

DEPUTY PRIME MINISTER AND
MINISTER OF DEFENCE
SINGAPORE

9th February, 1979

Prime Minister,

In August, 1978, we were asked by you to study problems in the Ministry of Education. We were appointed without any terms of reference; nor was any deadline set for the submission of a report. Even the membership of the team remained flexible. As we proceeded with our studies, we acquired new members who we thought could make a contribution. We are therefore not a formal Commission of Inquiry.

Nevertheless, having completed our studies, we consider it necessary to report to you. We construed our mission in the widest terms possible - to identify the more important problems in the Ministry of Education, and recommend possible solutions. As none of us possess much knowledge nor any expertise in education we found it necessary to acquire knowledge as we proceeded with our study.

We interviewed 18 senior officials of the Ministry of Education and 20 school principals. In addition we also consulted or interviewed 225 other officials and teachers. The list of persons who gave evidence before us is given at Reference List 1. In addition, we had access to about 120 studies, reports and papers produced by the Ministry of Education. These are listed in Reference List 2. As the gaps in our knowledge were not completely filled by information from these two sources, members of the team embarked on ad hoc studies on various subjects. Fifty-eight such studies were conducted and they are listed in Reference List 3.

The approach we take is that of the generalist, and not of the specialist. While we were able to identify most of the major weaknesses of the education system, we are less certain about the solutions in detail. We are therefore only able to offer these in broad outline. The implementation of these solutions will involve the setting up of a wide range of new curricula and syllabi for the new education structure we are recommending. Putting flesh to the bones of the structure is a job for specialists. We believe that

~~the expertise of Ministry professionals directed under an efficient~~
management system will be able to do the job. However, it is a task
that will take several years to accomplish.

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Dr Goh Keng Swee (Chairman)

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Goh Kim Leong (Secretary)

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CHAPTER 1 : AN OVERVIEW OF THE PROBLEM

Changes over the last two decades

It has not occurred to many Singaporeans how unnatural the present school system is. Most school children are taught in two languages - English and Mandarin. Eighty-five per cent of them do not speak either of these languages at home. Our system is largely modelled on the British pattern but the social and demographic background could hardly be more dissimilar. If as a result of a world calamity, children in England were taught Russian and Mandarin, while they continue to speak English at home, the British education system would run into some of the problems which have been plaguing the schools in Singapore and the Ministry of Education.

The problem has been made worse in the last two decades by the gradual but inexorable switch in primary school registrations from Chinese-stream schools to English-stream schools. The following figures show the trend:

<u>Year</u>	<u>English Stream</u>	<u>Chinese Stream</u>	<u>Chinese as % of Total *</u>
1959	28,113	27,223	45.9%
:	:	:	:
1962	31,580	22,669	38.4%
:	:	:	:
1965	36,269	17,735	30.0%
:	:	:	:
1968	34,090	18,927	33.6%
:	:	:	:
1971	37,505	15,731	29.0%
:	:	:	:
1974	36,834	10,263	21.7%
1975	35,086	9,112	20.5%
1976	35,035	7,478	17.5%
1977	40,622	6,590	13.9%
1978	41,995	5,289	11.2%

* Total includes Malay and Tamil streams.

This switch created severe problems. The first was the construction of large numbers of new English-stream primary schools, and later secondary schools. Then there was the need to recruit and train large numbers of teachers and to send them to the new schools with little teaching experience.

The drift from the Chinese-stream schools to English-stream schools has created some delicate political problems for the government. Parents send their children to English-stream schools in the belief that an English education would give them better career prospects. In general, this belief is valid. However, for parents from dialect-speaking homes and in lower paid occupations this does not necessarily hold true, as we shall explain later. But the drift to the English-stream schools had made it necessary for the government to pay special attention to bi-lingual education. It is clearly undesirable that Singaporeans should lose all connections with their cultural roots, whether their ancestors come from China, India or the Malay world. At the same time it is necessary to raise standards of English in the Chinese-stream.

As early as 1966-67, the first steps were taken in this direction. The policy was introduced requiring mathematics and science subjects in Chinese primary schools to be taught in the English language. In subsequent years, the policy was refined by defining guidelines and areas of discretion allowed to school principals.

In English language schools, 1969 saw the introduction of the policy of requiring the instruction of civics in English language schools to be conducted in the mother tongue. In 1970, the teaching of history in the mother tongue was introduced in primary three classes.

Subsequently, a great deal of attention was given to the number of hours in which instruction was carried out in that language. A distinction was made between language instruction time (LIT) and language exposure time (LET). The effect of all these efforts on school children has been assessed in a number of studies made by the Ministry of Education and the MINDEF team of systems engineers. The results are not encouraging. The MINDEF team studied examination results of 23 Chinese primary schools in which science and mathematics were taught in English. They concluded

that there was no improvement in English as a second language, but there was a decline in science examination results.

Bilingual Education

How far has bi-lingual education succeeded? One measure is provided by results of primary school leaving examinations (PSLE) and GCE 'O' Level examinations. Examinations may not be the best indicator of language competence. But the PSLE and 'O' level examinations have the merit of uniform application throughout all schools. On the basis of both these examinations, the great majority of school children, more than 60 per cent of those who sat for these examinations, failed in one or both languages. If we take the system as a whole, tracing successive cohorts of children who enter primary schools and eventually take GCE 'O' level examinations, only 19 per cent of primary school cohorts passed both languages at GCE 'O' level.

The Ministry of Defence conducted a study in 1975 to assess the working knowledge of English possessed by recruits from the English language stream. The study was limited to those who did not pass 'O' level examinations. Only 11 per cent of them were found to have an adequate working knowledge of English. There is some evidence that regression had taken place after the recruits left schools.

By 1976, the Ministry of Education, to which the Prime Minister had devoted a good deal of his personal attention, began to recognise the enormity of the problem. Some 65 per cent of a Primary One cohort of pupils did not complete their education in the sense of getting at least three 'O' level passes. Nearly half of this 65 per cent could not pass the Primary School Leaving Examination even after three tries. It was recognised that one contributing factor was virtually automatic promotion in all grades of school other than Primary Six whose pupils had to sit for the PSLE. Although the Ministry of Education in 1959 allowed a 10 per cent retention rate, in practice this was not observed. The retention being between 2 - 5 per cent in most cases. In 1976, the revised primary education system (RPES) was introduced and in 1978 the revised secondary education (RSES) system. The RPES put an end to automatic promotion in primary school, particularly after primary two. After the third failure in primary school, pupils would be channelled to a specially prepared basic course

where the emphasis would be on simple literacy and numeracy.

Under the RSES, pupils are promoted to the next higher grade based on continual and semestral assessments. Pupils who fail after having been retained twice, are channelled to vocational courses conducted by the Vocational and Industrial Training Board* (VITB). The VITB offers courses leading to certificates at the artisan, trade or technician levels, and courses leading to commercial certificates. The RSES was implemented in 1978 for Secondary One and Two pupils and in 1979 for Secondary Three pupils.

Nanyang University

On 5 March 1978, Nanyang University announced that it will prepare undergraduates for the same examination as the University of Singapore. This meant instruction in the English language and written examinations in that language. This decision was politically a difficult one to make for Nanyang University was established to promote Chinese language and culture. But Chinese-educated Nanyang graduates could not secure well-paid employment in the private sector. Government absorbed as many as it could but it could not employ all. Over the years, the best students from the Chinese stream schools applied for and obtained admission into the University of Singapore in increasing numbers. Their choice of subjects was confined mainly to medicine, engineering, architecture, science and mathematics where their lack of proficiency in the English Language would not handicap them to the same extent as would be the case with the humanities and law. This further compounded Nanyang's difficulties. Admission standards had to be lowered and this in turn reduced the market value of the graduates. The initiative taken to revitalise Nanyang was a bold move even though it did no more than to recognise realities.

Once Nanyang University elected to adopt English as the language of instruction and examination, the logical consequence was to re-structure the Chinese language stream schools to enable the better students to do their 'A' level examination in English. This policy was introduced in 1978, though preparation began earlier. The subject was first broached by the Prime Minister

* VITB is an amalgamation of the ITB and AEB.

early in September 1977. It took the Ministry of Education six months to produce an acceptable plan. Accordingly, the policy when it was belatedly announced gave the appearance of hastiness. Further, defective implementation by the Ministry of Education added to the confusion. Contrary to the Prime Minister's direction to limit the exercise to the best 800 students who are likely to qualify for university entrance, the Ministry extended the option to do 'A' level examination in English to all Chinese stream students. So those who would have been hard put to pass 'A' level in Chinese joined the exercise. But this new policy if correctly implemented is logical, indeed inescapable.

In December 1978, a new initiative was announced by the Ministry of Education on the direction of the Prime Minister. The object was to preserve the best schools in the Chinese stream, raise their standard of teaching and expand the school facilities. In this way, Singapore would retain the best in Chinese education which the tide of events threatened to eliminate.

The switch by Nanyang University in 1977 of its language of instruction and examination to English raised the issues of preserving the best schools in the Chinese stream and raising the standard of English in Chinese stream schools. The Ministry of Education did not respond quickly to these issues until a directive was sent to them by the Prime Minister's Office in August 1978. Three months later, a Special Assistance Plan (SAP) was then publicly announced on 30 Nov 78.

Attrition Rates

From the foregoing discussion, it is clear that a single system of education imposed on children of varying abilities, to absorb learning in languages which they do not speak at home, is the main reason for the weaknesses of the system and for high attrition rates. What is remarkable about the system is that so many made the grade in the face of extraordinary difficulties. But the fate of those who fall by the way side is not generally known. Army Commanders who have to train them and turn them to be effective soldiers are well-informed on this. These school dropouts, especially those who could not pass the PSLE constitute the majority of problem soldiers, those who wind up as court

martial cases, summary trials, for disciplinary offences, drug addicts and attempted suicide cases. Case histories of these soldiers have been published recently by a former MINDEF officer. It should be made compulsory reading for senior officials in the Ministry of Education.

It will be interesting to compare our attrition rates with those of other countries. Table 3.1 in chapter 3 gives the full details. The principal findings are as follows. In Singapore, only 71 per cent of our Primary One cohort reach Secondary School, compared with 92 per cent in Taiwan and 100 per cent in Japan. Fourteen per cent of the cohort eventually reach 'A' level in Singapore, compared with 52 per cent in Taiwan and 93 per cent in Japan for equivalent grades. Nine per cent of the cohort in Singapore obtain entrance into the two universities or the two polytechnics, compared with 20 per cent in Taiwan and 38 per cent in Japan.

The differences in attrition rate are due to several causes. First, both Taiwan and Japan have the advantage of a culturally homogeneous people. Second, their education is monolingual. Third, there are no common school examinations in Japan. To make up for this, Japanese universities administer their own entrance examinations. In Taiwan, common national examinations are not held at primary school level but at junior middle school. Nevertheless, the comparison suggests that there is scope for reducing the attrition rates in Singapore.

Fast and Slow Learners

If we are to avoid the unacceptable attrition rates of the past, it will be necessary to introduce the principle of teaching children at the pace at which they can absorb instruction. In the ideal world, this means that each child will learn at his or her own pace. But we do not live in an ideal world and it is necessary because of constraints of money and manpower, to reduce the process of teaching into systems. However regrettable this may be to the purist, practical considerations offer no better alternative. If we begin with the brightest pupils, the top 12 to 15 per cent, who make the grade to 'A' levels, reforms introduced in 1978 should be retained and further developed. These are steps in the right direction. Improvements may be made in detail by close monitoring

of the system, so that adjustments of the curriculum in response to studies on pupil performance may be introduced. The raising of standards of English in Chinese language schools, for instance, may require some marginal changes in performance levels in the Chinese language if pupils are not to be over-loaded. There has also been a notion that Chinese as a second language in the English language stream schools had been at too high a level. Several studies had been made of the subject by the Ministry of Education, but the methodology used seems to us suspect. We would recommend further studies of the subject with the use of more adequate statistical procedures and a clearer set of criteria.

The second category of pupils which give rise for concern are those who do not make the grade to three 'O' levels. In the present integrated system, 'O' levels prepare pupils for 'A' level examinations regardless of their ability to perform adequately at 'O' levels in four years. We have discussed this subject with the professionals and they are of the view that if these pupils that is those who fail to get three 'O' levels are taught at the slower pace, doing 'O' levels in five years instead of four, a lower attrition rate would result and the pupil will get greater benefit from his education. Some of these may not even pass 'O' level in five years. We are considering the advisability of introducing a lower certificate examination, as in England, at the end of the fourth year. It may be necessary not only to lengthen the period of preparation for 'O' level but also to reduce the work load of the pupil, especially in regard to second language standards. We are not competent to recommend in detail what these reductions should be; this is a matter which should be pursued by the professionals in the Ministry.

Most of these pupils would not have the capability to proceed to University education. Therefore, the requirements of the second language, which should be compulsory for university entrance as from 1980 onwards, could be made less stringent. It is better that they leave school with a good command of the English language than a poor command of two languages.

Third, there are the considerable numbers of school children who do not reach 'O' levels. Many of these leave the English stream schools illiterate in both English and the mother tongue. The present policy is to channel them to the basic course after three failures in primary school.

We have examined the running of the basic course in some detail and recommend that it be terminated as soon as possible. They add little to literacy of children, especially those who do the basic course in English. The response of children to the basic course itself has been bad. For instance in January 1978, 7137 children were offered places in the Basic Course, only 5505 children accepted the offer, of which only 1523 remained at the end of the year. Most of them left to seek employment under the junior training scheme. They turn up for a Saturday session at some schools. Tuition once a week at this level is virtually a waste of time. The children concerned attend these courses merely because their employers pay them for doing so, a requirement of the Junior Training Scheme.

In place of the basic course, we recommend that pupils who are assessed to have insufficient learning capacity to pass the PSLE be channelled during their primary school career into a special stream. This should be done without recourse to two or more retentions. Those from Chinese dialect speaking homes will spend the rest of their education in special classes teaching in Mandarin. English may be taught only to the extent of giving them minimum competence in spoken and written English which they may require in occupations which they will take up after leaving schools. These requirements are generally not demanding, for instance, writing out of bills and carrying on simple conversation in English in the few cases where this ability is required. Most of them will be better off if they leave school literate in at least one language, Mandarin. The affinity in grammatical structure, and even in word form, between Mandarin and the dialects make it easier for these children to be taught in Mandarin.

Children from English speaking homes, as well as those from Malay and Indian families, should go to special English courses where their curriculum and rate of teaching could be adjusted to fit the ability of the average pupil.

It must be stressed here that the children concerned are those who would have failed PSLE after three attempts. They would not make the grade to 'O' level, much less 'A' level and the university.

Educationists and others who oppose streaming of children according to their ability to absorb instruction often forget that the final result could be even more cruel to the children who do not make the grade and suffer repeated failures. The end product would have lost self-confidence, self-esteem and developed a host of character defects produced by feelings of inadequacy. It is far better that these children leave school literate in one language. Since they are not exposed to competition from brighter children in classes, there is less danger of loss of self-esteem.

Problems of Streaming

This system of having three sub-systems of education, each of which is adjusted to the rate at which children can absorb instruction, means that children have to be streamed at some stage in their school career. The subject of streaming children according to ability evokes strong emotional response, especially among professionals in the Ministry of Education, and the Institute of Education. However, we find that school principals who face the problem of slow learners have come to the conclusion that one system cannot do justice to all children, and they support our proposals. Eventually, we managed to convince the Director of Education that teaching children of different levels of ability under the special circumstances of Singapore, cannot be conducted in the same way as used by more homogeneous societies, where the language of instruction is the language spoken at home.

The problem of those who need to do 'O' levels in five years is less acute. Errors in streaming could be remedied in the case of late developers by a transfer to the main stream. Even if this does not happen, it is still possible for them to go on to 'A' levels if their 'O' level results are good enough.

Much of the prejudice against streaming of school children derives from an egalitarian philosophy fashionable in the Western World after World War II. This philosophy partly rests on a prejudice against the pursuit of excellence. We do not want to enter into a controversy against those egalitarian ideas. Perhaps this is just what Western societies need. But in Singapore, much of the problems in the present school system would not have arisen if those concerned had earlier accepted the logical consequences

of the fact that different children have different capacities to acquire knowledge. Further when this knowledge is imparted in languages which most of them do not speak at home, following what other countries do will not help much. The system has been structured such that only the brightest 12 per cent to 15 per cent of school children can cope. To subject the less able students to the same regime of learning has been the chief defect of our educational system in the past.

Moral Education

One of the dangers of secular education in a foreign tongue is the risk of losing the traditional values of one's own people and the acquisition of the more spurious fashions of the west. The danger has been recognised and the Education Ministry introduced courses in both primary and secondary schools. In primary schools, a series of text books named "Education for Living" (EFL) have been published and have been in use for some years. Much of the material in the EFL text books, particularly those for lower primary classes, are useful in inculcating useful attitudes such as respect for honesty, hard work, care for parents and so on. A good deal of it, however, is irrelevant and useless. Subjects such as the use of community centres, functions of government outpatient clinics are of little value in inculcating moral beliefs in children.

In secondary schools, the effort is carried out in "Civics Courses". Much of the material taught relates to information, some useful, others of little permanent value. For instance, it seems pointless to teach secondary school children the details of the Republic's constitution, much of which is not even known to Members of Parliament. It is better that children are taught simple ideas about what a democratic state is, how it differs from other systems of Government and what the rights and responsibilities of citizens of a democratic state are.

But all this is beside the point. A society unguided by moral values can hardly be expected to remain cohesive under stress. It is a commitment to a common set of values that will determine the degree to which the people of recent migrant origin will be willing and able to defend their collective interest. They will not be able to do this unless individuals belonging to the group are able to discern that an enlightened view of their

long-term self-interest often conflicts with their desire for immediate gain.

We recommend that formal instruction in moral education be given in all classes and all streams. The EFL and civics courses should be scrapped as soon as new material has been prepared. Moral instruction is best conducted not in terms of abstract ideas and appeals to lofty ideals. Children like to listen to stories and stories of great men in history, especially in Asia, as well as great religious leaders the world over, would have a greater impact on their minds than the presentation of abstract ideas. The subject is under study by a Committee of Parliamentarians headed by Mr Ong Teng Cheong. We need say no more than to stress the importance of the subject.

While moral education would help to give school children a set of values which could guide them in their adult life, this may not be sufficient to provide the cultural ballast to withstand the stresses of living in a fast changing society exposed to influences, good and bad of an open society such as ours. A people of recent migrant origin need to know more of their cultural roots. With the large scale movement to education in English, the risk of deculturation cannot be ignored. One way to overcoming the dangers of deculturation is to teach children the historical origins of their culture. Chinese pupils could be taught in the Chinese language in secondary schools early Chinese history up to the setting up of the Confucian state in the Han dynasty; Indians, the ancient history of India; and Malays, the early history of their peoples and the Archipelago.

