TRENDS IN CURRICULUM REFORM

National Goals for Secondary Education

In the last ten to twenty years most countries of the New Commonwealth have thought long and hard about national aims. Subsequently, most have tried to relate the goals of their education systems to these national goals and most have issued public statements declaring policy commitments.

The pattern of developments tends to be similar. First, the government of the day or a political party which subsequently assumes power takes a clear political initiative. This political lead sets the broad context for national development within which, at the next stage, goals for educational development are articulated. These are spelled out in national plans, educational policy review documents, national conference papers and the like and relate to national development goals. At the third stage, overall educational goals are broken down into more explicit aims and objectives for the various subjects of the primary and secondary curriculum.

Public debate may occur between any of these stages, though the process of refining educational aims and objectives gradually becomes more professional. This sequence is exemplified in the now famous Tanzanian Arusha Declaration of 1967. This set out the policies for African socialism and self-reliance on which Education for Self Reliance was based. Subsequently Tanzania has thoroughly overhauled its curriculum to operationalise its philosophy in the school system. Swaziland also gained inspiration for its educational policy through the political lead given in the Imbokodvo National Manifesto and the subsequent Second National Development Plan 1973-77. Educational aims were articulated in the National Education Commission Report of 1975. In 1976 the Ministry of Education issued its Current Trends in Educational Policy which discussed the progress being made in terms of school structure and curriculum towards achieving the goals laid down and anticipated in its discussions the imminent Third Development Plan. Here, perhaps, is the beginning of a fourth stage which incorporates professional evaluation and revision of strategies (and possibly goals as well) in the light of experience.

In the Old Commonwealth, where few radical breaks with the past have occurred since the last war and where national planning has not been so formalized nor so developmentally orientated, educational goals have not been so explicitly expressed. Nevertheless, there has been a considerable amount of rethinking about education. Schools are very much in the centre of public and political debate. Even in England, where traditionally national level goals have never been "imposed", a government Green Paper, Education in Schools 1977, listed general aims on the basis of an assumed national consensus on them. New Zealand is also currently formulating national level goals.

Such departures may indicate an unease in the countries of the Old Commonwealth about the direction of their education systems. In some cases the response to this unease is to tighten central control. If the content of educational goals is anything to go by, concerns throughout the Commonwealth are remarkably alike. Statements of goals vary considerably in their levels of generality and specificity but underlying most of them is the priority of

manpower development, expressed as "nurturing economic competence", providing in the curriculum opportunities to develop "life-skills", and to gain from "work experience". Another high priority is to develop the schools in such a way as to encourage the integration of culturally plural societies and equality of opportunity for all, regardless of race, sex, religion and class.

Swaziland's Second Development Plan, 1973-78, exemplifies the manpower development and the equality of opportunity goals:

> 1. To make places in secondary schools available to all who achieve the necessary qualifications.
>
> 2. To re-orientate the curricula at secondary level to counteract the current non-technological bias and to enable school leavers to move naturally into the employment opportunities open to them.

Malaysia's Third Plan, 1976-80, clearly deduces its goals for education from the national goals articulated in the New Economic Policy:

> The education and training system has a multi-faceted role to play in the creation of a society based on the principles of the Rukunegara and the realisation of the objectives of the New Economic Policy (NEP). The overall objective is national integration and unity.
>
> Bahasa Malaysia will continue to be implemented as the main medium of instruction to strengthen the basis for national integration and unity among the people of Malaysia, while the use of English will be extended as a strong second language. Policies and programmes for education and training will be geared to enable all Malaysians to participate more fully in the process of national development. To attain this objective, education and training will be oriented to meet the skilled manpower needs of the nation and to provide greater opportunity for education among those in the lower income groups and regions in the country. Curricular and extra-curricular activities will be developed to inculcate discipline and social responsibility as well as to promote a national identity and unity among all Malaysians. The education and training system of Sabah and Sarawak will be progressively integrated with the national system. (Ch. 22, p.384)

Most countries spell out educational goals which are relevant to the education system as a whole rather than with respect to secondary education in isolation. This lack of differentiation makes sense where basic schooling now extends to lower secondary level. At the level of basic schooling aims are generally expressed in terms of the knowledge, skills and attitudes students should acquire to enable them to develop their personal potential to the full, to become loyal citizens and to be competent and productive workers in the economy. The objective of lower secondary schooling is both to prepare young school leavers to survive in the world of work and to provide those who enter upper secondary education with the basic learning needed to cope with advanced studies. At the higher level, manpower requirements in technical and scientific fields are priorities.

