

ADDRESS BY THE PRIME MINISTER, MR. LEE KUAN YEW,  
TO MEMBERS OF THE POLITICAL ASSOCIATION OF THE  
UNIVERSITY OF SINGAPORE ON “HIGHER EDUCATION AND  
SINGAPORE’S FUTURE” ON 23 DECEMBER 1977

Since I last spoke in this lecture theatre, the temper and composition of the university has changed. First, nearly all the male students have now done 2.5 years National Service – older, I hope wiser. Second, the prospect is of a less buoyant employment market for graduates. I believe the mood is more sober and less boisterous.

One way to keep a population on its toes is high unemployment, a salutary method of social discipline.

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We have been fortunate, particularly in not having had significant unemployment in the years since the oil crisis. Therefore, social discipline and work discipline have to be achieved by other means – management controls, cultural habits and social pressure.

From Labour Ministry statistics, graduate unemployment is zero. By not having been born earlier to catch the economic boom before October 1973, what you will miss is the prospect of rapid promotions and increments.

For any government, high graduate unemployment is one of the key indicators of political disorder. The more trained and educated people a country has who are unemployed, the greater the potential for social and political unrest. Therefore, oil producing countries who have come into fabulous wealth since 1973, have been cautious – having seen what has happened in India, in Pakistan, in Ceylon – in substantially and rapidly increasing students who go to universities.

Our graduate unemployment rate is zero for two reasons. First, rapid economic development. Second, a university enrolment policy that ensures that only those who are clear potential passes are admitted and that the pass standard is never lowered.

We have from 1970 to 1977 between 7-9% of those who made Secondary 1 going to university (Table 1). This compares with 9.5% (Table 2) for England and Wales. However, if we take the percentage on the base of entrance into Primary 1, then although for England and Wales the figure is still 9.5% for

Singapore, the figures range from 4-5%. The reason is that some 35-40% of Primary 1 students did not pass the Primary School Leaving Examinations.

I hope, with the abolition of automatic promotions, we shall reduce the failure percentage rate to between 20-25%.

From 1970-75 in Japan, the figure was 31%. In America, 48%. These are not comparable figures because the Japanese and American education systems are different from ours which was built on the British norm. Japanese and American figures will include all those who made Pre-U 2 of our school system. However, the Japanese percentage of 31% is impressive because a large slice of that figure is in technical education.

If we add our Polytechnic, Ngee Ann students to the percentage who make tertiary educated, against secondary one as the base, we have an additional 6-9%. But placed against a primary one base, the figures go down between 4-5%.

For those in the apex of this pyramid, the universities, you may be reassured to know that we have in 1976 4,730 employment passes of professionals. Engineers are the largest group (2,552), next, teachers (1,191), then doctors and dentists (338), accountants (278), and architects (210). (Table

3). In addition, there are 920 university-trained who are on work permits. They are those starting their careers with salaries below \$750. Again, the largest group is for engineering (188), and next science graduates (171), most probably as trainee teachers (Table 4).

A significant part of our economic growth has been contributed to by these professionals.

Another set of figures will give you an idea of the magnitude of the seats you will have to fill if we were to attempt a policy of Singaporeanisation. There are 15,155 employment pass holders and foreign investors. Together, they earned, in 1974, from the latest figures available, \$420 million. This is income for themselves, not for the companies. It is from their income tax returns in Singapore. It does not include the arrangements they may have for incomes to be paid in, the Bahamas or Bermuda or other tax-free havens. Remove these 15,000 and I venture the guess that we have within 12 months about 300,000 unemployed (30% of our workforce). It will take 12 months because economic activity will go on until new decisions were not made, or wrong ones taken, and production and sales come to a halt.

When we embarked energetically on this economic policy of global economic links after 1965, we did so with our eyes wide open. This economic strategy has linked us more closely and directly to the major centres of industrial strength – trade, manufacture, communications, finance, the lot. There is no way to embark on Singaporeanisation without irreparable damage. I do not see us producing the number of engineers, management consultants and decision-makers with the experience and judgement to fill these jobs, even if all the firms wanted us to, for at least 20 years. Before then, new advances in business and industry will bring in a new generation of experts and expertise. Therefore the urgent need is to get more of our students educated better, to cut down the wastage. We have to improve our education from kindergarten upwards to post-university training.