Ministry Administration

Chapter 5 of this report reviews the functioning of the Ministry as an administrative machine. The set-up is defective in a number of important respects and will need a major overhaul, to make it a more effective instrument for policy decision making, policy implementation and general supervision of the school system. We have earlier referred to the failure of Ministry officials to produce working plans for reforms initiated by the Prime Minister in good time. Failure of the system to function efficiently can be traced to many causes which are examined in Chapter 5. Here it is necessary only to mention the main points.

There seems to be widespread unwillingness among Ministry officials to accept responsibility. Instead too many decisions are taken at meetings. Meetings are necessary in the interest of co-ordination between branches of an organisation, but we get the impression that they are resorted to in the Ministry on routine, even trivial matters, most of which should have been settled through normal staff channels. Too many meetings and conferences are held. Minutes of such meetings, which should be promptly prepared and circulated, often suffer delay for no apparent reason. There is inadequate follow-up of decisions reached at such meetings. Too many of the decisions reached are merely temporarising ones, ie to refer to some other Committee or to send the subject for further study by some other group or branch. As a result, too many studies have been produced, of which a large number are on inconsequential matters. It is this kind of habit which lay behind the dilatory treatment of the RSES initiatives.

A system of monitoring progress on new projects and innovations was introduced in the Ministry in May 1978. This branch, the Feedback and Monitoring Branch is doing useful work and the staff may need to be further strengthened because of work load.

The Educational Development Branch of the Ministry is in charge of curriculum matters. It is over-loaded as a result of recent changes in education policies requiring extensive changes to syllabi and curricula. It functions in a myriad of Committees over which supervision is inadequate. Given the staff at the disposal of the branch, it is unlikely that any adequate supervision could be exercised over these Committees. A better working system needs to be devised.

The Schools Division is the successor of what was formerly the School Inspectorate. The organisation system here needs a thorough overhaul. The span of control of senior staff over inspectors is much too wide. We also get the impression that the working methods of the inspectors (then known as Education Development Officers for primary schools, and Specialist Advisers for secondary schools renamed Inspectors and Senior Inspectors on January 1, 1979) need to be revised. It is sometimes difficult to make sense of what they are trying to do. So far as the

assessment of the teaching staff of schools is concerned, this should be done by the school principals, not by an inspector who visits the teacher, on the average, once in one or two years.

To be fair to Ministry officials, we have found most of them conscientious and concerned. But the defective system under which they work prevents many of them from giving of their best. There are probably few Ministries of Education in the world that are faced with such complex problems as ours or with such a rapidly changing situation.

Education is a subject of widespread public concern, especially when things go wrong or appear to have gone wrong.irate or concerned parents form a large proportion of the electorate. Inevitably, education issues become politically sensitive. Particularly is this so with issues concerning Chinese education and culture. And in a fast changing situation, handling of these matters requires deft hands in senior professional and administrative positions, able to make timely and judicious responses without sacrificing professional standards. The problems confronting the Ministry in the past have proved too complicated and intractable for the professional and administrative staff.

Further, experience as teachers and school principals does not necessarily provide the best background for the development of administrative and management skills. As a result, many Ministry officials had to labour against considerable odds, which is not the case in most other Government Ministries. Criticism of their performance is not intended to belittle these officials, most of whom have worked valiantly, but to underline the need for the change in the management system in the Ministry and the introduction of new methods of working. Needless to say, these reforms would take a considerable time to accomplish. Now that the hard political decisions on the new structure of education had been taken, most of the remaining problems should yield in ripeness of time to the application of professional expertise directed under an efficient and responsive management system.

Conclusion

The new education system which will evolve over the years will be one in which great prominence is attached to the English language at the cost of some reduction in standards in the mother tongue, be it Mandarin, Malay or Tamil. We have seen the trend over the past three decades towards English language schools, resulting from the free choice of parents. In the English stream schools, it has been necessary to insist on learning the mother tongue as a second language and to set minimum standards.

There may be parents who may want higher standards of education in Chinese, Malay or Tamil for their children, at the expense of lower standards in English. The Ministry of Education should make available special classes for children of parents who have expressed such a wish.

The report goes into detail in Chapters 3, 4 and 6, on standards that can be attained in English and the mother tongue, whether taught as the first or the second language. The norms suggested here are based on past experience on what children of different abilities can absorb. But these norms are not intended to be set as standards, valid for all time. More effective teaching methods may allow higher standards to be attained. A closer examination of past studies made by Ministry of Education officials could well suggest some modifications to these norms. These matters should be kept under close and continuing attention and adjustments should be made in the light of experience.

In conclusion, we must stress that the eventual structure of the school system will take several years to complete. During the transition, special care needs to be taken to reduce pupil wastage to a minimum and to avoid unnecessary dislocation in schools.

HISTORY OF EDUCATION SYSTEM IN SINGAPORE

CHAPTER 2

1. Introduction

In 1959, when Singapore gained internal self-government, the education policy had four aims:

- Equal treatment for the four streams, namely, Malay, Chinese, Tamil and English;
- Establishment of four official languages with Malay as the national language of the new nation in an attempt to unify the multi-racial community;
- Emphasis on the study of Mathematics, Science and technical subjects designed to equip the youth with requisite skills, aptitudes and attitudes for employment in the industrial sector; and
- Building of loyalty to the nation.

2. Historical Development

2.1 Education System in the 60s and early 70s

When the present Government came into power in 1959, it implemented the following:

- School building programme;
- equal treatment for all language streams;
- large scale training of teachers; and
- revision in curricula and syllabuses.

The Government inherited different education systems, curricula and syllabuses. Thus, for central control, the Government had to establish a common education system (ie. six years' primary, four years' secondary, two years' pre-university (Pre-U) education) in 1963. This was different from the Chinese schools' six-three-three system, with their school-based examinations, promotions and certifications. The common curriculum took no account of differences in the pupils' abilities.

2. Historical Development (cont'd.)

2.2 Present System

2.2.1 In 1976 and 1978, the Revised Primary Education System (RPES) and the Revised Secondary Education System (RSES) were introduced respectively, to cater for human differences and to reduce attrition (failures and drop-outs from the education system). Under these systems, pupils have to pass annual examinations before being promoted to the next higher grade. They are retained if they fail their examinations. There is streaming within a grade to cater for pupils who are less academically inclined.

2.2.2 In March 1978, the Pre-U options project was developed to upgrade proficiency in English of the non-English stream pupils. These pupils were offered two or three year Pre-U courses in which all subjects except the languages were taught in English. The purpose is to better prepare these pupils for University Courses. This is necessary in view of the establishment of common examinations for the Singapore University and the Nanyang University.

3. Major Education Policies

3.1 Equal Treatment for All Streams

3.1.1 In 1960, the Primary School Leaving Examination (PSLE) was first instituted in all the four streams.

3.1.2 In 1961, with the discontinuation of Darjah VII, primary education in the Malay stream was shortened to six years.

3.1.3 In 1962, the Chinese Senior Middle III Examination was substituted by the Government Secondary Four (Chinese) Examination. The

3. Major Education Policies (cont'd.)

3.1 Equal Treatment for All Streams

3.1.3 certificate obtained had equal status with the Cambridge School Certificate. Upper Secondary classes in Chinese Schools were reduced from three to two years to be in line with the Pre-U classes in English schools. At the end of the two years, the certificates awarded, namely, the GCE 'A' Local for Chinese Schools and GCE 'A' Cambridge for English Schools, have equal status.

3.1.4 In 1963, the Malay and Tamil stream pupils had their first School Certificate Examinations.

3.1.5 In 1965, common question papers in Mathematics and Science were first set for PSLE.

3.1.6 In 1971, Secondary Four pupils in all language streams first sat for a common GCE 'O' Level Examination.

3.2 Emphasis on Bilingualism

The objective of the Government to build a cohesive multi-racial society with a national identity resulted in the following:

3.2.1 From 1966, Secondary One pupils were required to learn a second language. It was offered as an examination subject at School Certificate level in 1969. From 1979, pupils will be required to have obtained a pass (Grade S8) in the second language in order to gain admission to the Pre-U classes.

3.2.2 Language Exposure Time (LET) for the second language at the primary school level was increased to provide pupils with more opportunity to hear, speak and use the second language.

3. Major Education Policies (cont'd.)

3.2 Emphasis on Bilingualism

- 3.2.2 . In 1966 and 1967, Mathematics and Science were taught in English in Primary One in the non-English medium schools.
- . In 1969, technical subjects were taught in English in Secondary One in the Malay and Tamil medium schools. At the same time, Civics was taught in the mother-tongue in the English medium schools.
- . In 1970, History was taught in the second language in Primary Three in English medium schools. However, the policy was terminated in 1971 because the language in the History text-books was above the standard of the pupils.
- . In 1972, it was announced that LET in the primary school curriculum was to be gradually increased. The target was to obtain 40 per cent LET by 1975. It was also decided that double weightage would be given to the second language in the 1973 PSLE.
- . In 1974, Block-Time-Tabling* was encouraged at Primary One and Two. This will reinforce the learning of topics common to closely related subjects such as Mathematics and Science. However, a survey conducted by the Ministry of Education (MOE) revealed that there was insufficient curriculum time for Mathematics, Science and English at lower primary levels in English-medium schools. Therefore in 1975, flexibility in LET was allowed and only in exceptional circumstances may schools have less than $33\frac{1}{3}$ per cent of LET.

* Block-Time-Tabling is a time-table in which the periods allotted for the closely related subjects are grouped together.

3. Major Education Policies (cont'd.)

3.2 Emphasis on Bilingualism

- 3.2.2 . In 1978, a Modified Primary Curriculum was proposed to provide flexibility in Language Instruction Time (LIT), which is the time allotted to the teaching of languages. In the revised curriculum, differences in pupils' home support for language learning were taken into consideration.
- . In January 1978, the Foreign Language Programme was implemented with the aim of ensuring that there would be adequate personnel proficient in foreign languages to meet the needs of the public and private sectors in Singapore.

3.3 Emphasis on Technical Education

3.3.1 Prior to 1960, technical education received little attention as entrepot trade formed the main economic activity of the Republic. It soon became apparent that the economy could not be sustained on this trade alone. Industrialisation was therefore embarked upon. A Technical Education Department was established in the MOE in 1968 to administer technical education and industrial training programmes.

3.3.2 Before 1969, pupils were channelled into academic, technical and vocational schools at the end of primary education. In 1969, a common curriculum in Secondary One and Two was introduced by the MOE for all schools. Pupils in all schools were required to take Technical Drawing in addition to the usual subjects. All the boys and 50 per cent of the girls underwent workshop practice once a week outside school hours. The intentions were to instil a sense of dignity in manual work and to ensure that pupils acquire practical skills besides general education.

3. Major Education Policies (cont'd.)

3.3 Emphasis on Technical Education

3.3.3 In 1970, aptitude testing for Secondary Two pupils was used as an additional means to channel pupils into the technical stream.

3.3.4 In 1976, a committee was formed to review technical education in secondary schools. The result was the Shelley Report on Technical Education (Edun SOO13/76 Vol 1 & Vol 2 dated Jul 76). Based on this Report, several changes were made. One of them was that girls could choose between Technical Workshop Practice and Home Economics. Another was the removal of two subjects, namely, Technical Drawing and Basic Electricity, from the curriculum.

3.4 Retention and Promotion Policies

3.4.1 In 1959, automatic promotion was replaced by a system whereby up to 10 per cent of the pupils in each standard (except Primary Six) could be retained. This was to allow the weak students an extra year to remedy their deficiencies.

3.4.2 From 1964, retention at Primary One, Secondary One and Secondary Four* was not allowed.

3.4.3 While a maximum retention of 10 per cent was allowed, most schools retained only two per cent to five per cent. Pupils were often promoted without much consideration of their readiness for the next level. This resulted in high attrition rates. About 65 per cent of the pupil intake at Primary One failed or dropped out at the primary and secondary stages.

* Failures of the School Certificate Examinations may apply to their own schools for re-admission after the publication of official results.

3. Major Education Policies (cont'd.)

3.4 Retention and Promotion Policies

3.4.4 To cater for the needs of both the academically and the less academically inclined pupils, the Revised Primary Education System (RPES) and the Revised Secondary Education System (RSES) were introduced in 1976 and 1978 respectively. Pupils who could not manage in the academic stream were channelled to a vocationally-oriented course. The purpose is to equip them with the necessary skills for employment in the industrial and commercial sectors.

- Under the RPES, pupils are promoted to the next level based on continual and semestral assessments. Thus, in the primary schools, pupils who fail after having been retained twice, are transferred to the Basic Course.
- On completion of the Basic Course, a pupil could either seek employment as an unskilled worker or proceed to the Junior Trainee Scheme run by the Vocational and Industrial Training Board (VITB). Under this Scheme, pupils receive on-the-job training and undertake a part-time Extension Education Programme which would enable them to consolidate literacy and numeracy. Pupils remain in the Scheme until they reach the age of 18.
- The RSES is an extension of the RPES. Under the RSES, pupils who fail at any level in secondary schools and are two years above the normal age, are channelled to vocational courses conducted by the VITB. The VITB offers courses leading to certificates at the artisan, trade or technician levels and courses leading to commercial certificates eg. the Accounts Clerk Certificate.

3. Major Education Policies (cont'd.)

3.4 Retention and Promotion Policies

- 3.4.4 . Both the RPES and RSES involve the streaming of pupils to the vocational stream. It is therefore important to establish standardised methods of assessment, to ensure comparability among schools. Although assessment guidelines and model questions have been issued to schools, the MOE indicated that this problem of ensuring comparability in assessment could not be fully resolved.

3.5 Proficiency in the English Language

- 3.5.1 Generally, pupils from the non-English medium schools lose out to those from the English medium schools in job opportunities due to their lack of proficiency in the English language.

- 3.5.2 In early 1978, measures were introduced at the Pre-U level to help the non-English stream pupils. For example, three options were offered to the Chinese stream pupils:

- . Under Option I, pupils would do the Pre-U course over two years in English except for the General Paper, which might be taken in Chinese.
- . Under Option II, pupils would do the Pre-U course over two years in Chinese and an additional year in English.
- . Under Option III, pupils would do the Pre-U course over three years entirely in English.

- 3.5.3 A survey was conducted in July '78 (Annex B & B1 of Edun Cf 149/72 Vol 4 dated 7 Aug 78) to find out pupils' reactions to the options offered. Results indicated that 90 per cent of the pupils favoured Options I and 10 per cent Option II. Option III was thus deleted.

3. Major Education Policies (cont'd.)

3.5 Proficiency in the English Language

3.5.4 For the secondary level, a Supplementary English Language Programme (SELP) was announced in December '78 for pupils in the non-English medium schools. Under SELP, six to eight hours of instruction in English Language are given outside the normal curriculum time. Vacation courses are also conducted.

3.5.5 A Special Assistance Plan (SAP) was announced by the MOE in December '78. The enrolment in the Chinese Schools has been declining as more parents are sending their children to English medium schools. This is because of the growing importance of English Language for employment. The Plan is to preserve a few established Chinese secondary schools by raising the standard of English in them. Its main feature is the development of nine selected Chinese schools into effectively bilingual institutions. Another innovation is the opportunity for pupils in these schools to attend regular classes in English medium schools. This is to expose them to an English speaking environment. For 1979, the top eight per cent of those who passed the 1978 PSLE were invited to join the selected schools. About half of these invited opted for the selected schools. 90 per cent of the Chinese stream students and 25 per cent of the English stream students who were invited opted for the selected schools.

3.6 Conclusion

This chapter gives an historical account of our education system as well as the major education policies. Chapter 3 looks into the problems in our education system. Chapters 4 and 5 describe the contributing factors to these problems.

1. Introduction

The success of an education system can be determined by the extent of education wastage and literacy level of the students. In the case of the Singapore education system, the bilingual ability of pupils is another determining factor. This Chapter identifies the existing problems in our education system and their effects on pupils.

2. Education Wastage

2.1 Forms of Education Wastage

One problem in education is the problem of education wastage. Some affluent nations, like the United Kingdom and Japan, avoid this problem by allowing automatic promotion with a compulsory schooling period in their education systems. For those education systems which allow repetition or dropouts, for example Singapore's, education wastage exists in the following forms:

- a. Failure to achieve the expected standards,
- b. Pre-mature school leaving,
- c. Repetition of grades,
- d. Unemployable school leavers.

However, only wastages in the form of (a) and (b) are examined and compared with other countries in the next section.

2.2 Statistics on the Flow of Pupils in the Singapore Education System**

About 71 per cent* of the Primary One enrolment eventually pass PSLE. 36 per cent do not make the grade to Three 'O' levels. Of the remaining 35 per cent, only 14 per cent enrol for Pre-University education. Of these, 9 per cent pass the 'A' level examination. These figures,

* All percentages quoted in Section 2 of this Chapter are percentages of the enrolment in Primary One (or its equivalent).

** For the years 1971 to 1974

2. Education Wastage (cont'd.)

2.2 Statistics on the Flow of Pupils in the Singapore Education System

except for the percentage of pupils who eventually pass PSLE (which rises from 76 per cent in 1975 to 79 per cent in 1977), remain fairly constant.

2.3 Comparison of Attrition Rates Between Singapore and Other Countries

Attrition rates⁺ in Singapore, France, Taiwan, the United Kingdom and Japan for various stages of education are shown in Table 3.1. The flow of pupils through these countries' education system is attached as Annexes 3A to 3E.

2.3.1 Elementary Education and Junior Secondary Education

In the foreign countries, there are hardly any significant percentages of dropout* during the Elementary and Junior Secondary stages because of the automatic promotion feature in their education systems. The percentages of dropout in these countries during the Elementary and Junior Secondary stages range from 0 per cent to 16 per cent and 0 per cent to nine per cent respectively. The dropout rates during the equivalent stages in the Singapore education system are six per cent (Primary) and 13 per cent (Secondary).

2.3.2 Common Examinations for Elementary Education and Junior Secondary Education

In Japan and Taiwan, there is no common examination at the end of either the Elementary or the Junior Secondary stages. In the United Kingdom and France, there is a common examination (equivalent to 'O' level examination) at the end of the Junior Secondary stage only. The failure

+ Attrition rate is defined as the sum of failure rate and dropout rate.

* Dropout rate does not include failures of the terminal examinations at the Elementary and Junior Secondary stages, eg. PSLE, GCE 'O' and equivalents.

