

7 APR 1979

Acc. No. NARC

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SPEECH BY DR TOH CHIN CHYE IN PARLIAMENT ON THE  
EDUCATION RESOLUTION  
28 MAR 1979

If there is any consolation the woes over education are not confined to Singapore. In October 1976 the British Prime Minister Mr James Callaghan joined in the public debate on the low standards of basic education in the United Kingdom. The British crisis in education was very related to the country's economic crisis. The U.K. needed better educated people to help regenerate industry but the engineering industry found that apprentice recruits did not have an adequate grasp of the 4 operations of arithmetic - addition, subtraction, multiplication and division. The culprit was New Mathematics taught in the schools. Candidates with less than 3Cs were studying engineering at university whereas better qualified students were studying medicine, arts and the social sciences. In fact many of the engineering and technology courses would have closed down if vacant places had not been filled by overseas students. HSC "A" level education bore no relation to the needs of an industrial trading state living off its manufacturing and commercial skills.

In the United States, the Scholastic Aptitude Tests for admission into colleges and universities showed declining test scores between 1963 and 1975. There was a decline of 44 points in verbal ability and 30 points in mathematics. The drop in

educational standards were attributed to New Mathematics, television plus a host of other factors beyond the control of the school.

The Singapore education system has moved in tandem with economic policies and has contributed in no small measure to our economic success. If there are failures in the education system they are of our own making. There was first the call for building "The Rugged Society". The Ministry of Defence found that school leavers were skinny and bespectacled - they made the most unlikely recruits for the army or police. From 1966 extracurricular activities were stepped up and as an incentive points were given for ECA which would qualify students for admission into Pre-university classes. Time spent on ECA meant less time on studies and homework.

As the push was given to ECA, the need for bilingualism was also emphasized, beginning first with secondary schools and extended later to primary schools.

In seeking to achieve these apposite objectives, hardly a year passed without policy directives emanating from the Ministry. The Report has been honest in annotating the history of confusion sown among principals and teachers between 1966 and 1978.

It was not to be unexpected that the Ministry of Defence in the course of time found that the Rugged Society was producing illiterate soldiers and had its soldiers wearing different tabs to indicate the dialects they spoke.

This Report might not have been written had not the failure to achieve bilingualism was shown in the high failure rates of 62% for PSLE and 66% for the GCE "O" level examination over the years 1975 to 1977.

The lesson is that educational policies must have priorities and must be given time to mature. It is true that an egg requires incubation but applying more heat to the egg will more likely kill the chicken in the eggshell than make it hatch out faster.

What is implicit is that the existing heavy load on students must first be eased. Bilingualism and technical education do make an impact on the well being of our economy as well as in making our society more cohesive. ECA does not, and should be treated as part of the joys of childhood and adolescence.

Switzerland has been publicised as a model where bilingualism or multilingualism has succeeded. It may be because Switzerland does not have a Ministry of Education but its citizens are encouraged to participate in policy making by way of referenda. Multilingualism in Switzerland is based on French, German, Italian which are languages derived from the Latin, having a common Roman alphabet and are phonetic. Spoken German in Switzerland is different from High German taught in the schools. It is a dialect peculiar to the northern part of Switzerland and cannot be understood in the bordering states of Germany or Austria.

English and Chinese have nothing in common. They are entirely two separate languages, one using phonograms and the other ideograms. Japanese is one language which is composed of Kanji (Chinese characters or ideograms) and two types of Kana (katakana and hiragana or phonograms). Clinical studies of neurological patients who suffer from word blindness or who have lost the power to grasp the meaning of printed words (alexia) show that while such patients do not comprehend words made up of Kana, they can however read Kanji. This has given rise to the postulate that reading ideograms is through association of the visual cortex and the speech areas of the brain while reading words

made up of phonograms are through association of the auditory cortex and the speech areas. Two different systems thus exist in the brain for learning languages and because Japanese is a single language, these systems reinforce one another. This is not so in the study of English and Chinese, each of which employ a different system and reinforcement is absent. It may explain why our attempts to achieve bilingualism in English and Chinese are so much more difficult.

The Japanese obviously have the advantage. As Table 3.1 of the Report shows the attrition rates at primary and secondary school levels are 0 in Japan, 0 and 9% in Taiwan but 29% and 36% in Singapore. These differences are due mainly to the fact that in Japan and Taiwan one predominant language is studied whereas in Singapore we are giving equal weightage to two different languages which do not reinforce each other.

In promoting our policy of bilingualism in English and Chinese, we must recognize inherent physiological systems for learning languages which may not be equally developed in every child.

Bilingualism is possible provided we accept the fact that applying equal weightage in achievement of linguistic proficiency, particularly for

English and Chinese is false as it cannot be applied to the majority of the student population. Those with exceptional linguistic abilities should be sent to an Institute of Languages, but they are the minority.

