51.1

Well-Qualified Young Adults

The majority of young Singapore residents had attained secondary or higher qualifications. In 2000, 82 per cent of residents aged 25–34 years had obtained at least secondary qualifications (Table 4). The proportions of polytechnic and university graduates among this group had improved

significantly over the decade – from 5 per cent to 11 per cent for polytechnic graduates and from 7 per cent to 24 per cent for university graduates.

While the older adults were not as well-qualified as the younger ones, the proportions with at least secondary qualifications were still quite high – at 63 per cent amongst those aged 35–44 years and 47 per cent for those aged 45–54 years. However, relatively lower proportions of the older adults were polytechnic or university graduates.

TABLE 4 HIGHEST QUALIFICATION ATTAINED FOR AGE GROUPS 25–54 YEARS

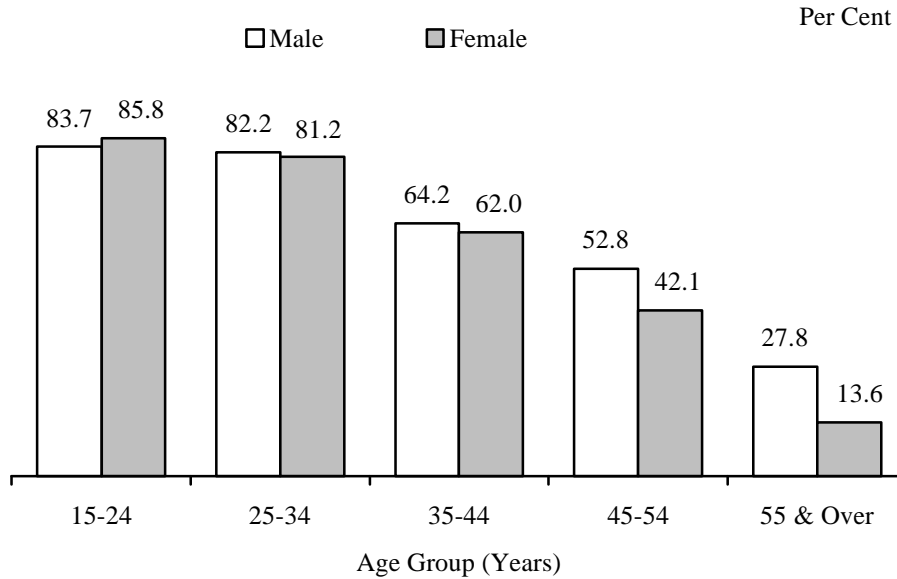
Highest Qualification Attained	Per Cent					
	25–34		35–44		45–54	
	1990	2000	1990	2000	1990	2000
Total	100.0	100.0	100.0	100.0	100.0	100.0
No Qualification	12.2	4.3	23.9	9.7	49.7	19.8
Primary	31.2	14.1	35.2	27.1	27.4	32.7
Secondary	36.9	25.7	26.3	30.9	13.6	26.1
Upper Secondary	7.6	20.6	7.0	15.1	4.6	12.5
Polytechnic	4.9	10.9	2.4	4.7	1.2	2.1
University	7.2	24.4	5.2	12.4	3.5	6.7

Compared with 1990, all age groups had shown significant increases in the proportion with secondary or higher qualifications. The ageing of the better-educated cohorts had helped improve the education profile of the older population.

Parity in Educational Attainment between Younger Males and Females

With equal education opportunities, younger females were as well-qualified as their male counterparts. In 2000, 81 per cent of females aged 25–34 years and 62 per cent of those aged 35–44 years had at least secondary qualifications (Chart 1). The corresponding proportions for the males were 82 per cent and 64 per cent. There was greater education disparity between males and females in the older age groups.

CHART 1 PROPORTION WITH AT LEAST SECONDARY EDUCATION, 2000



EDUCATIONAL UPGRADING

More Non-Graduates Acquired Additional Qualifications

Continuing education and upgrading through the attainment of technical, commercial and vocational qualifications at non-tertiary levels have become more prevalent. Among residents who were not university or polytechnic graduates in 2000, 13 per cent had acquired technical, commercial or vocational qualifications after leaving school. This was higher than the corresponding proportion of 9.2 per cent in 1995. The increase was most marked for the prime working age groups between the ages of 25 and 39 years (Chart 2).

CHART 2 PROPORTION WHO ACQUIRED TECHNICAL, COMMERCIAL OR VOCATIONAL QUALIFICATIONS



Low Incidence of Educational Upgrading among the Older and Less Educated

Older adults generally have lower propensity to upgrade their educational qualifications. Among the non-graduate residents aged 40 years and over in 2000, less than 15 per cent had acquired technical, commercial or vocational qualifications. In comparison, a much higher proportion of 30 per cent of those aged 25–29 years had upgraded themselves.