TABLE 3.1 ATTRITION RATES AT VARIOUS STAGES OF EDUCATION IN THE FIVE COUNTRIES

STAGE	SINGAPORE			FRANCE			TAIWAN			UNITED KINGDOM			JAPAN		
	% E	**% A	#% L	% E	**% A	#% L	% E	**% A	#% L	% E	**% A	#% L	% E	**% A	#% L
ELEMENTARY (PRIMARY)	100	29	0	100	16	0	100	0	8	100	0	0	100	0	0
JUNIOR SECONDARY (SECONDARY)	71	36	21	84	12 ⁺	38	92	9	31	100	72	9	100	0	7
SENIOR SECONDARY (PRE-U)	14	5	4	34	17 ⁺	-	52	26	6	19	7 ⁺	2	93	3	52
TERTIARY EDUCATION	9 ⁺⁺	-	-	27	-	-	20	-	-	15	-	-	38	-	-

% Enrolled refers to the % of the pupils enrolled at the beginning of the stage of education.

**% Attrition refers to the % of the pupils who left the stage of education pre-maturely (including those who failed at the end of the stage).

#% Left refers to the % of the pupils who left the education system after successfully completing the stage of education.

+ These attrition rates are equal to the failure rates as the dropout rates are zero.

++ This comprises four per cent at the Universities and five per cent at the Institute of Education/ Singapore Polytechnic/Ngee Ann Technical College.

2. Education Wastage (cont'd.)

2.3.2 Common Examinations for Elementary Education and Junior Secondary Education

rates (included as part of the attrition rates in Table 3.1) of these examinations in the United Kingdom and France are 58 per cent and 12 per cent respectively. The failure rates at the PSLE and GCE 'O' Level Examinations in Singapore are both 23 per cent.

2.3.3 Senior Secondary Education

Percentages of pupils who manage to reach the Senior Secondary stage in the four foreign countries ranges from 19 per cent (United Kingdom) to 93 per cent (Japan), whereas it is only 14 per cent in the case of Singapore (about one-seventh of Japan's). This great variation is mainly because of the different education policies in these countries. In countries other than Japan, Governments conduct common examinations in the form either of a terminal examination at the end of the Junior Secondary stage, eg. United Kingdom and France, or an entrance examination to Senior Secondary level, eg. Taiwan. The Japanese Government adopts a totally different policy. It tries to find ways and means to prevent pupils from failing examinations, even to the extent of simplifying the examinations. The reason is that the Japanese do not and cannot tolerate inequality among themselves. For the same reason, the attrition rate of the Senior Secondary stage in Japan is a mere three per cent which is the lowest among the five countries. Taiwan has the highest attrition rate, i.e. 26 per cent, for the Senior Secondary stage. The attrition rate of the Senior Secondary stage in Singapore is five per cent.

2. Education Wastage (cont'd.)

2.4 Tertiary Education

The percentages of pupils who eventually enrol for Tertiary Education in the four foreign countries range from 15 per cent to 38 per cent (Japan). In comparison, only nine per cent of the Singapore pupils are admitted for Tertiary Education.

2.5 Conclusion

2.5.1 The attrition rates (dropout plus failure rates), of the Elementary (29 per cent) and Junior Secondary (36 per cent) stages in Singapore are the highest when compared with the attrition rates of the equivalent stages in the four foreign countries. The high failure rates in the two common terminal examinations, i.e. PSLE and GCE 'O', accounted for the great differences in the attrition rates of these two stages. (In countries like Taiwan and Japan where there is no common examination at the end of these stages, more than 80 per cent of the pupils are able to complete the Junior Secondary education.)

2.5.2 Although the attrition rates in Singapore, compared with those in Taiwan or Japan are high, we must consider the social differences in these countries which give rise to different education policies and systems. Japan, besides being a highly industrialized country, has a culturally and linguistically homogeneous population with only one language. Although the Taiwanese speak both Mandarin and Hokkien, only one language (Mandarin) is taught in schools. They also constitute a culturally and linguistically homogeneous population. These two countries do not have the complex problems which we have in Singapore. We have a multiracial population of diverse cultural and linguistic backgrounds. Most pupils are learning two languages which

2. Education Wastage (cont'd.)

2.5 Conclusion

2.5.2 they do not speak at home. Children of different abilities are undergoing the same education programme. In fact they are doing the GCE 'O' level examination in four years instead of the five years British pupils take.

3. Low Literacy

In the present education system, there is no established means of measuring the literacy of pupils at the various levels. The existing standardised examinations, for example the PSLE, are only achievement tests. The test results do not tell much of the pupil's literacy level. In the absence of such means, different test instruments have been devised by the Ministry of Education and MINDEF in their surveys conducted to determine the literacy levels attained by pupils and national servicemen respectively.

3.1 Attainments of Literacy and Numeracy Skills in Schools

In 1975, the Ministry of Education conducted two surveys on pupils' literacy levels, namely, "Attainment of Basic Numeracy and Literacy Skills by Pupils with Primary Education" (Edun 0013/74/Pt B dated Aug 1975). and "Ability of Primary Four pupils to follow Oral and Written Instructions" (Edun 0013/74/Pt B, Vol 2 dated Dec 1975). The findings showed that at least 33 per cent of the P6 population in the English stream and 25 per cent in the Chinese stream did not meet the minimum literacy levels of P6 standard. At least 25 per cent of the P6 population did not meet the minimum numeracy level. Most of the P4 pupils performed satisfactorily in the tests on following instructions but almost 60 per cent showed poor proficiency in the use of English language.

3.2 Literacy Levels of English-educated National Servicemen

The survey was conducted by MINDEF in 1975 (MINDEF 4-5/27-1-1 dated 20 Nov 75) to examine the

3. Low Literacy (cont'd.)

3.2 Literacy Levels of English-educated National Servicemen

the literacy levels of the English-educated recruits. These recruits attained educational levels ranging from Secondary Three to no formal education. The findings showed that only 11 per cent of these recruits were able to handle fairly well work/training situations in which English was the sole means of communication. Only 17 per cent of those with Secondary Three to Primary Six educational levels attained the same proficiency. The rest attained poor proficiency in English. They have dropped out of schools for a number of years before they were called up to serve in the SAF. Their poor proficiency in English could therefore be attributed to regression as well as the education system.

3.3 Conclusion

In the present education system, a considerable percentage of pupils in schools do not meet the minimum literacy skills expected of them. The situation is more severe in the English stream. Regression in language has worsened the situation further, as indicated by the high percentage of national servicemen who show poor proficiency in English.

4. Ineffective Bilingualism

Presently, the first and second languages are given equal maximum marks in the PSLE and the second language is made a compulsory subject at the GCE 'O' Level Examination. The aim of emphasizing the second language in schools is to achieve effective bilingualism. This section analyses the effects of our bilingual education by examining, firstly, pupil performance in languages, secondly, the extent of newspaper reading and lastly, the language exposure time. These analyses will provide indications whether bilingualism has been effective under the present education system.

4. Ineffective Bilingualism (cont'd.)

4. 4.1 Pupils Performance in Languages

According to the statistics provided by the Ministry of Education, the average percentages of pupils who failed either L1, L2, or both over the years 1975 to 1977 are

- . PSLE : 62 per cent) Of those who sat for the
- . GCE 'O' : 66 per cent) examinations

In other words, under the present education system, less than 40 per cent of the pupil population pass both the first and second languages. In view of the bilingual policy, these figures are undesirable. If examinations are to be taken as the best available instrument in gauging the competency level of pupils in a subject, then more than 60 per cent of the pupils fail to attain the minimum competency level in one or both languages.

4.2 Newspaper Reading

From the Survey conducted by the Survey Research of Singapore in 1977, the percentage of Singaporeans who read both Chinese and English newspapers is only eight per cent (126,000) of the population of age fifteen years and above. More than 60 per cent (77,000) of these readers are from the age group of fifteen to twenty-five. These 77,000 readers form only 13 per cent of the fifteen to twenty-five age group. Only 13 per cent of this group practise their bilingual skill by reading newspaper; it is most unlikely that the remaining 87 per cent are able to maintain their bilingual skill by reading materials other than newspapers. Therefore it is estimated that only about 13 per cent of the fifteen to twenty-five age group are bilingual. (Around 19 per cent of the population have attained passes in both L1 and L2 at GCE 'O' Level.)

4.3 Effects of Language Exposure Time (LET) On Pupils

Language exposure time means the total time allotted to learning the language as well as to subjects taught in the language. Teaching some subjects in the second language, thereby increasing LET, has been a practice

4. Ineffective Bilingualism (cont'd.)

4.3 Effects of Language Exposure Time (LET) On Pupils

adopted by the Ministry of Education to promote bilingualism in schools. The following analyses discuss the effects of LET on pupils and examine the extent LET has influenced the learning of languages by pupils.

4.3.1 Analysis of PSLE Results of Chinese Schools (MINDEF 4-O/24-5-16 SUPP "C" dated 31 Oct 78)

In this report, the PSLE results of 23 Chinese Primary Schools that have switched from the use of Chinese to the use of English in teaching Science and Mathematics were analysed. As a result of the switch, there was a significant drop in the Science result but not the Mathematics result. There was no significant change in the results of CL1 and EL2. Therefore the switch to teaching Science and Mathematics in English has led to no improvement of EL2 result, but to a drop in the Science result instead.

4.3.2 Analysis of PSLE Results of English Schools

In the report "Analysis of Examination Results" (MINDEF 4-O/24-5-16 SUPP "C" dated 6 Dec 78), the PSLE results of schools of all streams over the year 1973 to 1978 were analysed. It was noted that there was a significant improvement in CL2 in the English medium schools. However, this improvement could not be attributed solely to LET since there was no corresponding improvement in EL2 in the Chinese stream. The improvement in CL2 results was mainly due to an influx of CL1 teachers into the English medium schools and more pupils from Chinese linguistic background joining the English medium schools.

4.4 Conclusion

In the preceding sections, it has been established that:

4. Ineffective Bilingualism (cont'd.)

4.4 Conclusion

- less than 40 per cent of the pupil population manage to attain the minimum competency level in two languages.
- only 13 per cent of our youth (fifteen to twenty-five age group) read both Chinese and English newspapers.
- language exposure time is not the sole determining factor for the learning of languages.

Thus, the policy of bilingualism has not been universally effective.

5. Variation in School Performance

The past years' results in PSLE and GCE 'O' examinations show that the academic performances of some schools have been consistently better than others. The variation in school passing rates in these examinations ranges from 10 per cent to 100 per cent with a mean of 70 per cent and a standard deviation of 16 per cent for primary schools, a mean of 59 per cent and a standard deviation of 24 per cent for secondary schools. In other words, there is a wide variation in school performances especially among the secondary schools. The report entitled "Variation in School Performance" (MINDEF 5-7/1-83 dated 18 Jan 79) analyses the contributing factors to these differences in the school performances. These schools have been categorized according to their results in the PSLE or GCE 'O' examinations as:

Good Schools	: above 80 per cent passes
Average Schools	: 50 per cent - 80 per cent passes
Poor Schools	: below 50 per cent passes

5.1 Pupils' Home Background

Good schools have higher percentages of pupils from better home background, in terms of pupil's father occupation and educational level than the other schools. In both the Chinese and English streams, the differences in the percentages between the good schools and the poor schools are significant.

5. Variation in School Performance (cont'd.)

5.2 Teachers' Background

Good schools have higher percentages of better academically qualified teachers than the poor schools. However, the differences in percentages are not consistently significant. There is a significant difference in percentages in the Chinese schools but not in the English schools. There is also no significant difference in the length of service of teachers in the good and the poor schools.

5.3 School Background

5.3.1 School Facilities

The Ministry of Education, in its report entitled Proposed Space Allocation Models for Schools (Edun 3563/65 Pt H Vol 2 dated Feb 78), categorises school into different types according to the facilities. There is no correlation between the school results in the examinations and the types of facilities they have. It is also observed that good, average or poor schools are scattered all over Singapore without a fixed pattern. In other words, the facilities and locality of schools have not contributed significantly to the performance of the schools.

5.3.2 Government and Government-Aided Schools

"There is a significant difference in results between the government and government-aided schools for both the primary and secondary standards. While only 44 per cent of all the schools are government-aided, 71 per cent of the good schools are government-aided and 84 per cent of the poor schools are government schools (which make up 56 per cent of all schools)."

5.3.3 Pupil/Teacher Ratio

The pupil/teacher ratios of all schools are compared according to the school results. The

5. Variation in School Performance (cont'd.)

5.3.3 Pupil/Teacher Ratio

finding shows that the poor schools have lower pupil/teacher ratio than the good schools. This could be explained by the fact that a good school's principal, especially the government-aided schools, is under tremendous pressure from the pupils' parents or religious organisations to accept more pupils. In spite of the high pupil/teacher ratio in the good schools, the results of these schools remain good because of better quality of students. Therefore, the performance of schools does not necessarily reflect the pupil/teacher ratio.

5.4. Other Factors

Besides those factors that have been considered in the previous paragraphs, there are many other factors which are intangible and yet important. They are:

- . Dedication of teachers
- . Teacher's teaching method
- . Quality of pupils.

5.5 Conclusion

Amongst the factors that have been analysed, pupils' home backgrounds and the types of school (whether government or government-aided) are the only factors that are significantly different between the good and the poor schools. Most of the good schools are government-aided schools whose pupils are mainly from better home background.

6. Morale of Teachers

6.1 Sample Survey

A survey was conducted by the Education Study Team to gauge the morale of teachers in schools. The survey covered a sample of 140 teachers from 16 primary and 12 secondary schools in the English stream. The schools

6. Morale of Teachers

6.1 Sample Survey

were classified under "poor" or "good" categories based on their 1977 PSLE or GCE 'O' Level Examination results. The time taken for each interview was about 1 to 1½ hours. The questions discussed related to the social status of teachers, their pay, promotion and career development, their present workload, teaching of weak pupils, supervision and guidance, school environment, and the present education system. During these interviews, the teachers were assured that their identities would not be disclosed. As a result, the teachers spoke freely on their present problems and suggested various improvements.

6.2 Grouping of Teachers

18 per cent of the 140 teachers interviewed said that their morale was low, 52 per cent average and 30 per cent high. Thus, the claim that the teachers at present have low morale is more apparent than real. A statistical analysis showed that there was a significant relationship between the type of school (poor or good schools by examination results) and the morale of teachers. The percentage of school teachers from poor schools having low morale was 14 per cent as compared to four per cent from good schools. There was no significant relationship between the school level (primary or secondary) and the morale of teachers.

6.3 Major Factors Affecting Morale of Teachers

The factors affecting the morale of teachers were examined and the four major ones were: the relatively low social status of teachers, frequent changes in the education system, the present system of supervision and guidance of teachers and poor promotion prospects. The percentage of teachers from poor schools who were adversely affected by these four factors was twice that from good schools. An analysis of these four factors is as follows:

6. Morale of Teachers (cont'd.)

Social Status

72 per cent of the teachers interviewed felt that their social status was low and 49 per cent of them indicated that their morale had been adversely affected by this. Unfair criticisms by the press and public, lack of authority and shabby treatment by MOE (eg. being the last to be told of MOE's policies and being made the scapegoats for MOE's mistakes) were some reasons cited by the teachers for feeling so. The teachers' suggestions for improving their image included greater recognition of achievements and more frequent consultation by MOE than that at present.

Changes in the Education System

92 per cent of those interviewed thought there had been too many changes in the education system and 48 per cent of the teachers indicated that these had adversely affected their morale. The majority viewed these changes unfavourably, with only 14 per cent of the teachers considering them helpful.

Present System of Supervision and Guidance

64 per cent of the teachers indicated that their principals rarely if ever discussed their problems with them. 53 per cent of them felt that the inspectors were of no help during their school visits. 80 per cent of those interviewed also felt that the present system did not allow them to air their grievances. Among the reasons cited for this was that principals, inspectors and the teachers' unions were ineffective. The teachers' suggestions for improving this situation included the establishment of a complaints bureau in MOE and the organisation of more seminars and workshops. While the majority were aware of the limitations of the existing system, only 41 per cent of the teachers said that these had adversely affected their morale.

Promotion Prospects

74 per cent of the teachers considered their chances of promotion as slim or nil. A separate investigation showed that:

6. Morale of Teachers (cont'd.)

Promotion Prospects (cont'd.)

- the average numbers of years for a non-graduate teacher to be promoted from Education Officer (EO) to Senior Education Officer (SEO) and SEO to Principal Education Officer were 16 and seven years respectively.
- an average non-graduate EO in the Education Service had to serve about twice the length of time of an average Executive Officer in the General Executive Service and about $1\frac{1}{2}$ times the length of time of a Staff Nurse before being promoted.*
- the promotion prospects of graduate teachers were better than those of non-graduate teachers although they still lagged behind those of their counterparts in the General Executive Service.

These findings lend support to the teachers' contention that their promotion prospects are poor. Although 50 per cent of the teachers were not happy about their promotion prospects, only 32 per cent of those interviewed said that this had adversely affected their morale. Another reason cited for the dissatisfaction was that promotion criteria were vague. Teachers have suggested that promotion criteria be more clearly spelt out and that some form of merit increment be introduced.

* The three services are comparable because they offer three possible career paths for an 'O' Level school-leavers. The three specific grades of Executive Officer, Education Officer (Group III) and Staff Nurse have similar salary scales. Trainee teachers and student nurses have to undergo two to three years of professional training before they can be emplaced on the respective grades of EO III and Staff Nurse.

6. Morale of Teachers (cont'd.)

6.4 Conclusion

The majority of the teachers interviewed (82 per cent) indicated that their morale was not low. However, a significant relationship existed between the type of school (poor and good by examination results) and teachers' morale. Major factors which have affected morale were low social status, frequent changes in the education system, ineffective system of supervision and guidance and poor promotion prospects.

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EDUCATION POLICIES - CONTRIBUTING FACTORS TO
THE EXISTING PROBLEMS IN THE EDUCATION SYSTEM

— CHAPTER 4 —

1. Introduction

1.1 Chapter 3 has identified three main short-comings in the existing education system. They are:

- Education wastage;
- Low literacy of many school-leavers; and
- Non-attainment of effective bilingualism.

1.2 This Chapter describes the major education policies which contribute to these short-comings. The first part of this Chapter examines the existing education system and the second part looks at the policy of bilingualism.

2. The Existing Education System

2.1 A Rigid System

2.1.1 In the present 6-4-2 education system (ie. six years of primary, four years of secondary and two years of pre-university education), pupils in all schools follow a common curriculum. There are three common examinations, namely the PSLE, GCE 'O' and GCE 'A', which are conducted at the end of Primary Six, Secondary Four and Pre-U Two respectively.

2.2.2 The 'single-curriculum' education system does not take into consideration differences in absorption capacities and rates of learning of the pupils. Although pupils may be streamed according to merit into different classes and schools, all are required to cover the same syllabus within the same period and to sit for the same examinations. This rigidity in the system tends to favour the above-average pupils,

2. The Existing Education System (cont'd.)

2.1 A Rigid System

- 2.2.2 penalising the below-average pupils and the slow learners. This resulted in high failure rates. In 1976, 41 per cent of the PSLE candidates and 40 per cent of the GCE 'O' candidates failed. These high failure rates could be reduced if the education system is flexible enough to cater for the different categories of pupils.