Language Policies

Mother Tongue

Language policies reflect national goals. In recent years language policies for the primary schools throughout the world have indicated a growing awareness that learning in childhood is facilitated by the use of the mother tongue as the medium of instruction. Goals directed towards the development of the full potential of the student are involved here. In some countries adoption of a local or national language as opposed to an international language has been part of a movement towards political and cultural autonomy and nation-building. At the secondary level, however, the issue is more complicated. Many of the students who complete secondary education will enter the world of work where facility in an international medium is important or they will go on to higher studies where the medium is often an international language or where study materials are mostly in English or French. Manpower development goals are involved here.

English and National Languages

Consequently, only a very few countries in the New Commonwealth have taken the decision to abolish the use of English as the medium of instruction at secondary level. Sri Lanka and Malaysia have recently done so and Tanzania is in the process of changing over to Kiswahili. Some countries use English alongside other national languages. Singapore, for instance, uses English, Chinese, Malay and Tamil at secondary level. Hindi is the official national language in India but in the secondary schools the medium of instruction will be the regional language and Hindi or English. At the Junior Secondary level three languages are compulsory; the mother tongue or the regional language, Hindi or English and another modern Indian language.

Malaysia and Singapore

The contrasting policies of Malaysia and Singapore illustrate how different strategies may be used to work towards similar goals. Both countries emphasise national goals of economic development and national integration. Both have multi-lingual populations reflecting different cultural traditions and both in the past differentiated their secondary schools in terms of the four local languages. English was the language of instruction in the major academic schools and there was tough competition for entry to them. Other schools taught in Malay, Chinese and Tamil. With the extension of free lower secondary schooling the core curriculum became common to all language streams in both countries. This was justified on grounds of equity, efficiency and, above all, national unity. But here the similarity ends. Malaysia made the decision to introduce Bahasa Malaysia at the expense of all other media of instruction progressively throughout the primary and secondary schools up to form six by 1982 and eventually in higher education also. English is a compulsory second language up to form five. The other two languages are optional. Examinations are in Bahasa Malaysia. Despite the practical difficulties of implementing this policy Malaysia has persevered in the re-training of teachers in Bahasa Malaysia and in the adaption of text books so that by 1979 even science and maths are taught in Bahasa Malaysia.

In Singapore the national language is Malay but four official languages (Chinese, English, Malay and Tamil) are recognized for educational purposes and parents are free to choose the language of instruction for an essentially common curriculum. Public examinations are in all four official languages. Bi-lingualism is enphasized and every student must study a second official

language. English is very popular. Singapore's major objective is to produce school leavers (after ten years of schooling) who are literate in at least one language but abler students may study two, even three, languages as first languages:

> Every new government school is integrated to enable students and teachers of two or more language streams to work in one building under one administration and to participate in extra-curricular activities.

National and International Languages

A number of countries use English as the main medium of instruction at the secondary level while emphasizing other national languages at the primary level. Swaziland, for instance, has recently introduced Siswati as a national language but continues to use English at secondary level. The two major reasons for this are,the lack of suitable learning materials in other languages and the problems and expense of producing them without a very determined effort and, secondly, the obvious advantages of having a population schooled in an international medium. In general these considerations have outweighed those to do with the adoption of a national language for reasons of political and cultural self-assertion. This is demonstrated clearly by the fact that in most countries, whatever the media of instruction at secondary level, English is still the major language for public examinations. English is more often than not also a compulsory subject in the curriculum at the lower secondary level and will probably remain so.