Our wastage rates are terrifying. In 1964, nearly 64,000 students entered primary one, the peak year. They were born in 1958. The PAP took office in 1959. So I can disclaim responsibility. But the PAP was saddled with the burden. In 1977, the primary one admissions were down to 47,000. For 1976, and again in 1977, at least till a few days ago, we were below the 40,000 mark. Had we left population trends alone, we would have had shot beyond the 80,000 babies per annum mark by 1977. Then this great opportunity to transform the educational quality of the population would never have been.

All these years, since 1959, we have just been mass producing schools and teachers, and juggling with languages of instruction. It was a messy, massive exercise as much in education as in politics. And it was and is highly sensitive politics because language and culture arouse great passions. The wastage is unbelievable. Can it be that we are more stupid than other people?

Each year, some 100 of our top scholars go abroad on scholarship. Formerly, they were nearly all men. Now, there are gradually more women. Nearly half, 50%, of these scholars each year are in the first class honours list of their universities, in Britain, Canada, Australia, New Zealand. Even those in Japan, France and Germany do very well, despite having to learn a new language.

Yet until last year, we could not get more than 55 or 60% to pass their PSLE after six years of schooling at the first attempt. It was amazing. We should have had the feedback within the Education Ministry. We did not. The feedback came through only National Service. We discovered it when we had to get Hokkien-speaking platoons formed and to teach officers to speak Hokkien in order to command the men. Only then did the Education Ministry know what

had gone wrong. Once a student misses language comprehension, he or she has missed the bus with automatic promotions.

When a Singapore child goes to school he is exposed to bilingualism, in 75% -- may be 72% of the cases – to two new alien languages. At home he speaks Hokkien, Hainanese, Teochew, Hakka, Cantonese, or Hindi, or Bengali – name the dialect and we have got it. He goes to school and is immediately confounded by a barrage of two verbal artillery systems. He is subjected to two percussion bangs. Into one ear he gets English, into the other Mandarin. He speaks neither at home. No two languages are more different and diverse. Chinese is monosyllabic, tonal, idiographic, no phonetics, without inflexions, and a unique syntax. But after a while, he discovers how the sounds are related to his dialect at home.

But, the English his teacher speaks, he does not quite understand at all. And when he is about to make sense out of it, he is further confused when he watches television. Between the Singapore announcer, “Hawaii Five-O”, “On the Buses”, the whole range of American, British, Australian accents, many a student gets lost. So he retreats into Hokkien, Singapore Hokkien, not Amoy standard Hokkien. He is what, if I were a doctor, I would call a linguistic “autistic” – he withdraws into himself, the patois of his home and his friends.

Education is a very gradual process. We will not know our errors until some eight to ten years. And we will not see the success of corrective policies until another eight to ten years.

I would be surprised if we cannot reduce the PSLE wastage down to 25%. But 25% is still very high. But this may be the price we have to pay to produce bilingualists. In most monolingual societies like America, the illiteracy rate is about 10%. But we cannot have monolingual education.

However, I am cheered by the drop in total births. With the number of teachers already recruited, classrooms will go down from 44 to about 30 pupils. We can have more individual attention and correction of all compositions. We have too many gradings of compositions with no corrections of grammar and style. We have too many “tikam-tikam” multiple choice questions. Gradually, we shall have a population which will react instantaneously, laugh, cry, and be angry together at the same time. We will share a common language – nearly.



But for your lifetimes, whether as a supervisor or an executive, you will be faced, and those of you who have done National Service know this well, with having to repeat your instructions in one other language besides English. And it is absolutely wrong that one other language should be a dialect.

It means that because of the structure of our society, for a long while, those who want to be effective in supervisory positions must be bilingual, preferably trilingual – a tremendous imposition. Every word, from “A” for apple has to be learned in three languages. That is the price we have to pay for at least another generation.

Because I learned my Mandarin and dialect in adult life, I have had to keep new phrases in practice so that they will roll trippingly off my tongue. So, I used to carry a multipurpose plug for my tape-recorder when I travel. When I get to a new destination, I had to adjust the plug pins. This will give me a clue on whether or not to change the voltage on the tape-recorder from 240 to 110.