2.2 Increased Workload For Pupils

- 2.2.1 Our study on "Balancing of Curriculum" (MINDEF 4-0/24-5-16 SUPP 'C' dated 27 Oct 78) shows that pupils' workload has increased over the last ten years. The main factors which contribute to this increase are outlined below:

a. Primary Schools

- Policies of LEP and Bilingualism -
The second language exposure time was gradually increased over the years. More subjects are now taught in the second language, eg. Mathematics and Science are taught in English in the non-English streams. Many pupils find difficulties in adjusting to the medium of instruction. Thus they have to spend additional time in learning the language as well as the content.
- Parental Pressure - Parents are aware of the keen competition in schools. It is increasingly difficult to gain admission into Pre-University and the University of Singapore. Not only do the parents want their children to do well academically, but they also want their children to go for tuition in music, ballet, swimming and art. Parental pressure thus creates additional workload for the children.

2. The Existing Education System (cont'd.)

2.2 Increased Workload For Pupils

2.2.1 a. Primary Schools

- System Pressure - In recent years, many demands were imposed by the MOE and the school system. From 1973 onwards, the second language carried equal marks as the first language in the PSLE. Before 1973, it was given only half the marks allotted to the first language. The RPES was introduced in 1976. Under the RPES, failures are retained, or channelled to the Basic Course. Continual and semestral assessments are implemented. These are all viewed as additional hurdles to cross.
- Other factors
 - With the restructuring of the English Language (EL1 and EL2) syllabuses, contents are reduced in the lower primary and increased in the upper primary. This results in heavy English syllabuses for Primary Five and Primary Six.
 - Teachers tend to teach not from recommended syllabuses but from textbooks, which usually cover more contents than the syllabuses.
 - Teachers are not trained to interpret the syllabuses. Thus, to be on the safe side, they tend to teach more items than required.

b. Secondary Schools

- Heavy curriculum - The GCE 'O' Level Examinations are designed for a five-year course in the secondary schools. In Singapore, pupils are required to

2. The Existing Education System (cont'd.)

2.2 Increased Workload For Pupils

2.2.1 b. Secondary Schools

- complete the course in four years.
Furthermore, the curricula have been increased over the years by the reduction in the primary schools' syllabuses without a corresponding reduction in the GCE 'O' Level syllabuses. For example, in the primary schools, History and Geography had been phased out, but these subjects remained in the secondary schools. Topics in Mathematics, like 'symmetry' and 'loci', have been transferred from the primary to the secondary schools. New topics are also introduced, eg. Modern Mathematics. All these result in a crammed curriculum.
- Introduction of Workshop Subjects -
With the emphasis on technical education, workshop subjects were made compulsory from 1969 for all pupils in the lower secondary. These subjects were normally taught outside school hours and took up an additional six periods per week. (One period is 35 - 40 minutes). In 1977, the contents of workshop subjects were reduced eg. Technical Drawing and Basic Electricity were removed. The workshop hours were also reduced to three periods a week.
- Emphasis on Bilingualism - Schools are encouraged to increase the second language exposure time by teaching some subjects in the second language. For example, Mathematics and Science are taught in English in some non-English medium schools and Civics is taught in

2. The Existing Education System (cont'd.)

2.2 Increased Workload For Pupils

2.2.1 b. Secondary Schools

- the second language in all English medium schools. The use of the second language as a medium of instruction creates more work for the pupils who are not proficient in that language.
- Emphasis on Extra-Curricular Activities (ECA) - From 1966, participation and proficiency in ECA were recorded and graded, and could be used as a subject for promotion and for entry into Pre-University. Participation in ECA has been increasing over the last ten years, eg. the number of school bands increased from 54 in 1968 to 117 in 1978. Active participation in ECA would leave less time for self-study and homework.
- Inadequate Teachers - The MOE found that teachers were inadequate in certain new subjects, eg. Modern Mathematics and Physical Science. The lack of good teachers in these subjects would create more difficulties for the pupils.
- Parental Pressure - Parental pressure also imposes a tremendous workload on the children.
- System Pressure - At present, with a policy of retention in the RSIS, failures are ultimately channelled to the vocational stream. Pupils are continually assessed. The admission criteria for entry into Pre-University have also become more stringent than before. All these force the pupils to work hard.

2. The Existing Education System (cont'd.)

2.2 Increased Workload For Pupils

2.2.2. Curriculum Development Officers (CDOs) work independently on their respective subject areas. There is a Curriculum Development Committee (CDC) in the MOE. Its terms of reference include the co-ordination of curriculum development. However, the fact that pupils' workload has been increasing over the years shows that the co-ordination at the committee level has not been adequate.

2. The Existing Education System (cont'd.)

2.3 Promotion and Retention Policy

2.3.1 Only about 22,000 out of 41,000 pupils who enter secondary schools each year manage to obtain three or more GCE 'O' Level passes. The high attrition rate is partly due to:

- the lack of an absolute standard at Primary Six to sieve the pupils going to secondary schools - It has been the practice of the MOE to pass as many pupils as possible at the PSLE, subject to the availability of vacancies in the secondary schools. This practice does not ensure that pupils entering Secondary One have achieved the standards required to cope with the secondary school curriculum. Principals have often complained that many pupils entering Secondary One were not able to write or to do Mathematics.
- a system of automatic promotion - Before the RPES and RSES, the majority of the pupils were promoted automatically to the next level. In this way, many pupils who were not able to meet the requirements of one level were promoted and expected to follow the same curriculum at the same pace as the better pupils.

2.3.2 The abolition of automatic promotion in RPES and RSES does not solve the problem of high attrition. The same number of pupils enters secondary schools. The only difference is that the weaker pupils (who would have failed PSLE) do not sit for their PSLE; they are retained, or channelled to the Basic Course. In the secondary schools, the RSES is now an additional sieving mechanism. However, attrition will remain unchanged. It will simply take another form - instead of the high number of failures at the 'O' Level Examinations, there will be high

2. The Existing Education System (cont'd.)

2.3 Promotion and Retention Policy

2.3.2 numbers of retentions and dropouts from the academic stream. The RPES and RSES have their own problems, one of which is the lack of an accurate assessment instrument to identify the pupils who should be retained. However, the Assessment Unit in the MOE is presently looking into the problems.

2.3.3 To set absolute standards at PSLE, it would be necessary to work backwards from the GCE 'O' Level Examination. In the present rigid education system, the use of absolute standards would mean fewer pupils entering secondary schools. If the curriculum is to be flexible enough to cater for different categories of pupils, it would mean longer years of study for some pupils. These extra years would either be spent in primary schools or secondary schools, depending on the standards stipulated for the PSLE.

2.4 Poor Reading Habits of Pupils

2.4.1 The Institute of Education (IE)'s ^{Survey} ~~"Survey of Reading Interests and Habits"~~ ^{Habits & difficulties of many pupils} shows that, generally, pupils did little reading. Poor reading habits were partly due to inadequate support at home. The school environment was also not conducive to the cultivation of these habits, because of crammed curriculum, insufficient library facilities and the teachers' approach (which was more compelling than motivating in nature) towards the promotion of reading.

* Written by Professor Heaton, and yet to be published.

2. The Existing Education System (cont'd.)

2.4 Poor Reading Habits of Pupils *measure of Reading - Survey of Reading Habits*

2.4.2 The IE's ^{paper} survey states that, "while little can be done about the home environment there is much the school can and should do to improve the quality of reading..... Higher standards in the first and second languages will be a consequence of improvement in reading levels, Reading, be it in the first or second language, has the potential to reinforce, extend and enrich language skills....." At present, reading habits are not adequately promoted in schools.

3. The Policy of Bilingualism

3.1 No Specific Definition of Effective Bilingualism

The objective of bilingualism as spelt out by the MOE is to build a cohesive multi-racial society. This is a very broad and general statement. There is no specific definition of "Effective Bilingualism" in terms of functional usage (eg. the abilities to read the newspapers and to converse) or in terms of literacy level. Without clearly defined objectives, the formulation of language policies has been rather arbitrary. Some examples are given in the following paragraph.

3.2 Weak and Confusing Directives from the Ministry

The concept and policy of LET were introduced in 1966, with the aim of facilitating the learning of the second language, eg. Mathematics was taught in the English Language in some Chinese medium schools. Even now, twelve years afterwards, issues on LET are still being discussed and new models proposed. The whole project on LET was very much a hit-and-miss affair, as evidenced by the changes in LET. Some of these changes are documented below:

- A circular (Edun 514/69/35 dated 21 Oct 69) directed that History be taught in English for Primary Three in the Chinese medium schools.

3. The Policy of Bilingualism (cont'd.)

3.2 Weak and Confusing Directives from the Ministry

- Another circular (Edun 514/69 dated 21 Oct 70) rescinded this directive.
- A circular (Edun 3695/61 dated 23 Oct 72) from the MOE advised that the minimum second language exposure time should be increased to 25 per cent in 1973, 33 $\frac{1}{3}$ per cent in 1974 and 40 per cent in 1975. The figures were arbitrary and not based on any study.
- Another circular (Edun 3695/61 dated 19 Sep 74) allowed schools flexibility in determining LET.

3.3 Failure to Cater For Children from Different Home Backgrounds

3.3.1 The majority of the pupils are taught in two languages, English and Mandarin. About 85 per cent of these pupils do not speak these languages at home. When they are at home, they speak dialects. As a result, most of what they have learned in school is not reinforced.

3.3.2 In the past, no attempt was made to provide flexible LET and LIT to cater for the differences in home support (such as encouragement of parents and the language spoken at home). Only recently, the MOE started to work out a curriculum which provides flexibility in LIT for the primary schools. The languages spoken at home by the pupils are taken into consideration in the curriculum.

3.4 Emphasis on the English Language

3.4.1 As Singapore industrialises, the English Language becomes more important relative to the other languages. The main emphasis of the MOE has been on the improvement of proficiency in the English Language in the non-English medium schools. Little assistance to improve proficiency

3. The Policy of Bilingualism (cont'd.)

3.4 Emphasis on the English Language

3.4.1 in the English Language has been given, by the Ministry to the English medium schools, where inadequacy in the English Language is also severe. A report by the MOE, ("The Teaching of English Language in Schools", ref PR 40/04 78/366 dated April 1978) states that many pupils who entered Secondary One did not pass English, at Primary Six (at least 22 per cent in 1977), and teachers felt that skills which should have been learnt at the primary level had in fact not been learnt at all. The lack of a concerted effort to improve English in the English medium schools contributes to the ineffectiveness of the language policy.

3.4.2 For the majority of pupils, English is a second language, because it is linguistically different from the mother tongues spoken at home. For the below-average pupils who could not cope with two languages and do not have home support for English, it may be more effective to teach them a single language which is linguistically more similar to the language spoken at home than to persist in teaching them two languages or English.

3.5 Lack Of A Conducive Environment For Learning of Languages

3.5.1 "The most profound influences on the child's acquisition of language skills are the home and the school" (Professor Heaton, Institute of Education). While it is difficult to influence the home environment, it is possible to create a conducive environment in the schools.

3. The Policy of Bilingualism (cont'd.)

3.5 Lack Of A Conducive Environment For Learning of Languages

3.5.2 The environment in our schools is not entirely conducive to the learning of languages. The Heaton's Report on pupils' reading habits states that about 30 per cent of the pupils sampled used dialects in the playground. Moreover, the Chinese-medium schools lack an English-speaking environment and the English medium schools lack a Mandarin-speaking environment.

4 Conclusion

The contributing factors to the existing problems in the education system, as far as education policies are concerned, are:

- the present rigid education system with a common and heavy curriculum, which does not recognise the differences in pupils' home support and absorption capacity; and
- the lack of specific objectives in the policy of Bilingualism.

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CONTRIBUTING FACTORS - SYSTEMS AND PROCEDURES

— CHAPTER 5 —

1. Organisation of the Ministry of Education

- 1.1 In 1976, the Management Services Department (MSD) of the Ministry of Finance reviewed the organisation of the Ministry of Education Headquarters (HQ). Based on the MSD Report (MSD 7.21, Project No: 10/76, Dec 1976, Ministry of Finance), the Ministry of Education made some immediate changes to its organisation chart. The organisation chart as at 29 August 1978 is shown in Annex 5A. A revision of the whole organisation chart based on the MSD Report was completed at the end of 1978. The new organisation system (as shown in Annex 5B) has been implemented in January 1979*.
- 1.2 In the re-organised structure, the Chief Executive of the Ministry is the Permanent Secretary, with the Director of Education acting as a consultant for and a coordinator of the more professional aspects of the Ministry's activities. The directors of two divisions - the Schools Division and the Education Development Division - will report to the Permanent Secretary through the Director of Education while the other four directors will report directly to the Permanent Secretary.

2. Overall Planning and Leadership

- 2.1 Until recently, the Ministry had no overall education plan and no definition of specific objectives. There were no clearly defined objectives for the whole education system and for the programmes and activities within the system. The basic objective of developing

* Under the new organisation, the designations of the various officials are changed. For example, DD/Dev is now Director/Education Development, the EDOs and SAs are now designated Inspectors and Senior Inspectors. However, the functions of these officials and the system of working remain similar. As our studies were done mainly in 1978, designations used in this Chapter are those of the organisation system in 1978.

2. Overall Planning and Leadership (cont'd.)

- 2.1 literacy was not explicitly recognised. The attainment of objectives was hindered because middle level management was not guided by consistent and tangible overall goals. Instead, each section in the Ministry was busy with isolated and immediate tactical problems. Little attention was devoted to overall policies. The Ministry's present effort in preparing an overall plan (under the direction of Prime Minister in Jul 78) is in the right direction.
- 2.2 Lack of an overall plan resulted in many projects being initiated by the Prime Minister (eg. the Language Exposure Time Project, the Pre-University Options and the Pre-Primary Programme). Although top-down initiation has been useful, the middle and ground levels should contribute more than what they have been contributing. Because the Prime Minister has no formal contact with the ground level, he has to rely a lot on first principles. Furthermore, when policies come from the Prime Minister, there is a tendency for such policies to be immediately executed without thorough analysis. An example is the Pre-U Options Project.
- 2.3 To overcome the problem of the lack of overall planning and defined objectives, a strong leadership which can provide direction, cohesion and drive to the Ministry is essential.
- 2.4 The complicated hierarchical structure in the Ministry reflects the objectives and responsibilities of the Ministry and the extent and range of its activities and functions. However, the inter-relationships between various sections are inadequately defined. Essential co-ordination could be increased. For example, in the development of curriculum, there is no formal link between the Curriculum Development officers and the Schools Branch. As such, the Schools Branch seldom gives to the Development Branch feedback on ground level reactions to the curriculum implemented.

2. Overall Planning and Leadership (cont'd.)

2.5 The 1976 MSD report on "Organisational Review of the Ministry of Education HQ" (MSD 7.21, Project No: 10/76, Dec 1976, Ministry of Finance), pointed out that "The present dichotomy of the Ministry into an Administration Division and a Professional Division is not necessary. this has brought barriers to free interaction and communication. Each Division has its own imperatives and its own set of priorities; each officer is primarily concerned with the activities and well being of his own Division, Branch, Section or Unit." The Ministry has recognised the problem and has incorporated MSD's recommendation of merging the two Divisions with the Permanent Secretary having overall responsibility for the whole Ministry in its recent re-organisation. However, a strong leadership is still needed to ensure close co-ordination between various sections and to reduce sectional self-interests. A general appreciation of the objectives of each section in relation to the overall goals of the Ministry is essential.

3. Management Culture

3.1 Management by Consensus

3.1.1 Decisions were often made only after everybody has been consulted. This is shown in:

- the widespread use of committees instead of decisions within the lines of authority,
- the verbatim compilation of the comments of superiors and subordinates in the same report instead of relying on superiors to present the collective views of their units. (For example, a collection of different views of HQ officers on the various suggestions put up by principals was presented in the report on "Residential Seminars of Principals-Follow-Up Actions." (EDUN Cf 69/76 Pt G July 77 P & R Branch). Comments of superiors and subordinates were not summarized and followup actions were delayed.)

3. Management Culture (cont'd.)

3.1 Management by Consensus

3.1.2 Management by consensus often resulted in the Ministry of Education having to take a long time in formulating plans but giving very little time for implementation. One example is the Special Assistance Plan. The Ministry had taken a few months to formulate the plan but given themselves only one and a half month to implement the policy. In fact, the formulated plan (EDUN 0003/76 Vol 7) submitted by the Ministry on 4 Nov 78 was rejected by the Prime Minister, and another plan was put up on 15 Nov 78 for Cabinet's decision. The parents were given only five days to opt for their choice and the principals had only ten days to finalize their class arrangements and time-tables. Finally, the pupils were informed of the results of transfer two days before the school re-opened. Another example is the Pre-U options where the Principals were given only two days to conduct a survey on student reactions to the options.

3.1.3 Self-confidence on the part of heads of units and superiors' trust in the units and their heads could be generated if more decisions were made through lines of authority and fewer by consensus.

3.2 The Committee System

There is an abundance of committees, about 100 committees from the different branches and units. For example, 62 Subject Standing Committees and Working Committees for Development of Curriculum, 12 Monitoring and Feedback Committees for monitoring projects and six other committees namely Staff Development Committee, Physical Planning Committee, Curriculum Development Committee, Planning & Reviewing Committee, Senior Professional Officers Committee and Ministerial Committee. Delineation of responsibilities of the individual

4. The Committee System--(cont'd.)

Committee members has not always been clear. Examples of the effects of management by committees are given below:

3.2.1 Diffusion of Responsibility

Although the overall responsibility for curriculum development lies with the Curriculum Development Committee (CDC), the responsibility and authority for the actual development work lie in two different channels:

- . Working Committees (WCs) report to the Subject Standing Committee (SSC) which then reports to the Curriculum Development Committee (CDC).
- . Curriculum Development Officers (CDOs) report to the Assistant Director/Curriculum (AD/Cur) who then reports to the Deputy Director/Development (DD/Dev). Both AD/Cur and DD/Dev are members of the CDC and the CDOs are members of the SSCs.

Although AD/Cur and DD/Dev are responsible for curriculum development, they have no formal control over the SSCs and WCs who actually write the syllabuses and the textbooks. The CDO has to report to the Chairman, SSC as well as to AD/Cur. This dual command results in the diffusion of responsibility and thus a lack of control.

3.2.2 Dual Loyalties of and Secondary Commitment from Committee Members

Many members of the SSCs and WCs are teachers from schools. The teachers give first priority to their own school commitments and not to curriculum development.