English, with an alphabet, is easier to study than Chinese which does not have an alphabet. For English stream students studying Chinese in our schools is made unnecessarily difficult by the fact that up to date the Ministry of Education has not yet decided on the 1,000 active and 1,000 less active character list. This list defines the standard to be achieved in six years of primary schooling. It means that a child has to read and write approximately 330 characters a year. In the absence of a word list, Chinese teachers of the old school firmly believe that 5,000 characters are required at PSLE and 10,000 characters at "O" level examination. This is simply overwhelming and it is little wonder that students do suffer from a mental block. Chinese language study has become the most unpopular subject even among children of parents who speak Mandarin at home and were educated in Chinese. They are falling between the English stool and the Chinese stool.

In 1976 the Peking People's Daily published a study on the frequency of usage of Chinese characters. It examined 7,075 news releases and newspaper articles comprising close to 7 million characters. In all, 5,080 characters were found to be in common use with only 2,076 of them accounting for 99% in accumulated usage while the remaining 3,004 for only 1%. Eventually 3,200 characters were compiled for further discussion and study. It is quite clear that because the basic character list has not been compiled in Singapore, bilingualism has turned out to be a failure. The illiteracy discovered among national service men must be laid at the doors of the Education Ministry.

I would like to caution the Ministry not to swing to an extreme position where bilingualism is considered pre-eminent regardless of the fact that students have other aptitudes which can give them salable skills on leaving schools. If Lee Pan Hon's musical talent had not been spotted by chance, it is possible that he would be no more than an average student in Kreta Ayer and end up as a fiddler on the SAF Road Show.

As vice-chancellor I had urged Pre-university students to choose subjects which will give them mobility in their choice of courses at the university. They were not to confine themselves to Mathematics and the sciences but to include an arts subject which could be a second language. The Report now recommends that CL2 be made compulsory at the "A" level examination. I do not support this recommendation.

Table 1

Applications to Singapore University (English stream)

	<u>1977/78</u>	<u>1978/79</u>
Total applicants	3542	3817
Number offering	843	875
CL2	(23.8%)	(23%)
Number of passes	666	755
in CL2	(79%)	(86%)

For academic years 1977/78 and 1978/79 almost one quarter of English stream applicants to the University of Singapore offered CL2. This is encouraging in itself. In making L2 compulsory there is a failure to examine the specific requirements which each faculty have for special courses.

In the case of medicine, because rapid advances have been made in molecular biology, it

is essential that students have a firm grounding in chemistry and biology. Medical students in their first year will face a new style of idiomatic English heavily laced with glossary derived from either Latin or Greek. A good command of English is therefore necessary.

Insistence on a second language at "A" level creates a paradox that a monolingual student who may score very well in other subjects will be deprived of admission into the University of Singapore. Students who have failed CL2 at "O" level have proceeded to Britain to take their "A" level without a second language and have been admitted into British universities. For most students who do not come from wealthy homes this overseas route to university is remote. In the end we inflict on ourselves a penalty by reducing the number of competent professionals whose services our society will need in the future.

With declining births the degree of freedom in streaming students is proportionately reduced. If we were to follow rigidly the assumptions made in Table 6.1 of the Report we may face shortfalls in manpower requirements for the future.

Success in bilingualism is desirable but universal bilingual efficiency will have to be seen in the life time of future generations. Using a population of 1,646 patients Drs. Lee Ho Guan and Leong Vie Ching found in 1973 that the main languages spoken at home were:-

Chinese dialect	64.8%
Mandarin	1.3%
English	5.2%
Malay	7.8%
Indian	1.8%
Others	0.7%
Two languages	8.2%
No details given	10.2%

More Chinese in Singapore will no doubt in time be fluent in Mandarin but my guess is that dialects will not completely disappear. Businessmen in Singapore may still have to conduct business with visiting Chinese businessmen who are conversant in dialects but not necessarily in Mandarin.

Last but not least the family is the most important education institution. During the first 3-4 years of a child, brain development takes place and the child's future is very much dependent on the amount of stimulation it has received at home. Moral education too begins at home. Teachers

cannot act in loco parentis. At best they can only supplement a child's moral guidance. Perhaps moral education should begin with parents and special classes organized for those who are going to be newly weds and parents.

There can be no opposition to the resolution which is drafted in such broad terms. However I am fearful that the honest intentions and reasons in publishing this Report on Education will be forgotten in the course of time and the bureaucracy will return to its old ways of doing things.

For these reasons I beg to move an amendment to the main resolution by adding after para (3) the following:-

- (4) advocates that the Ministry of Education collates the suggestions and criticisms raised during the debate in the House;
- (5) urges the Ministry to study the implications of policy changes in depth and to give schools and parents adequate lead time to implement such policies.

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