But when I have to switch between English, Mandarin, Hokkien, and Malay – never mind Tamil, the mental transformers have even more work to do than the multipurpose plug. These transformers, physically and mentally, that I have to lug around are an encumbrance. Unfortunately, they are not excess luggage I can afford to jettison.

My final point is that most of our acute problems are of a very special nature, and they can be solved only by those who understand the complexities of Singapore and Singaporeans. If most of this meagre 4% of Primary 1's, who get to the top of the educational pyramid are without that sense of commitment to the community that carried them and paid for them to get up to the upper reaches of the education ladder, then Singapore will falter and fail.

Wastage there always will be. But a clear majority must have an abiding commitment to the joint interests of their fellow citizens and themselves or Singapore will fall apart into the disparate racial, clan, dialect and religious groups from whence they sprang. It is this sense of responsibility, this unavoidable obligation to keep the Singaporeans together, to protect their lives and livelihood, which cannot be imported. We can afford to import the professional expertise and entrepreneur flair in the 15,000 employment pass holders. But we cannot import this feel for Singapore, and what makes Singaporeans tick. Only we can do this for ourselves.

And one unpleasant decision which the University of Nanyang has taken, a most necessary decision, is that from 1978 their undergraduates in Accountancy and Business Administration will sit for the same joint examinations with

students of the University of Singapore. They will attend the same lectures in the English language given by the same lecturers. They will probably be supervised or tutored by their own respective staff. The target date to get this done for all faculties is 1981.

This is the measure of the totally different political climate of Singapore. It has taken over 20 turbulent years to have economic imperatives work its way through the passions of language and culture. Only in 1977 – 21 years after Nanyang University was founded, has the self-governing Chinese-educated Council of Nanyang University reached an unanimous decision to teach in English. Only the older Ministers understand and sympathise with the dilemma of this group of men. I share their desire to preserve as much of the traditions of Confucian scholarship, values and culture as is possible in Singapore.

English has provided a neutral instrument all racial and dialect groups can learn to use with no unfair bias. English has given us direct access to the knowledge and technology of the industrialised West. Without the continued use of English, Singapore would not have secured a new base for her economy, and brought up to date her role in the international and regional economy. It is the duty of the government to ensure that Nanyang University's reorganisation

succeeds. For to do nothing is to see more years of wastage in Nanyang University.

Your responsibility is not simply to pass examinations and get a job. In order that you can do your job and discharge your debt to the community you must have a second and third language capacity. You must feel for your people – those who could not make it to the top. Only that sense of commitment will enable you to carry them with you in the difficult decisions your generation must take before Singapore becomes a totally homogeneous people. Singapore may never be homogeneous in its ethnic composition, perhaps not even in its language use. But we can share one language and one national ethos. We share the same future, and we may as well make the best of it.

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TABLE 1

**PERCENTAGE OF SINGAPORE STUDENTS  
RECEIVING HIGHER EDUCATION**

Year 19..	No admitted to					Sec 1		%	Pri 1		%	Year 19..	No admitted to				Sec 1		%	Pri 1		%
	Univ. of S'pore	Nan yang Univ	Inst.* of Edun	Oversea's Univs.* Colleges	Total a	Year 19..	Enrol b		a/b	Year 19..			Enrol c	a/c	Poly	Ngee Ann Tech. College	Inst** of Edun	Total d		Year 19..	Enrol e	
								Year 19..			Enrol f											
70	1390	685	582	71	2728	64	34204	8.0	58	55453	4.9	70	1617	302	316	2235	66	39816	5.6	60	60037	3.7
71	1328	710	207	97	2342	65	34864	6.7	59	59362	3.9	71	2068	336	73	2477	67	39392	6.3	61	55497	4.5
72	1613	888	47	93	2641	66	39816	6.6	60	60037	4.4	72	2512	264	12	2788	68	38837	7.2	62	59056	4.7
73	1692	785	177	216	2870	67	39392	7.3	61	55497	5.2	73	2734	444	1	3179	69	36753	8.6	63	62533	5.1
74	1634	645	118	259	2656	68	38837	6.8	62	59056	4.5	74	2795	649	-	3444	70	38200	9.0	64	63724	5.4
75	1823	829	108	423	3183	69	36753	8.7	63	62533	5.1	75	2475	960	-	3435	71	40557	8.5	65	59130	5.8
76	2006	786	268	538	3598	70	38200	9.4	64	63724	5.6	76	2561	795	24	3380	72	39179	8.6	66	60862	5.6
77	1878	593	201	500	3172	71	40557	7.8	65	59130	5.4	77	2379	765	92	3236	73	46223	7.0	67	58571	5.5

Note: \* Entry qual. - GCE 'A' Level or H.S.C.