There are also numerous Feedback and Monitoring Committees to monitor various projects (e.g. Basic Course, Pre-U Programme, RSES, Foreign Language, Pre-Primary Programme, Supplementary English Language Programme, Assistance Plan Schools). Some officers sit in practically all of these committees as well as in the Planning and Review Committee. Since these officers have to take care of their normal duties, they are left with little time to devote to these committees.

3.2.3 Continuity of Responsibility

Whenever a particular curriculum is to be reviewed or developed anew, a new committee comprising new members is formed. Because of the lack of continuity of membership, new members could not be held responsible for any defects in the curriculum developed by their predecessors. The committee would probably not be present to see the implementation of the curriculum it has developed. In this way, the sense of responsibility could be diluted. Much time is also wasted by the new committee members in familiarizing themselves with what has gone on before them.

3.2.4 Responsiveness of Committees

There is no systematic review of education problems by the various committees. (For example, the development and revision of curriculum are not reviewed systematically by SSCs; reviews of the more important subjects, like the English and Chinese Languages, were more often prompted by top management and only those less important subjects, like music, were initiated by the SSCs chairman or CDOs.)

Most committees could not always respond immediately to development as the majority of them (for example, SSCs and the Feedback and Monitoring Committees) held meetings at intervals of two months or longer. Less frequent meetings mean longer delays and greater chances of projects going astray.

Where immediate response is required, an ad hoc committee comprising the Ministry's officials has to be formed (for example, for the Pre-U Options Project).

3.2.5 Implementing Decisions Made at Committee Meetings

Sometimes there is a delay in implementing decisions made at Committee Meetings. This is illustrated by two examples.

- . In the Chinese Word List Projects, decision on working out the character list was made on 24 Feb 77 at the 9th CDC Meeting. However, the first meeting of the Working Committee was

3.2.5 Implementing Decisions Made at Committee Meetings (cont'd)

called only after some 7 months. In fact, no action was taken until the Director of Education, in early June, specifically instructed a CDO to work out the tentative work plan for the project; later he instructed the Director/School and the Assistant Director/Secondary to nominate members for the Main Working Committee. This delay could have been avoided if there were a better allocation of tasks and responsibilities.

Another example concerns the Pupil Data Bank. Although the inaccuracy of the inputs in the Data Bank had been recognised and a review of the Pupil Data Bank was deemed necessary at the 38th Meeting of the Planning and Review Committee on 23 Mar 78, the Bank is still inaccurate. A shortage of staff could be a reason for the delay, but the lack of clearly defined areas of responsibility is also a contributing factor.

3.3 Coordination and Cooperation among the Branches

Different surveys have been conducted by the various branches in the schools. Principals were often asked to submit numerous types of statistics. A Standing Instruction (EDUN 755/67) was later issued by the Permanent Secretary (Education) on 12 May 78 to all Branch Heads requiring that all surveys and collection of statistical data from schools must be first cleared with the Director (Planning & Review). However, this has not always been strictly complied with. There is also a lack of co-ordination among the various branches in supplying suggestions/information for streamlining of the data collection system. A closer co-operation between branches should be established so that the collection of data from schools can be properly scheduled.

In the Language Exposure Time (LEET) project, several Branches and Sections were involved. This has resulted in diffused responsibility and poor co-ordination. For example, the Minister for Education, at a briefing on 19 Oct. 72, announced the intention of increasing the Second Language (L2) exposure time and said that views of principals and teachers should be sought and a survey on staff availability be conducted. However, no survey was carried out.

3.4 Dilution of Professionalism

Education Development Officers (EDOs), School Advisers (Sch Advs), and Specialist Advisers (SAs) have the conflicting role of being both the assessors and advisors to the principals and teachers. In addition, they have to perform other incidental duties like serving as members of SSCs in the development of curriculum, involving in examination preparation, and participating in committees work on youth festivals, and campaigns. Consequently, each teacher could only be supervised by an EDO or SA once a year on the average. As such, there is a lack of close supervision. The EDO or SA merely inspects but could not possibly carry out his advisory role (e.g. giving professional advice on teaching methodology and curriculum, counselling, and giving classroom demonstration lessons).

3.5 Feedback

After the implementation of the Basic Course, it was found that the attrition rate of pupils enrolled in this Course is high (about 6% drop out per month for each level). However, the officials and the professionals in the Ministry had not identified the problem areas or come out with any remedial action. Since the Monitoring committee only meets once every six months, the response to feedback is slow and is not sufficiently sensitive.

In the case of the Pre-U Options Project, when the actual responses from students differed significantly from the predictions of the preliminary survey, the Ministry did not appear to be alarmed. It did not foresee that the bulk of students offering Option 1 included many who did not have the language proficiency required for the learning of contents, and that the project would thus result in a high percentage of failures.

4. Project Development and Decision Making

The development of projects in the Ministry could have been more systematic. The initiation of projects, the definition of objectives, and the decision making can all be improved.

4.1 Initiation of Projects

Ground level reactions seldom become the trigger for new projects. Projects are usually initiated by the political leadership. Some examples are given below:

4.1 Initiation of Projects (cont'd)

- . In the Language Exposure Time (LET) project, the plan to provide for flexibility in LET to suit pupils' home support in language was initiated by a minute on bilingualism from the Prime Minister.
- . The project of Pre-University Options was initiated by the Prime Minister who requested that the standard of English be raised in the Chinese stream Pre-U classes.
- . The major curriculum changes were initiated from the top, for example, the English Primary Pilot project was initiated by the then Minister for Education, and curriculum changes in Mathematics by the Director of Education.
- . The development of an education sub-system to cater for the below-average students was directed by the Prime Minister. This has resulted in the Revised Secondary Education System (RSES) for the secondary schools and the Basic Course for the primary schools.
- . The review of technical education in the secondary schools was initiated by the Prime Minister. A committee chaired by Mr Rex A Shelley was later formed by the Senior Minister of State for Education.

The reliance on initiation from the top has the disadvantages mentioned in Paragraph 2.2 above.

4.2 Definition of Objectives

The ultimate objectives of project are not always defined. If defined, they are not always clear and specific. For example:

- . In the Chinese Word List Project, the objective for preparing the "1000 active and 1000 less active character list" within two weeks was not defined.
- . The objectives of bilingualism are not specific. The categories of pupils to be effective bilinguals, the languages to be emphasised and the extent of emphasis are not defined. Detailed specifications of attainments of language proficiency at each level of education are also not laid down.

4.3. Identification and Analysis of Problems

The Ministry of Education sometimes did not identify problem areas and did not carry out detailed analysis. Following are two examples:

- . In the RSES, it was assumed that the non-academically inclined pupils would be vocationally inclined. There was no analysis of the cause of education wastage.
- . The Pre-U Options project was completed in 20 days. There was no time for a detailed analysis.

4.4 Recognition of the Urgency of Projects

The urgency of projects were not usually recognised. For example:

- . In planning for the RSES, there was no mention of the time frame for implementation.
- . In the Pre-U Options project, the Prime Minister had pointed out to the Ministry as early as Sept. 77 that Nanyang University had switched to teaching in English and he requested that the standard of English in the Chinese stream Pre-U Education be raised. The urgency of developing a working scheme was not recognised by the Ministry officials until five months later, when the Prime Minister gave them a time frame of 3 weeks.

Consequently, solutions to problems are often worked out by force of circumstances and under pressure of time constraint. They are more likely to be weak and to need remedial actions after implementation.

4.5 Criteria for Decision Making

4.5.1 In the Chinese Word List project, there was inadequate research done to determine the number of characters required. The number of characters to be included in the final Character List is still uncertain. The number of characters is very important as it defines the standard of Chinese to be achieved in the primary schools.

4.5.2 Some arguments made by the Ministry are not completely logical. This was reflected in a paper (entitled "Textbook Review System and Guidelines

4.5 Criteria for Decision Making (cont'd)

for Publishers" CDC 78/22/02, discussed on 22nd Meeting of the CDC, dated 1 Jun 78) opposing the Ministerial Committee's suggestion of establishing a consultant agency staffed by Ministry officials to assist publishers in the production of schools textbooks. The main reasons given were first, extra work would have to be done by the Ministry with no monetary benefits and second, it is not possible to service all publishers and to service only some publishers would give rise to criticisms of favouritism. These are valid reasons. But the alternative suggested is that principals and teachers could serve on these consultant agencies for publishers. This is a contradiction because principals and teachers are also officers belonging to the Ministry and they have school commitments.

5. Project Implementation and Evaluation

Since the Ministry is structured along functional lines, officials usually resort to committee management to co-ordinate programmes for implementation and evaluation. The Feedback and Monitoring Section has Implementation Committees and Monitoring Committees for various projects. The Implementation Committees set targets and draw up operation plans for the planning and launching of the programmes, while the Monitoring Committees keep tab of project development and progress for review and evaluation. Although committee management has the advantage of team effort, it also has its constraints as illustrated in paragraph 3.2. Generally, the Feedback and Monitoring Section has performed its functions well but there is still room for improvement. The following are some of the problems identified:

5.1 Understanding of Objectives and Policies

Objectives and policies may not have been completely understood. For example, in the Pre-U Options Project, the Prime Minister wanted a programme to upgrade the English proficiency of those 800 Chinese stream students who would be expected to proceed to the University. Instead, a programme was devised to cater for all Chinese stream students. It also reflects the reluctance of the Ministry 'to separate the sheep from the goats.'

5.2 Awareness of the new policies by ground level units

5.2.1 Principals were given the wrong impressions regarding the Pre-U Options Project. Some of them thought that they should 'sell' Option I (2 years in English) to students.

5.2.2 Many teachers interviewed by us were unaware of the rationale and objectives of the new policies or projects implemented by the Ministry, e.g. the RSES, and the 5-year rolling plan for teachers. As a result, some of them were not well-prepared to accept additional responsibilities. Often, they were not told clearly of the implications of new projects.

5.3 Enforcement of Uniform Standards

In RPES and RSES, there was no enforcement of the assessment guidelines across schools. The maintenance of a uniform standard posed problems and the comparability of standards between schools could not be ensured. This problem has been recognised by the Ministry and an Assessment unit has been set up to develop proper testing instruments for effective streaming of pupils and for achieving comparable standards among schools.

5.4 In-depth study of the Implications and Prediction of possible outcomes

Generally, there was insufficient in-depth study of the implications and prediction of the possible outcomes.

- . In the LET project, this is evident by the reversal and revision of policies. For example, one circular (Edun 3695/61 dated 23 Oct 72) advised schools that the minimum LET would be increased to 25% in 1973, 33½% in 1974 and 40% in 1975. These figures were arbitrary and no study was conducted. This circular was then superseded by Edun 3695/61 dated 19 Sept. 74 where schools were allowed flexibility in LET.
- . In the LET project, the policy of "Teaching History in CL2" was implemented in 1970 without consideration of the implications and possible outcomes of the policy. Much complaints were received from schools and finally the policy was abolished in 1971.
- . In the Pre-U Options Project, the response and ability of students to cope with the different programmes were not predicted. Therefore, high failure rates are expected in subjects like Economics, History and Geography.

5.4 In-depth study of the Implications and Prediction of possible outcomes (cont'd)

- . In Apr 76, the Ministry decided that the Basic Course was to be implemented in Jan 77 starting with the B4 level. B1 to B3 would be implemented in 1978. Because of the time constraint, the syllabus and the readers for the B4 level were prepared within a period of 5 months. Only a preliminary survey of a sample of 35 students drawn from 2 schools was conducted to gauge the pupils' standards. The professionals did not go through the usual procedure for the development of a curriculum.

5.5 Pilot Projects as a tool of evaluation

- . In 1966, before the implementation of the teaching of Mathematics and Science in EL2, a pilot project was conducted in 28 Government Primary Schools. This pilot project was used as a tool of evaluation, and was a good idea. However, subsequent policies on LBT were implemented immediately in all schools. To overcome problems of implementation which may be overlooked and to gauge ground level reactions, new policies should be introduced as pilot project in some schools first before extending them to all schools.

6. Project Feedback

One of the problems of the Ministry is that the high level committees (e.g. the Ministerial and the Planning and Review Committees) have little access to ground level reactions. Insufficient feedback often means poor assessment of the results of projects.

6.1 Informal Feedback

6.1.1 In the development of the curriculum, the SSCs do not receive ground level reactions through formal feedback channels. The committee members have only ad hoc contacts with some schools and teachers and often have to depend on their personal experiences.

6.1.2 Since feedback is informal, ground level reactions to curricula seldom serve as the trigger for new development on curriculum. There is also a lack of feedback on the ability of pupils to absorb

6. Project Feedback (cont'd)

the recommended materials and the effectiveness of textbooks prescribed. There should be a systematic evaluation of newly introduced curriculum to gauge its effectiveness and to modify it where necessary.

6.2 Ground level reactions

6.2.1 Before the implementation of the RSES, there was no systematic evaluation of possible ground level reactions. For example, school principals were not consulted. There was also no discussion with the Specialist Advisers and CDOs on the preparation of the RSES paper.

6.2.2 In the Pre-U Options project, the principals were told to carry out questionnaires survey in schools to gauge the student reactions. However, the time given to the principals was so short that the survey had to be done in a hurry. As a result, the ground level reactions received were inadequate and not accurate.

6.3. Continual Feedback

6.3.1 In the LET project, surveys and seminars were only conducted after the implementation of new policies and when implementation problems arose. For example, after numerous complaints about difficulties faced by students in learning History in the mother tongue were received from the schools and the public, a committee on "Teaching of History in Non-Chinese Schools" was formed to look into the difficulties encountered by the schools.

6.3.2 Generally, monitoring and feedback were conducted on an ad-hoc basis (e.g. LET project, Pre-U Options, RSES). A system of continual monitoring of and feedback from the education system as a whole is lacking.

6.4 Response to Feedback

Sometimes, the Ministry does not respond to feedback.

- Planning & Review Branch (P & R) has done studies on Literacy and Numeracy amongst school pupils and the findings were quite alarming. (Study entitled "Attainment

6.4 Response to Feedback (cont'd)

- . of Basic Numeracy and Literacy skills by Pupils with Primary Education", EDUN 0013/74/Pt B, Aug 75.)
However, this feedback information was not used by the Ministry. There was little evidence that the many studies done by P & R were translated into actions. Another example is the Basic Course Non-Response study (entitled "Non-response to the Basic Course", EDUN of 69/76 Pt E Pt 4, PR 78/25, Aug 78).

6.5 Communications between the Ministry Headquarters and Schools

- 6.5.1 Communication between the Ministry headquarters and schools is rather poor. For example, many principals are not informed of the outcomes of surveys conducted on the schools and quite a number of teachers seem to be unaware of the existence of new policies. Some principals, according to the findings of a survey conducted by the Shelley Committee, were not clear about the objectives of technical education.
- 6.5.2 Communication problems are aggravated by the highly centralised system. Errors of understanding, judgement, commission or omission in implementation by the Ministry headquarters would have a multiplier effect through the long chain of the whole system on the schools. Even within the Ministry, horizontal and vertical communications are not always reliable nor effective.

6.6 Monitoring and Recognition of Successful Projects

- 6.6.1 Pilot Projects carried out by the Associated Schools are not monitored by HQ. For example, Kheng Cheng Primary School has built a science laboratory, audio visual laboratory, mathematics room and music rooms to facilitate students' learning. Also, Poi Ching School has built a language laboratory and carried out the Lady Bird Key Words Reading Scheme under the supervision of staff from the Institute of Education. The successes of these projects are not recognised by the Ministry of Education and there is no follow-up on these good programmes.
- 6.6.2 Another example is the Chinese Primary Pilot Project. It was implemented in 1974 to improve the teaching and learning of Chinese Language at Primary

6.6 Monitoring and Recognition of Successful Projects (cont'd)

6.6.2 levels. Special audio-visual aids for teaching Chinese Language in P1 to P3 were introduced in 23 schools. A survey of 73 teachers from 17 of the schools involved was conducted in 1976. The teachers agreed that the materials have helped to raised the Chinese standard in the lower primary levels. The principals of these schools, in April 78, also agreed that the project materials were good and suitable for their pupils and that materials for up to P6 should be developed. However, the Ministry of Education has not extended this successful project to all schools; neither has it extended the programme by developing similar special materials for P4 to P6.

7. Specific Examples of Problem Areas

There are three specific examples which highlight the problem areas in the systems and procedures of the Ministry of Education.

7.1 Curriculum Development

The initiation of curriculum development is usually top-down and seldom contributed by the ground level through feedback. The committee system for writing up the curriculum is diffused in responsibility, weak in control, lacking in continuity and slow in response. Annex 5C gives a detailed description of the problem areas in curriculum development.