Educational upgrading is less prevalent amongst those with below secondary qualifications. In 2000, only 9.4 per cent of those with primary qualifications and a mere 1.2 per cent of those with no qualifications had acquired technical, commercial or vocational qualifications (Table 5). Among the females, the proportion of those with less than secondary school education who sought further education was even lower.

The likelihood of educational upgrading appears to be stronger amongst secondary school leavers. Among both the males and females with secondary and upper secondary qualifications in 2000, more than 20 per cent had acquired additional qualifications.

**TABLE 5 PROPORTION WHO ACQUIRED ADDITIONAL QUALIFICATIONS
BY HIGHEST ACADEMIC QUALIFICATION AND SEX**

Highest Academic Qualification	Per Cent					
	Total		Males		Females	
	1995	2000	1995	2000	1995	2000
Total	9.2	13.1	11.3	16.0	7.3	10.4
No Qualification	0.6	1.2	1.2	2.5	0.2	0.5
Primary	6.7	9.4	9.7	13.1	2.9	5.1
Secondary	16.3	22.7	18.2	25.6	14.5	20.0
Upper Secondary	17.3	22.7	14.6	21.6	19.8	23.7

Majority of Less-Educated Obtained Basic Certificate

The level of academic qualification is the main determinant of the type of technical, commercial or vocational qualification acquired after leaving school. Over 70 per cent of those with primary or no qualifications obtained a basic certificate such as the National Trade Certificate Grade 3 (NTC-3) or Certificate

of Competency (Table 6). In contrast, the majority of the secondary-educated obtained an advanced certificate, with a large group moving on to obtain diploma, advanced diploma or professional qualification.

TABLE 6 TYPE OF TECHNICAL, COMMERCIAL OR VOCATIONAL QUALIFICATION ACQUIRED BY HIGHEST ACADEMIC QUALIFICATION

Type of Technical, Commercial or Vocational Qualification	Per Cent							
	No Qualification		Primary		Secondary		Upper Secondary	
	1995	2000	1995	2000	1995	2000	1995	2000
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Certificate	82.0	81.6	72.5	73.2	33.0	45.9	20.3	36.0
Advanced Certificate	16.0	18.4	25.2	23.6	44.6	37.1	22.6	32.7
Diploma / Advanced Diploma	1.0	-	1.5	1.4	16.5	10.6	40.5	20.7
Professional Qualification	1.0	-	0.8	1.8	5.9	6.4	16.5	10.6

Comparisons with Hong Kong

Table 7 provides a comparison of the education profile of Singapore and Hong Kong. The education profile has improved in both cities during the 1990s. With Singapore's emphasis on post-secondary education, the proportion with post-secondary qualifications has surged. Starting at the same base in 1990/1991, the share of the population with post-secondary education in Singapore is now higher than that of Hong Kong.

TABLE 7 HIGHEST QUALIFICATION ATTAINED IN SINGAPORE AND HONG KONG

Highest Qualification Attained	Per Cent					
	Singapore Total Population		Singapore Resident Population		Hong Kong Total Population	
	1990	2000	1990	2000	1991	2001
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
Below Secondary	58.3	45.1	57.5	42.5	57.2	53.8
Secondary	26.5	25.0	27.5	26.2	26.8	24.2
Post Secondary	10.8	18.4	10.9	20.5	10.1	11.5
University	4.4	11.6	4.1	10.8	5.9	10.5

Notes : Data refer to persons aged 15 years and over. For Singapore, highest qualification attained refers to the highest standard passed or the highest level where a certificate, diploma or degree is awarded. Students' highest qualification attained were imputed from their level of education attending. For Hong Kong, data refer to the highest level of education completed.

Today, Singapore has a relatively larger graduate pool than Hong Kong. Of the total population in Singapore in 2000, 12 per cent were university graduates. Foreign talent inflows provided an important source for the increase in

university graduates. The corresponding proportion was lower in Hong Kong, at 11 per cent in 2001.

CONCLUSION

Singapore residents have become better educated during the last decade. There are now proportionately more residents with upper secondary and university qualifications. Resident non-graduates have also developed a keen interest in education upgrading with more pursuing technical, commercial or vocational qualifications.

Over the years, the education profile of Singapore residents is likely to improve as more opportunities are offered for education at tertiary level. There will be an increasing demand for education upgrading among resident non-graduates and even among graduates as more residents recognise the importance of continual upgrading to maintain and improve their employability and keep their knowledge and skills up to date and relevant.

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