\*\* Entry qual. - GCE 'O' Level or S.C.

Trainees whose entry qualifications are Univ. Degrees or Tech. Diploma/ITC are excluded. However, the nos. are as follows:

	1970	1971	1972	1973	1974	1975	1976	1977
Univ. Degree	388	203	224	115	94	228	309	290
Tech. Diploma/ITC	7	143	-	32	17	145	36	13
Total	395	346	224	147	111	373	345	303

× Statistics for private students studying in countries other than UK, Australia and New Zealand are not available as such students are not required to go through the PSC before proceeding abroad.

TABLE 2

Comparative Percentage of Students Receiving  
Higher Education

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SUMMARY

Country	Period	As % of Sec I (Grade 7)		As % of Primary 1 (Grade 1)	
		Univ	Tech College	Univ	Tech College
Singapore	5 yr ave (1973-77)	8.0%	8.3%	5.2%	5.5%
UK/Wales	3 yr ave (1969-71)	9.5%	2.9%	9.5%	2.9%
Japan	6 yr ave (1970-75)	31.0%	0.6%	29.9%	0.6%
USA	6 yr ave (1970-75)	48.2%	NA	48.2%	NA

TABLE 3

**DATA ON EMPLOYMENT PASSES ISSUED TO PROFESSIONALS  
DURING THE PERIOD FROM 1970 TILL OCTOBER 1977**

YEAR	1970	1971	1972	1973	1974	1975	1976	1977 (Jan to Oct)
ENGINEERS			1002	1106	1382	2087	2552	1978
Accountants			88	126	153	196	278	201
Architects			89	90	117	184	210	89
Doctors/Dentists/ Pharmacists/Chemists			33	72	53	83	338	258
Surveyors			37	48	85	95	120	68
Management Consultants			49	17	16	16	no data	no data
Lawyers			4	7	25	38	41	22
Teaches (Teachers teaching from primary school level to university level)			no data	no data	413	774	1191	911
TOTAL	4196	5285	1302	1466	2244	3473	4730	3527

Notes: (1) For years 1970 and 1971, there is no data breakdown according to occupational groupings. Also, the two figures 4196 and 5285 include Employment Passes issued to other types of foreigners who do not have tertiary education, eg journalists, nurses, radiographers etc.

(2) For years 1972 and 1973, no separate data is available on teachers.

(3) For years 1976 and 1977, no data is available on the management consultants group. This is because in the programme for computerisation of employment pass data, there is no grouping of management consultants.

a) Education	1
b) Art and Social Science	2
c) Science	10
d) Accountancy	1
e) Law	1
f) Degree in other branches of study	4

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Total: 920  
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TABLE 4

Number of work permit holders with Post-Secondary  
Education as at 21 Dec 77

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Type of Post-Secondary Education

(i)	<u>Holder of diplomas, technical or professional certificates</u>	234
(ii)	<u>1<sup>st</sup> Degree Holders</u>	667
	a) Education	16
	b) Arts and Social Science	74
	c) Science	171
	d) Accountancy	25
	e) Commerce and Business Administration	72
	f) Law	7
	g) Engineering	188
	h) Architecture	3
	i) Surveying	1
	j) Building	4
	k) Medicine and Surgery	2
	l) Pharmacy	8
	m) Veterinary Science	6
	n) Degree in other branches of study	90
(iii)	<u>Higher Degree Holders</u>	19
	a) Education	1
	b) Art and Social Science	2
	c) Science	10
	d) Accountancy	1
	e) Law	1
	f) Degree in other branches of study	4
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	TOTAL :	920
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