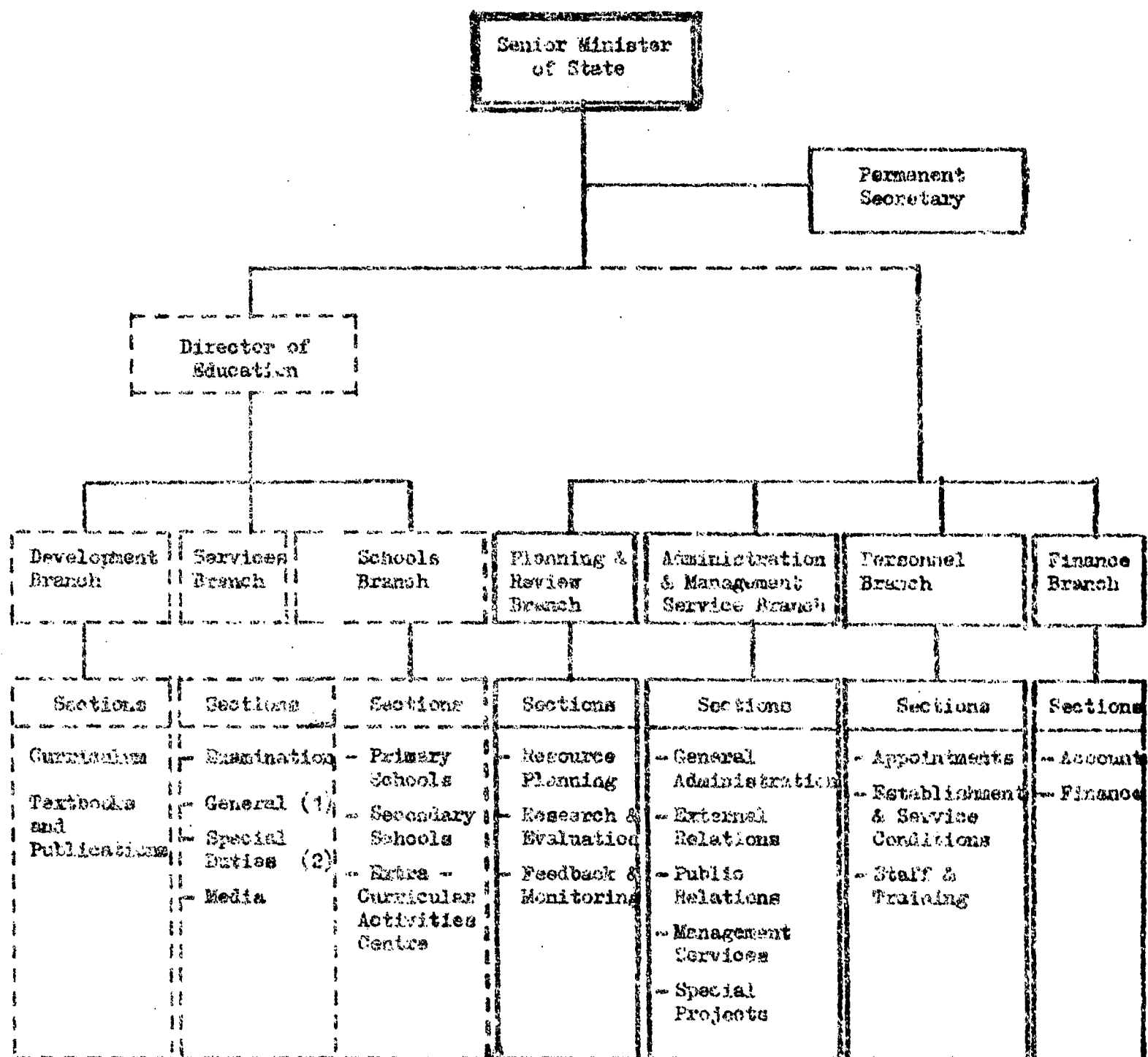
7.2 Control and Supervision of Schools

The Education Development Officers (EDOs) and Specialist/School Advisers (SA/Sch Adv) assume conflicting roles. They are expected to supervise or assess teachers and at the same time, advise teachers on professional matters. The present supervision of teachers concentrates mainly on classroom inspection. This partly due to the small inspector to teacher ratio. Therefore, it is impossible for the inspector to see teachers often and they have little time to observe the teacher outside the classroom. Annex 5D gives a detailed description of the problem areas in the control and supervision of schools.

7.3 Basic Course

Under the RPES, from P3 onwards, weak pupils in primary schools who have failed a third time after two repeats will be channelled to the Basic Course. There are therefore four levels of Basic Course, B1 to B4. The EDOs, principals and teachers feel that the Basic Course needs to be improved. Annex 5E describes the reasons for its present implementation failure. (In 1978, there were 7,137 pupils being posted to the Basic Course, but 1,632 (23%) of them did not turn-up in Jan 78. Subsequently, the average drop-out rate at each level was 6% per month. By 30 June 1978, only 3,257 pupils (46%) remained. By 30 Nov 1978, only 1,523 pupils (21%) remained).

ORGANISATION CHART OF THE MINISTRY OF EDUCATION HQ (AS AT 29 AUG 78)



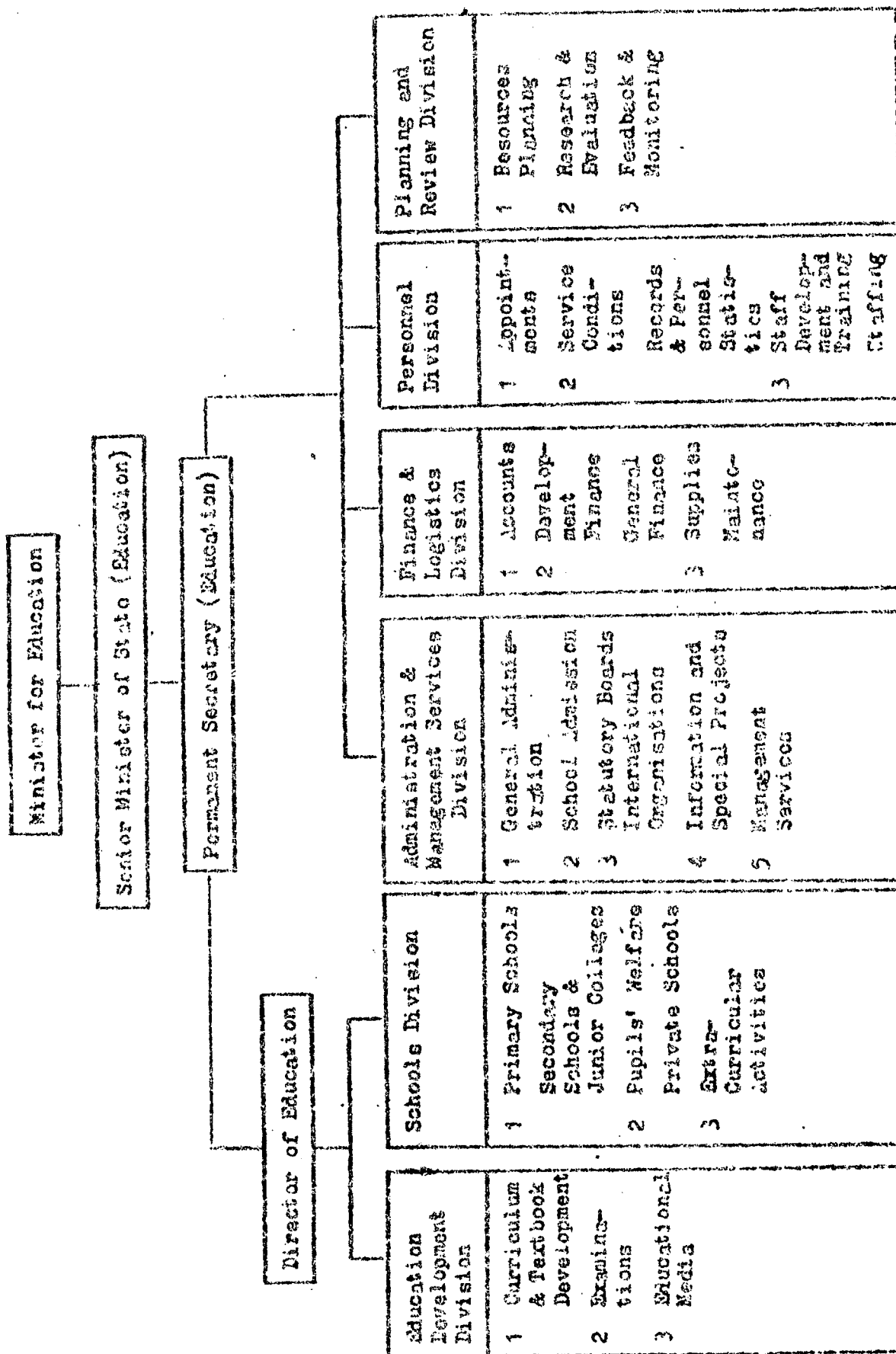
Key

	Professional Division
	Administrative Division

(1) Includes Admissions, Kindergartens, Private Schools and Complaints Units.

(2) Includes Guidance, Social Work, Special Education, Islamic Education, Campaigns and Seminars/Conference Units.

ORGANISATION CHART OF THE MINISTRY OF EDUCATION HQ (JANUARY 1972)



CURRICULUM DEVELOPMENT

1. Objective

This paper examines the existing process of curriculum development. The working procedures are outlined in Appendix A.

2. Initiation of curriculum development

2.1 Top-Down Initiation

The major curriculum changes were initiated from the top down. Examples are:

- the initiation of the English Primary Pilot Project by the then Minister for Education in 1971
- the initiation of curriculum changes in Science (Primary Level) by the Minister for Education
- the initiation of curriculum changes in Mathematics by the Director of Education.

Although the Subject Standing Committees have initiated suggestions (for example, for Physical Sciences and Music), those were few and far in between.

2.2 Overall Long-Term Planning

Curriculum changes were initiated independent of one another in the absence of a long-term education plan.

Although there were attempts to produce strategic education plans, those were not widely used. Recently, under the direction of the Prime Minister (July 1978), the Ministry has prepared overall objectives and long-term targets for the education system. ("Framework for the Revised Education System", reference Edun S003/76 Vol 6 dated 20 Oct 78).

2.3 Feedback

Ground level reactions from teachers and pupils to existing curricula seldom become the trigger for new curriculum development. The top-level committees (the Ministerial and the Planning and Review Committees) have little access to ground level reactions. Even the middle-level committees (like the Subject Standing Committees) have no formal feedback channels to receive ground level reactions. They have to depend on the experiences of the individual committee members and the ad hoc contacts the Curriculum Development Officers (CDOs) have with some schools and teachers.

2.4 Analysis

At present, the development of curriculum is initiated mainly from the top. Curriculum changes have led to different emphasis in different years. Bilingualism was the emphasis during the period from 1963 to 1968, while technology was the emphasis during the period from 1972 to 1975. These differences in emphasis meant that the middle-level management (such as the Subject Standing Committees and CDOs) could not clearly work towards consistent and tangible overall objectives. Development of an education sub-system to cater for the below average pupils was directed by the Prime Minister (resulting in the Revised Secondary Education System for those who cannot make it to the GCE 'O' level and the Basic Course for pupils in the primary schools). While top-down initiation of curriculum changes has been relevant and useful, insufficient feedback from the ground level and inadequate contribution from the middle level mean that the top management has to depend on first principles, personal initiative and whatever appreciation of the ground level they could gather from informal channels.

The Ministry needs an overall plan with clearly defined objectives. Their present efforts in preparing such a plan are in the right direction. It is also essential that formal feedback channels from the ground level to the top level via the middle level be established in order that the Ministry can react to ground level development.

3. Committee System

3.1 Existing Parallel Channels of Working Responsibilities

The overall responsibility for curriculum development lies with the Curriculum Development Committee (CDC). Working responsibilities and authority lie in two parallel channels (Appendix B), namely,

- Working Committees (WC) reporting to Subject Standing Committees (SSC) which in turn report to the CDC,
- The Curriculum Development Officer (CDO), who is a member of the SSC, reports to the Assistant Director/Curriculum (AD/Cur) on curriculum matters. The AD/Cur reports to the Deputy Director/Development (DD/Dev). Both AD/Cur and DD/Dev are members of the CDC.

The AD/Cur and the DD/Dev are responsible for curriculum development, but they have no formal authority over the SSCs. Their link with the SSCs is through the CDO sitting in the relevant SSC. The CDO has to report to the Chairman, SSC as a member of the SSC as well as to report to the AD/Cur as a CDO.

3.2 Group Responsibility of Committees

In addition to the diffusion of responsibilities between DD/Dev and AD/Cur and between the SSCs and the WCs, the committee system also means joint group responsibility among committee members. No one member can be held solely responsible for a certain curriculum development programme.

3.3 The Writing of a Curriculum

The writing up of a curriculum does not always incorporate the following aspects:

- specifications of objectives
- definition of the scope
- statement of past problems experienced so as to ensure that they are not repeated

3.3 The Writing of a Curriculum

- comparison of our curriculum with those of other countries such as in United Kingdom, New Zealand, Hong Kong and others.

Past experiences would only be reflected in the writing up of a curriculum if members of a previous SSC still serve in the current SSC. But, again these experiences are not sufficiently spelt out in writing. Also, there is little comparison made between our curriculum with those of other countries.

3.4 Dual Loyalties and Commitment

A major proportion of the members in the SSCs/WCs are teachers from schools. When we interviewed the Secretary of the English Language Subject Standing Committee, we noted that as far as priority of work was concerned, the teacher's first commitment was to the school principals (eg appointment as game masters) and not to curriculum development. Meetings were called only when they would not conflict with the teacher's commitments in schools. One such example was the Chinese Subject Standing Committee which met only in the evenings of working days and during weekends. Another example was the English Language Standing Committee. Owing to school commitments a member was absent during one of the meetings. As a result, a part of the whole curriculum was missing from discussions. The CDO had to arrange a separate meeting with this member to finalise the whole curriculum.

3.5 Lack of Continuity

Sometimes, a committee comprising completely new members is established when a particular curriculum is to be reviewed or developed anew. For example, the previous Civics Committee was dissolved and a new committee was established to revise the Secondary School Civics curriculum. As a result, there is problem of continuity. New members have to familiarise themselves with the workings of the committee, whereas the time consumed could have been channelled to tackle the main problem of curriculum development. The new members may also

3.5 Lack of Continuity

not be held responsible for any defects in the curriculum developed by their predecessors. The present members may not even be present to see the implementation of the curriculum developed by them since, when the curriculum work has been largely completed, the committee will have been dissolved. As a result, no one would have a full picture of the implementation of a curriculum.

3.6 Responsiveness

When immediate response is required, ad hoc committees comprising Ministry's officials are formed (for example, for the Basic Course for failures in Primary Three - Six).

There is no systematic review of curriculum by the SSCs. Instead the development and revision of curriculum depends on:

- external pressures in a case of the more important subjects (for example, English and Chinese Languages).
- initiative, personal interest and drive of the SSC chairman and CDOs, especially in the case of the less important committees (for example, in the development of the music curriculum and textbooks).

3.7 Role and Functions of the CDO

Our interviews with CDOs in the English Language, Chinese Language and Civics Standing Committees revealed that:

- CDOs are at present much involved in syllabus writing, having little time to meet teachers in schools to gauge the results of a curriculum after it has been implemented.
- The career development of CDOs follows a path similar to that of ordinary teachers, although a person may have been selected as a CDO because he is of a better calibre than the other teachers.

3.7 Role and Functions of the CDO

- The training of a CDO does not follow any programme. CDOs are sent overseas for courses on curriculum as and when these courses become available.

3.8 Analysis

The shortcomings of the present committee system in the Ministry of Education are listed below:

- diffusion of responsibility and weak control,
- dual loyalties of and secondary commitment from members,
- lack of continuity,
- difficulty of immediate response,
- lack of comparative studies of curriculum in other countries.

In the long run, the actual work involved in curriculum development should be managed and done by the CDOs with experts in subject areas selected to serve in advisory capacities (instead of executive capacities as at present). This proposal is shown in Appendix C. The DD/Dev estimated that manpower will have to be increased from 16 at present to 64.

However, we cannot immediately do away with the present committee system as it provides:

- all round expert opinion in the development of curriculum - members of SSCs/WCs come from the Ministry HQ, the Institute of Education, the Singapore University, the Nanyang University and Schools.
- Distribution of workload - members of committees are also involved in writing the syllabus.

Furthermore, there is insufficient full-time CDOs to run the entire curriculum development process.

In the short run, we suggest that for the major subjects, namely, the languages, science and mathematics, the system recommended for the long run (Appendix C) be implemented.

3.8 Analysis

For the other subjects (like Music and Civics) the existing SSC system can be retained but modified to that given in Appendix D with the present two-channel lines of communications replaced by a single channel. Instead of reporting to the CDC, the SSCs should report to the AD/Cur. The CDO would remain as the Secretary to the SSC.

The career development of the CDOs should incorporate the following:

- a regular programme of overseas or local training in the development of curriculum should be arranged for the CDOs,
- the recognition given to the work done by CDOs should not be equivalent to but should be more than that given to an ordinary school teacher - after all, a person is selected as a CDO because he is better than the ordinary teacher. This fact should be recognised by the Public Service Commission.

4. Feedback

4.1 Communications between CDOs and Schools

The CDOs have the following channels of communication with schools:

- association with teacher-members of SSCs and WCs who can draw upon their personal experiences and observations in the schools,
- Schools Branch's inspections of schools (an informal channel, as no formalised reports are given to CDOs and insufficient attention is given to curriculum during these inspections),
- "meet-the-teachers sessions" (sessions are not regular but held on an ad hoc basis for specific projects, for example, twice in 1977 for the Basic Course project),
- replies to questionnaires and observation sheets submitted by teachers for specific projects (eg. the Basic Course).

4.1 Communications between CDOs and Schools

While the existing channels provide some feedback, they have their limitations. Teacher-members of committees can draw upon their own experiences only. The "meet-the-teachers sessions" are ad hoc and are large one-time seminars rather than regular small discussions. Questionnaires and observation sheets are suitable for only specific projects, and teachers can only answer what is asked. Thus the only comprehensive (in terms of the number of schools covered) channel is the inspections done by the Education Development Officers (EDOs), School Advisers (Sch Adv) and Specialist Advisers (SAs). However, there is no formal link between the CDOs and the EDOs/Sch Advs/SAs. In reality, there is no real feedback from the Schools Branch to the CDOs. Curriculum is not specifically discussed during the inspections. A formal channel of feedback should be established between the Schools Branch (the implementers and supervisors) and the Curriculum Section (the developers). During their visits to schools, the EDOs/Sch should specifically discuss with the teachers on curriculum. A copy of their report on the section of curriculum should be extended to the CDOs. The CDOs could advise the Schools Branch on any special areas/questions/issues to be discussed with the teachers.

In addition, CDOs should establish formal links with other sections in the Ministry. For example, the Examinations Section could inform CDOs of the schools performance in the examinations and any implications those may have on curriculum (eg. symptoms of overloading of curriculum).

4.2 Objective Trials

When a new/revised curriculum is being written CDOs should be encouraged to test in some schools the relevance and effectiveness of various curriculum changes. The teachers and pupils would give them additional feedback which could guide the CDOs in their work. They should be assisted in their basic research conducted in the schools by the Research and Evaluation Branch.

4.3 Evaluation of Curriculum

At present, except for a few projects like the Basic Course project, there is no systematic post hoc evaluation of the relevance and effectiveness of the curriculum introduced in schools. We suggest that an objective evaluation of any newly-introduced curriculum be made to gauge its effectiveness after a reasonable period and that modifications be made where necessary. This should be done by the Schools Branch as they would provide an independent view.

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CURRICULUM AND TEXTBOOK DEVELOPMENT

1. Working Procedures (Appendix)

The process can be divided into three stages:

- setting up the plans
- writing the syllabus
- writing the textbooks and implementation.

1.1 Setting up Plan

- The Ministerial Committee (MC) or the Planning & Review Committee (P & RC) makes changes to the general education policies.
- The Curriculum Development Committee (CDC) translates those policies into target and plans.
- In special cases (such as when a directive is received from the Prime Minister's Office), an ad hoc committee of relevant personnel studies the issues and establishes plans. These plans have to be approved by the CDC, P & RC and MC before the relevant Subject Standing Committee (SSC) can start work on the syllabus.

1.2 Writing the Syllabus

- The SSC Chairman, the SSC Secretary and/or the Curriculum Development Officer will be called up by the Assistant Director/Curriculum or the Deputy Director/Development and briefed on the objectives, approach and required outcomes in those plans. The SSC will then meet and, if necessary, form Working Committees (WC) to look into specific areas in the writing of the syllabus.
- The Working Committees will meet and do the actual write-up of the syllabus to be submitted to the SSC for approval.

1.2 Writing the Syllabus

- The syllabus is geared to a standard which the committee members feel the "average student" could cope with. This subjective standard is based on the teaching experience of the members. No detailed reference to models from other countries is made in the writing of a syllabus.
- The final approving authority for syllabus content is the CDC.

1.3 Writing the textbooks

- Once a syllabus is approved by the CDC, the SSC sends copies of this syllabus to a working committee of textbook writers (if it exists) or to commercial publishers. Though publishers are expected to adhere to guidelines drawn up in the syllabus, this is not always so in practice.
- Textbooks are submitted to a Textbook Assessment Panel (comprising three Education Officers) for review. Only textbooks recommended by the majority of members in the panel will be approved by the Assistant Director/Textbooks, for inclusion in the "Approved List of Textbooks" issued to schools.

2. Subject Standing Committees/Working Committees

2.1 Sometimes, members of the SSC are recommended by the Chairman and/or the Secretary of the SSC. Other times, they are recommended by the Assistant Director/Curriculum or the Deputy Director/Development. The members are appointed by the Director of Education, mainly on the basis of their past performance as teachers or principals in schools.

2.2 The Secretary of the SSC is usually a Curriculum Development Officer or a Specialist Advisor whilst the Chairman may be a school principal from an Institute.

2. Subject Standing Committees/Working Committees

2.3 The frequency of committee meetings ranges from twice a month (eg. for Civics) to once in three months (eg. for English Language or Music), depending on the requirements of a particular curriculum to be developed in time for implementation. Meetings are called on a "as and when" basis depending on the needs at the time and on the availability of members (mainly teachers). In the three years from 1976 to 1978, only 17 per cent of the SSCs and 31 per cent of the WCs held meetings at intervals of less than two months. Most of the SSCs and WCs hold fewer than ten meetings in this three year period.

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RECOMMENDATIONS

— CHAPTER 6 —

1. Introduction

In the previous chapters, we have identified some problems in our education system. This Chapter outlines our recommendations in two areas:

- . the structure of the education system, and
- . systems and procedures in the Ministry of Education.

It, however, does not touch on the professional aspects of education. For example, we are not competent to recommend changes to the curriculum, minimum educational standards or teaching methods. These changes are necessary and professional officers will be required to help work them out.

2. Basic Objective and Considerations For Our Education System

The basic objective of our education system should be to produce school-leavers who are literate in at least one language. Literacy is defined here as the ability to read articles on local news in the newspapers and to write at least simple sentences. The education system should take the following into consideration:

2.1 Language Proficiency

- 2.1.1 Those pupils who are ablest would be given the opportunity to do two "first" languages (EL1 + CL1) and possibly a third language (like German).
- 2.1.2 The average and the above average pupils would be given the opportunity to do a "first" language and a "second" language (eg. EL1 + CL2).
- 2.1.3 Those pupils who cannot cope with two languages would be better off being literate in one language than attempting to learn two languages and being literate in neither.

2. Basic Objective And Considerations For Our Education System (cont'd.)

2.2 Academic Ability

- 2.2.1 The academic and intellectual abilities of children vary. The pace which is suitable for the bright pupils would be inappropriate for the slow learners. There should be provisions for slow learners to proceed at a pace more relaxed than that for the bright pupils.
- 2.2.2 There should also be provisions for late developers to join the brighter pupils when they (the late developers) could cope with the faster pace.
- 2.2.3 Pupils who do not succeed in academic studies could succeed in technical or commercial training.

3. A Suggested Education System

3.1 Main Features

3.1.1 Primary Schools

- a We would recommend that the first three years of primary schooling concentrate on language learning more than on the absorption of facts. This is to give pupils a strong foundation in language for learning of content, such as in Science, Mathematics and other subjects.
- b We would also recommend that the primary school system allows pupils with different abilities to develop at different paces. To do this, pupils will be channelled into the following streams according to their results in the examinations and intelligence tests.
- In the past years, about 60 per cent of the Primary One cohort could pass PSLE without having to repeat any year in the primary education. These pupils should

3. A Suggested Education System (cont'd.)

3.1 Main Features

3.1.1 Primary Schools

- b . be channelled to a normal bilingual stream where they will do two languages (EL/ and CL/ML/TL/). They will complete their primary education in six years.
- . Another 20 per cent of the Primary One cohort could pass PSLE but only after having to repeat one or two years. These pupils will need a pace slower than that of the normal bilingual course of six years. They will be channelled into an extended bilingual stream where they could be given more attention and could work at a slower pace (with an additional one or two years, depending on individual ability) than the normal bilingual stream. They will also do two languages (EL/ and CL/ML/TL/).
- . In the past years, over 20 per cent of the Primary One cohort failed to complete their primary education successfully despite being given two additional years of repeat lessons. These pupils are not academically inclined but they could be successful in vocational courses. They cannot cope with two languages. For them, bilingualism means illiteracy. These pupils who are slow-learners should be identified through examinations and intelligence tests* and channelled to a primary monolingual stream whose

* A few students who fail an examination may not be slow-learners. They fail because of other reasons (for example, poor home environment). These students would have the intellectual capability to handle the standard academic course. They could be identified by Intelligence Tests and allowed to proceed to the bilingual stream. Thus, the Intelligence Tests rescue these pupils from being put into the wrong stream.

3. A Suggested Education System (cont'd.)

3.1 Main Features

3.1.1 Primary Schools

- b . curriculum will concentrate on language and basic numeracy. The primary objective is to develop literacy in one language and basic numeracy so as to enable them to speak, read and write and to undertake training in a skill or trade. Pupils with an English, Malay or Indian speaking home environment should be taught mainly in EL. It would not be difficult for the Malays and Indians to learn the English Language because of the similarities between Malay, Tamil and English. Romanised Malay uses the same alphabet as English. Malay and Tamil are both phonetic languages unlike Chinese. Pupils with a Chinese speaking home environment should be taught mainly CL and oral English. At the end of the course, the pupils will sit for a simple examination to qualify for a certificate. They will then proceed to do training in a skill or trade at VITB. To discourage parents from taking their children out of the five-year primarily monolingual course, students who drop out of this stream along the way will not qualify for the VITB courses.
- o Lateral movements among the three streams will be allowed as follows:
 - . pupils from the extended bilingual streams with good passes may be promoted to the normal bilingual stream,
 - . late developers in the primarily monolingual stream who perform very well may be promoted to the extended bilingual stream,

3. A Suggested Education System (cont'd.)

3.1 Main Features

3.1.1 Primary Schools

- c . failures in the normal bilingual stream will be channelled to the appropriate level in the extended bilingual stream where they will enjoy a slower pace,
- . the very few pupils in the extended bilingual stream who repeatedly fail will be channelled to the monolingual stream.

3.1.2 Secondary Schools

- a Pupils should be promoted to secondary schools only because they have achieved the standard necessary for them to cope with secondary education. They should not be promoted just to fill vacancies in the secondary schools. For entry into Secondary One, pupils will be channelled, based on their PSLE results, to the three streams. We agree with the Director of Education that questions for testing intelligence could be included in the PSLE. This is to improve the degree of accuracy in streaming.
- b About 14 per cent of the Primary One cohort would pass the GCE 'A' Level Examination and five per cent of the cohort will eventually enter University. We recommend that the top eight per cent of the Primary One cohort* (giving some allowance for late developers) be channelled to a special bilingual stream. In this stream, the pupils will do both EL1 and CL1⁺ and complete their secondary education up to GCE 'O' Level in four years. To enable them to do both EL1 and CL1, the standard of

* equivalent to about 10 per cent of the PSLE passes.

+ or ML1 or TL1.

3. A Suggested Education System (cont'd)

3.1 Main Features

3.1.2 Secondary Schools

- b CL1 should be adjusted. One possible arrangement is given in Annex 6C. On reaching the GCE 'O' Level, these pupils should have achieved sufficient proficiency in Chinese to do Chinese Literature at GCE 'A' Level.
- c About 39 per cent of the Primary One cohort would successfully pass the GCE 'O' Level Examination, scoring at least three GCE 'O' Level passes. With the top eight per cent of the cohort channelled to the special bilingual stream, the next 31 per cent of the cohort will be channelled to the normal bilingual stream. These pupils will do EL1 and L2* leading to the GCE 'O' Level in four years. We feel that the standard of L2 today has been pitched at too high a level for functional purposes and for the purpose of university entrance requirement. We suggest that the professional officers examine how the standard of L2 could be reduced. An example of a possible arrangement is given in Annex 6C. At the end of Secondary Four, pupils doing L2 should be able to read the news (including foreign news and editorials) and to write simple letters in L2.
- d Today, about 41 per cent of the Primary One cohort would fail to obtain at least three GCE 'O' Level passes at the end of their secondary education. For these pupils who would definitely not go for GCE 'A' Level and university studies, it would be better for them to concentrate on the learning of languages

* L2 is CL2 for Chinese students; ML2 for Malay students and TL2 for Tamil students. Similarly, L3 is CL3 for Chinese students ML3 for Malay students and TL3 for Tamil students.

3. A Suggested Education System (cont'd)

3.1 Main Features

3.1.2 Secondary Schools

d rather than the studying of factual subjects (for example, Physical Sciences). We recommend that these pupils be channelled to an ordinary stream concentrating on English Language (EL1) and doing only a lower "second" language (L3*). The standard of L3 will be lower than that of L2. The primary aim is to at least maintain the level of the second language they have learnt in the primary school (that is, they should be able to read local news and to write at least simple sentences in L3). In order to help these pupils obtain at least three GCE 'O' Level passes, we also recommend that:

- the pupils be allowed to complete their secondary education at a slower pace (leading to the General Certificate of Education Examination in five** instead of four years), and
- the students be allowed to sit for fewer GCE 'O' Level subjects than those in the bilingual streams.

We suggest that the ordinary stream will lead first to the Certificate of Secondary Education (CSE) in four years. Pupils may take the GCE 'O' Level Examination in the fifth year, sitting for the same subjects for which they have performed well at the CSE examination. They may sit for as few as three subjects in any one examination. The CSE is recommended for three reasons:

- to provide students who could not succeed at the GCE 'O' Level with a lower qualification,

** In Britain, the secondary schools programme leading to the General Certificate of Education takes five years.

3. A Suggested Education System (cont'd.)

3.1 Main Features

3.1.2 Secondary Schools

- d . to provide average and below average students guidance on the number and choice of subjects for the GCE 'O' Level Examination, and
- . to provide the average and below average students exposure to a common examination in order to reduce examination shock at the GCE 'O' Level Examination a year later.
- e Late developers, in the ordinary stream, with very good results will be transferred laterally to the normal bilingual stream. Failures at each level in the special bilingual stream will be channelled to the appropriate level in the normal bilingual stream. Similarly, failures in the normal bilingual stream will be channelled to the appropriate level in the ordinary stream.

3.1.3 Pre-University

Pre-University Education will be done in English. Pupils must take a second language. Those from the special bilingual stream will be encouraged to do a foreign language. Other students who have done CL2 at GCE 'O' Level will do CL2 at GCE 'A' Level.

3.1.4 Summary

The lengths of education for the different groups are summarised in Table 6.1.

T A B L E 6.1

Breakdown of the Suggested Education System by Group

<div style="text-align: center;"> <div>Group</div> <div>Level</div> </div>	Brilliant	Above Average (31%)	Average (41%)	Poor (20%)
Primary	6 years	6 years	6-9 years	8-9 years
Secondary	4 years	4-5 years	5-6 years	-
Pre- University	2 years	2-3 years	-	-
Total	12 years	10*-14 years	11-15** years	8-9 years
Language Proficiency	EL1+CL [#] A12	EL1+CL2	EL1+CL3	(CL2+oral English) or EL

** This is the theoretical maximum length of education. However, with channelling of students who are not academically capable to VITB, the number of students who could take so long to finish their Secondary education would be less than one per cent, if any at all.

* Some average pupils will not proceed to GCE 'A' level.

or ML1 or TL1

3. A Suggested Education System (cont'd.)

3.2 Comments

3.2.1 Reduction of the Attrition Rate

The suggested education system provides an opportunity for the less capable pupils to develop at a pace slower than that for the more capable pupils. However, a more relaxed pace for the less capable pupils is only one of the important factors influencing the attrition rate. It must be complemented by a properly-organised implementation programme; a realistic curriculum, competent teachers, sufficient teaching materials and facilities and a healthy social environment. The system also recognises that not everyone is academically inclined. It does not force bilingualism, the PSLE or the GCE 'O' Level course on those who cannot cope with them. Instead, it tries to seek ways of giving half a loaf when a whole loaf would choke. A child who could not cope with two languages is given one language. A child who is not meant for academic endeavours is given literacy and numeracy to prepare him for training in a skill. A child who cannot handle the GCE 'O' Level course in four years is given five years. Hence, reducing the attrition rate is secondary to offering a child the most appropriate opportunity.

3.2.2 Accuracy in Streaming

The suggested education system recognises the fact that no streaming system is perfect. To allow a child every opportunity to go as far as he can, to avoid putting a child in the wrong stream and to allow any wrong "fit" to be corrected, the following features have been incorporated:

3. A Suggested Education System (cont'd.)

3.2 Comments

3.2.2 Accuracy in Streaming

- "first streaming only after three or four years of primary schooling*; only those who fail at least two consecutive years of the bilingual course will be channelled to the primarily monolingual course"
- intelligence tests to ensure that intelligent children who have potential are given the opportunity to prove themselves
- lateral movements among streams to rectify incorrect "fits" and to cater for late developers.

3.3 Implementation

If the suggested education system is approved, planning and implementation will involve the following:

- Revision of the curriculum to cater for the different streams,
- Development of streaming procedures,
- Development of proper examinations and their controls,
- Development of appropriate intelligence tests,
- Review of textbooks and other teaching materials,
- Review of the allocation of teachers,
- Development of a proper briefing and action programme to ensure that schools, principals and teachers are fully aware of the objectives, structure, implications, strengths and weaknesses of the suggested system,
- Development of a promotion programme to properly promote and explain the system to the public and parents.

* compared to streaming at Primary One in Taiwan and Canada.

3. A Suggested Education System (cont'd.)

3.3 Implementation

Sufficient time must be given to the Ministry of Education for the whole exercise. It would be harmful if the implementation is rushed with inadequate preparation to meet an imminent dateline. Such a crash programme would lead to poorly developed curricula, poorly designed examinations, intelligence tests, procedures and feedback mechanisms, inadequate preparation of and by the schools, and adverse public reaction to another sudden change.

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education

4.1 Leadership

4.1.1 In Chapter 5, the need for strong leadership was discussed. A full-time Minister for Education would be essential to provide vital political leadership and drive for the Ministry.

4.1.2 The Ministry of Education has implemented the new organisation system (Annex 5B) in early 1979. Under this new organisation, PS (Education) would be the Chief Executive of the Ministry of Education. With this formal recognition, he should be able to provide organisational leadership and drive for the Ministry.

4.2 Overall Planning and Feedback

We suggest the following improvements in the problem areas identified in Chapter 5, Section 2 :

To expand the scope of the Resource Planning Branch to include overall planning (for example, planning to reduce attrition and planning for effective bilingualism) as well as the present planning for manpower and physical facilities.

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.2 Overall Planning and Feedback

- To expand the scope of the Feedback and Monitoring Branch to include the monitoring of not only "projects" per se but also critical areas in the education system.

4.3 System Efficiency

System efficiency could be improved and the following are some recommendations:

4.3.1 Management Culture

Management should make more decisions within the lines of authority. Though this may mean heavier responsibility, it would help to inculcate self-confidence on the part of the heads of units and superiors' trust in the units and their heads. The number of committees should be reduced to the necessary minimum. Responsibilities for projects should be assigned to specific project directors instead of committees. This will eliminate the problems of diffused responsibility and lack of control. Direct assignment means personal involvement and commitment. (There will be continuity and rapid response to the feedback.) Also, to minimise any delay of action after a decision has been made, there should be clear allocation of tasks and defined responsibilities.

4.3.2 Project Development and Decision Making

Projects should be systematically reviewed, properly perceived and adequately evaluated, supported by effective feedback. Project initiation from the ground level or middle management level should be encouraged and recognised. All objectives should be clearly defined, and the targets to be achieved should be specifically stated. Through the systematic review of the

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.3 System Efficiency

4.3.2 Project Development and Decision Making

education system and the continuous monitoring of projects, problems will be identified more efficiently and the urgency of projects will be recognised. To assist in decision making, the Ministry of Education should also develop a capability to do basic social research.

4.3.3 Project Implementation and Evaluation

Instead of relying on numerous committees to implement and evaluate projects, delegation of jobs and responsibilities would be more efficient. Most important of all, objectives and policies must not be ambiguous; they must be completely understood by the implementing bodies and the ground level units. The implications of new projects should be studied in depth and made known to the ground level units who can then be made aware of their responsibilities. Possible outcomes should be predicted so that preventive instead of remedial measures can be taken. Some new projects could be experimented in pilot schools before being introduced in all the other schools. This is to gauge ground level reactions and to identify any implementation problems which might have been overlooked.

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.1 Roles of the Education Study Team

4.4.1.1 The Education Study Team will join the MOE as a unit to serve PS (Education) as staff advisers.

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.1 Roles of the Education Study Team

4.4.1.2 This unit will assist MOE in the development of systems and procedures and the planning and implementation of the suggested education system. It will work closely with all divisions of MOE.

4.4.2 Tasks of the Unit

The immediate tasks of the unit would be:

4.4.2.1 Expanding the Scope of Resource Planning Branch

At present, the Resource Planning Branch is responsible for the planning of the manpower and physical facilities the schools require. We have recommended in Paragraph 4.2 of this chapter that the scope of Resource Planning Branch be expanded to include the planning of policies and the development of major programmes. For example, it should be responsible for developing plans for effective bilingualism and the reduction of the education attrition rate. Working closely with the professionals, it could develop an improved education system to cater for the needs of the nation and the different abilities and aptitudes of the pupils.

The Unit will assist the Resource Planning Branch in this expansion. For example, it (the Unit) will identify the critical areas for planning (like the development of objectives and long

Proposals to Improve the Organisational Effectiveness
of the Ministry of Education (cont'd.)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.2 Tasks of the Unit

4.4.2.1 Expanding the Scope of Resource
Planning Branch

and short term plans, and the identification of major problem areas).

MOE has two computerised data banks - one for teachers and the other for pupils. These data banks could provide essential information for planning activities. However, at present, the data bases in these banks are limited in scope and accuracy. A task of the Unit is to improve the existing information system in order to support planning activities and research studies. It will define a comprehensive data base for teachers and pupils. It will identify areas where such computerised data could be most useful. It will develop proper procedures for recording data, updating data and supplying data to users. It will examine the need for and the feasibility of establishing a computer unit for MOE.

Working with the education officers in the other divisions, the Unit and the Resource Planning Branch will plan the implementation of the suggested education system. They will identify the activities required and design the implementation programmes. They will coordinate the activities of the other divisions in support of the suggested system, for example: revision of the curriculum to cater for the different streams,

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.2 Tasks of the Unit

4.4.2.1 Expanding the Scope of Resource Planning Branch

development of proper examination and their controls, and development of streaming procedures. A proper briefing and action programme will be developed to ensure that schools, principals and teachers are fully aware of the objectives, structure, implications, strengths and weaknesses of the suggested system.

4.4.2.2 Improving Feedback and Monitoring Branch

At present, the Feedback and Monitoring Branch monitors projects for example, the Pre-Primary Programme, the Basic Course, the Revised Secondary Education System, the Pre-U Options and others. We have recommended in paragraph 4.2 of this chapter that the scope of the Feedback and Monitoring Branch is to include the monitoring of not only projects per se, but also critical areas in the education system. The Unit will assist the Feedback and Monitoring Branch to identify critical areas and define indicators to monitor these critical areas. One critical area is the present education attrition in our schools. Indicators such as examination results from continual and somestral assessments could be used to monitor education attrition.

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.2 Tasks of the Unit

4.4.2.2 Improving Feedback and Monitoring Branch

The Unit will also assist Feedback and Monitoring Branch to implement the programmes on the suggested education system, designed by Resource Planning Branch. Feedback and Monitoring Branch will also need to monitor the suggested education system.

4.4.2.3 Improving Research and Evaluation Branch

At present, the samples taken in the surveys conducted by the Research and Evaluation Branch are limited partly owing to inadequate manpower in Research and Evaluation Branch to conduct massive sample surveys. The Unit will assist the Research and Evaluation Branch to improve its capability of doing research especially with socio-economic data. This could be done by identifying areas of research, seeking guidance from survey experts from Britain and also establish a full-scale sample Survey Unit with a capability of surveying 2000 samples within a reasonably short period of time. Manpower Assistance will have to be sought from the Ministry of Defence.

For the survey data to be used within a fast changing environment, the data collected must be processed speedily and accurately. Timely information should be

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd.)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.2 Tasks of the Unit

4.4.2.3 Improving Research and Evaluation Branch

generated to help policy-makers in decision making. As mentioned in para 4.4.2.1 of this Chapter, the Unit will examine the need for the feasibility of establishing a computer unit in MOE to help in research studies.

4.4.2.4 Assisting Schools Division

In para 4.3 of this chapter, improvements in the School Division were suggested. The Unit will assist Schools Division in the following areas:

- Develop procedures to assess the effectiveness and efficiency of schools, principals and teachers. One example is that teacher supervision could be done by principals and vice-principals.
- Develop procedures to review and evaluate the teaching methods practised in schools, recognise effective methods of teaching and introduce them to other schools. (The assistance of IE will be enlisted)
- Develop procedures for channelling feedback from principals, teachers and pupils, identify the problems and assist in the development of corrective measures.

4. Proposals to Improve the Organisational Effectiveness of the Ministry of Education (cont'd)

4.4 Roles and Tasks of the Education Study Team in MOE

4.4.2 Tasks of the Unit

4.4.2.4 Assisting Schools Division

- Develop indicators to monitor critical areas.

One example is to identify the major factors (eg. promotion prospects, social status and others) which affect the morale of teachers and to suggest improvements.
- Assist in the development of group inspection of schools. One example is to develop a school appraisal programme to evaluate the effectiveness and efficiency of schools, identify school needs and recognise features which could be communicated to other schools.
- Assist in the development of a self-appraisal programme for the schools so that they can identify the needs of their own schools and initiate the necessary adjustments in consultation with the MOE.

5. Morale of Teachers

In Chapter 3, Section 6, we identified the main areas in which teachers have expressed their dissatisfaction. We suggest the following improvements in these areas:

a. Qualifications of Teachers

The Ministry should offer opportunities for deserving teachers to further improve themselves academically and professionally. For example, selected teachers with GCE 'O'

5. Morale of Teachers

a. Qualifications of Teachers

and 'A' level qualifications should be given the opportunities respectively to study for their 'A' levels and degrees with full pay.

b. Suggestion Scheme

A Staff Suggestion Scheme could be established for teachers to air their views on problem areas and to offer suggestions for improvement to the education system. Incentives in the form of monetary rewards could be given for practical suggestions that are implemented.

c. Publicity

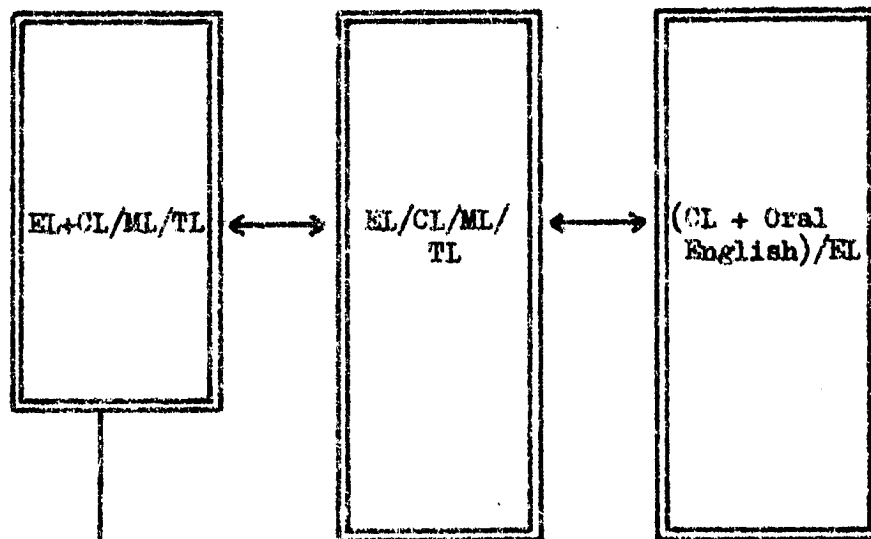
To enhance the public image of teachers, we propose a publication along the lines of SAF's PIONEER magazine. This should have a wide circulation and should highlight the useful activities and contributions of the teaching profession. Worthy efforts by individual teachers could also be commended in the publication.

d. Briefing Sessions

The DOE should brief principals and selected teachers from schools on major policy changes before these are publicised and implemented. This will ensure that teachers will not be the last to know of these changes.

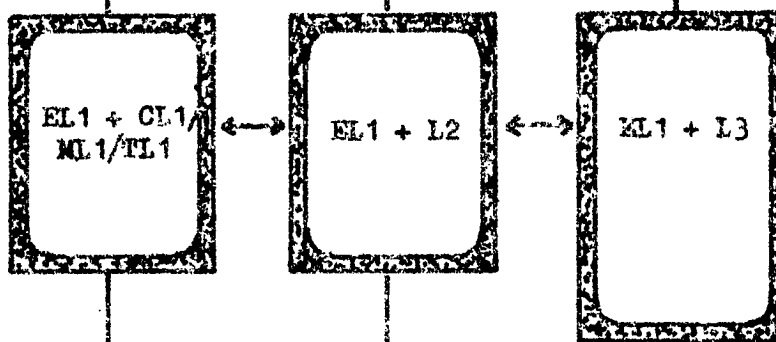
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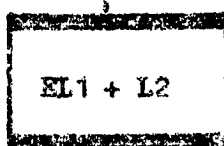
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GCE 'O'

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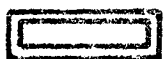
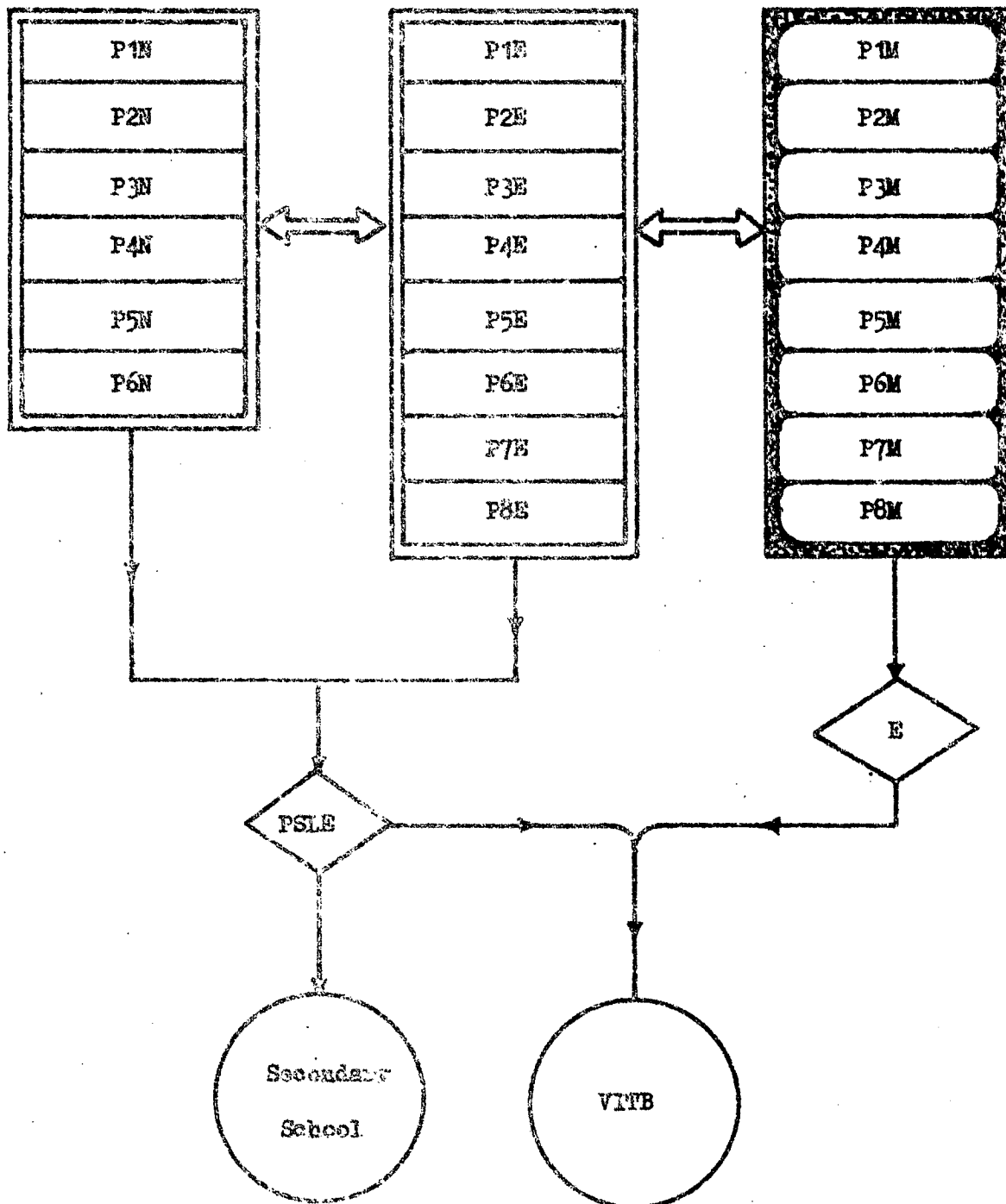


GCE 'A'

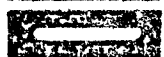


Lateral (inter-stream) movement

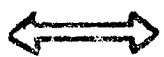
VITEB/employment

1. Primary SchoolAbove Average and AverageBelow AveragePoor

EL + CL/ML/TL



(CL + Oral English) or (EL)

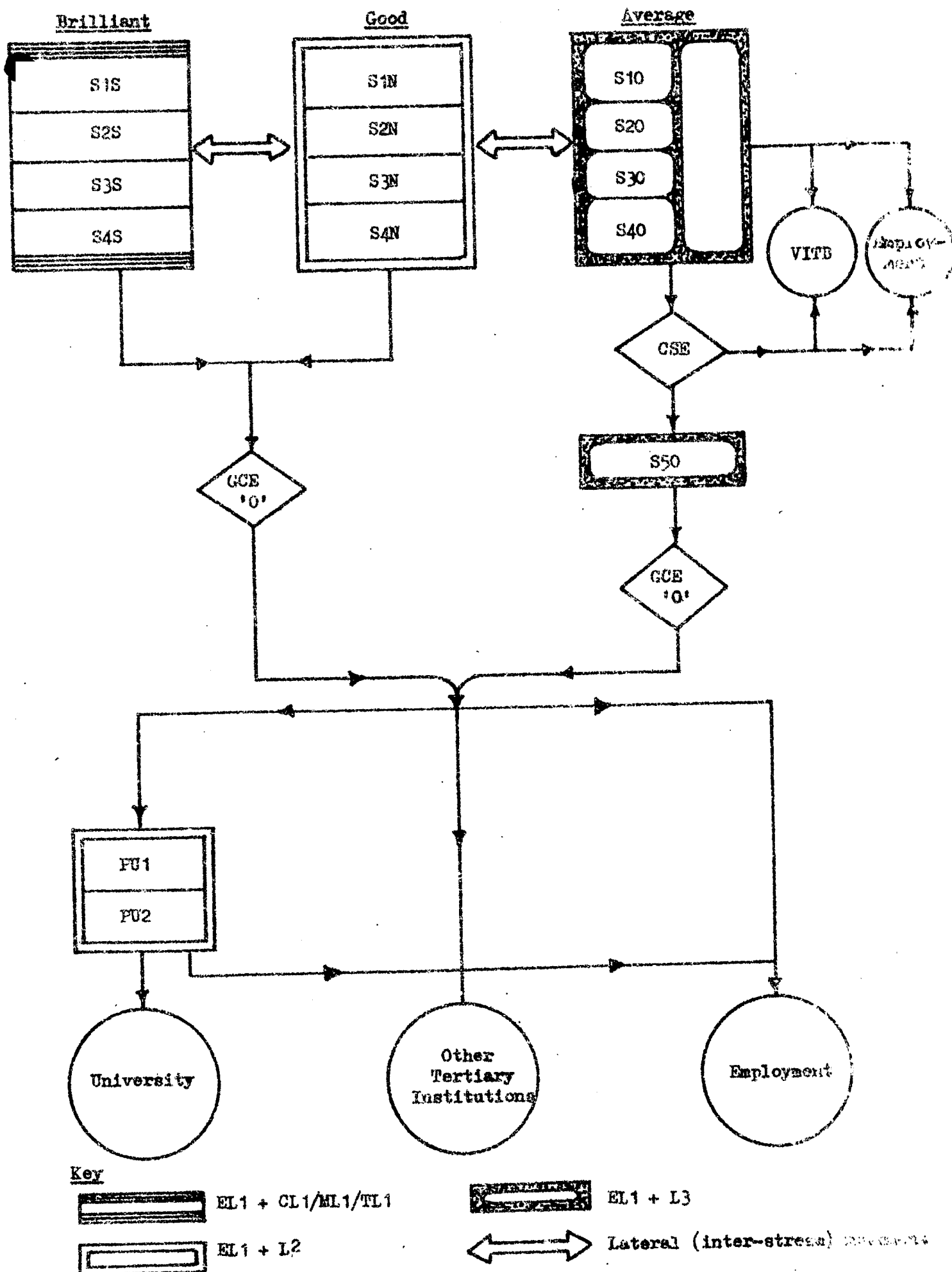


Lateral (inter-stream) movement

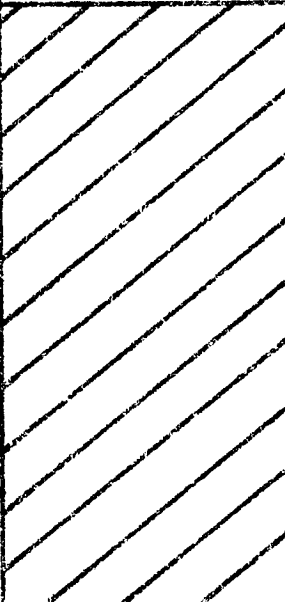



Examination

2. Secondary School



SUGGESTED LEVELS OF LANGUAGE ATTAINMENT*

Present Level of CL1	Proposed System		
		CL	
P1		 P1 	

* Standards of ML1, ML2, ML3, TL1, TL2 and TL3 should be set in a similar way.

RATIONALE OF THE SUGGESTED LEVELS OF LANGUAGE ATTAINMENTS

1. Primary Schools

We have suggested that pupils in primary schools should attain, at the end of their primary schooling, a Chinese language proficiency equivalent to today's Primary Five in CL1. This difference of one level lower is chosen because:

- pupils would be taking EL1 (compared to EL2 for those taking CL1 today)
- in the survey* by the Ministry of Education, it was found that the average CL2 pupils (taking EL1) have attained a CL2 proficiency equivalent to Primary Five in CL1.

2. Secondary Schools

2.1 The Special Bilingual Stream

Pupils in the special bilingual stream (the top eight per cent) will be doing CL1. We suggested that their level of proficiency at the end of Secondary Four be equivalent to today's Secondary Three in CL1. This one level lower is to allow the pupils to take EL1 as well as CL1. Where parents would like their children to do a higher level CL1 special classes will be conducted for their children.

2.2 Normal Bilingual Stream

At the end of Secondary Four, pupils in the normal bilingual stream should have attained the proficiency in CL2 equivalent to today's Secondary One in CL1. This difference is because of the following:

- CL2 pupils should have attained by Primary Six an ability to read local news items in Chinese newspapers. In Secondary schools the main objective is to maintain and improve this proficiency for CL2 pupils. Setting the level at today's Secondary One in CL1 would enable the pupils to read the more sophisticated items in the newspaper (for example, foreign news and commentaries),

* "Survey on Attainments in Chinese Language by Average Pupils in Chinese and English Streams Schools", 1978.

2. Secondary Schools (cont'd.)

2.2 Normal Bilingual Stream

- this is consistent with the survey conducted by Ministry of Education.* This survey indicated that CL2 pupils at Secondary Four have attained a proficiency level equivalent to today's Secondary One in CL1.

Continuing at the same rate, the CL2 pupils would have attained a proficiency level at PU2 equivalent to Secondary Two in CL1.

2.3 Ordinary Stream

The ordinary stream comprises pupils who would need more time and guidance in their academic studies than the normal bilingual streams. They will cover the secondary school curriculum in five years instead of four. To enable most of them to be successful in the secondary schools, they should concentrate on improving one language (English), learning the other subjects in this language and only maintaining their proficiency in their second language. Therefore, we have suggested that pupils in this stream should learn their second language at half the pace of the normal bilingual stream.

* "Survey on Attainments in Chinese Language by Average Pupils in Chinese and English Streams Schools", 1978.