A complementary rather than a countervailing trend is the attempt in many countries to inculcate respect for and facility in local languages. In Malta, for example, whilst French and Italian are still offered according to the tradition of the island, there is now provision for the study of Hindi, Urdu, Mandarin and Tamil. Recently, Arabic has been made a compulsory subject in schools. Tonga reports public concern at the former neglect of the Tongan language and now emphasizes it in the curriculum, particularly at primary level, despite shortages of learning materials. There is also growing awareness of the importance of regional languages in terms of economic and political links. Spanish is widely taught in the Caribbean. Indeed, Barbados has only recently adopted it as an official second language. All over the Commonwealth the study of Latin and Greek has fallen into disuse.

Old Commonwealth

Language policies in the Old Commonwealth are equally diverse and have proved equally difficult to work out. They are very controversial and usually represent compromises between competing ideals. These countries have recently had to cope with increasing demands from indigenous minorities for recognition and status for their own languages and with the difficult issue of catering for recently arrived immigrants whose children need to acquire facility in the language(s) of the host society at the same time as they need or demand the provision of mother-tongue teaching.

The general trend is for minority indigenous or imported languages to be acknowledged in the curriculum and sometimes to be used as the medium of instruction. Maori in New Zealand and Welsh in Wales are examples of indigenous languages which have gained status. In Western Australia,where English is the medium,the variety of optional and examinable languages reflects the multi-cultural composition of the population and regional interests. French,

German, Italian, Indonesian and Japanese are all available. A variety of other European languages are offered in a special multi-cultural programme in extra-curricular time. The needs of minorities from Asia and the Caribbean are now receiving attention in England though policy and provision is largely a matter for local authorities and schools and vary widely in actual practice. English is universally the medium of instruction and English as a foreign or second language is taught in special classes and centres in areas of special need. In Canada where English and French have equal status as official languages in some provinces, policies vary with regard to the media of instruction in schools. In Quebec students must learn one language and must study the other as a second language. In Alberta only English is prescribed but French and any other language may be offered at the local board's discretion. In Manitoba English and French are both media of instruction but any other language may be taught for up to fifty percent of the school day.

The issues in the Old Commonwealth, it appears, are very similar to those in the New; despite the longer history of their school systems these countries are only recently coming to grips in respect of language policies with problematic issues of national integration and manpower needs together with social justice and relevance for minorities. The context within which every language policy is worked out is unique and crucially important to its viability. It is noteworthy that even in countries with adequate resources, the issues to be resolved remain very difficult; the "right" policies to adopt are by no means self-evident and will probably embody a number of compromises between competing demands.

Differentiation in the Curriculum

Lower Secondary

In the New Commonwealth a majority of countries provide different curricula in different types of school. But, although not very advanced at present, the trend is probably towards a basic, minimum, common core curriculum for all schools at the lower secondary level and for differentiation to be planned where necessary in accordance with specific local conditions and needs.

Where differentiation occurs it is mainly in terms of differences between technical, vocational, commercial and academic schools. It occurs mainly in countries which still have all-age schools or where there is highly selective entrance to prestigious academic schools. Some Caribbean countries are gradually eradicating such distinctions and working towards the provision of a common extended basic schooling at the lower secondary level. Nigeria's policy of universal primary education will be extended to the provision of a common school at the lower secondary level from 1982 onwards. (Figure 2 p.19)

But the academic/non-academic distinction is not the only one. Sometimes differentiation between schools occurs in terms of the differences in need of rural and urban students. In the past this would not have differed greatly from the vocational/academic distinction but one or two countries are experimenting with curricula for rural schools which would be relevant to highly localized contexts. Papua New Guinea's provincial high schools and Guyana's community high schools are examples.

Tanzania's strategy in recent years is to allow very limited access to secondary education until universal primary education is achieved. There are four types of secondary school, each with its own specialist "bias", technical, agricultural, commercial, and home economics. Students enter a bias according to preference and orientation. All subjects in any one bias are compulsory but there is a common core of subjects across all biases in Siasa (political

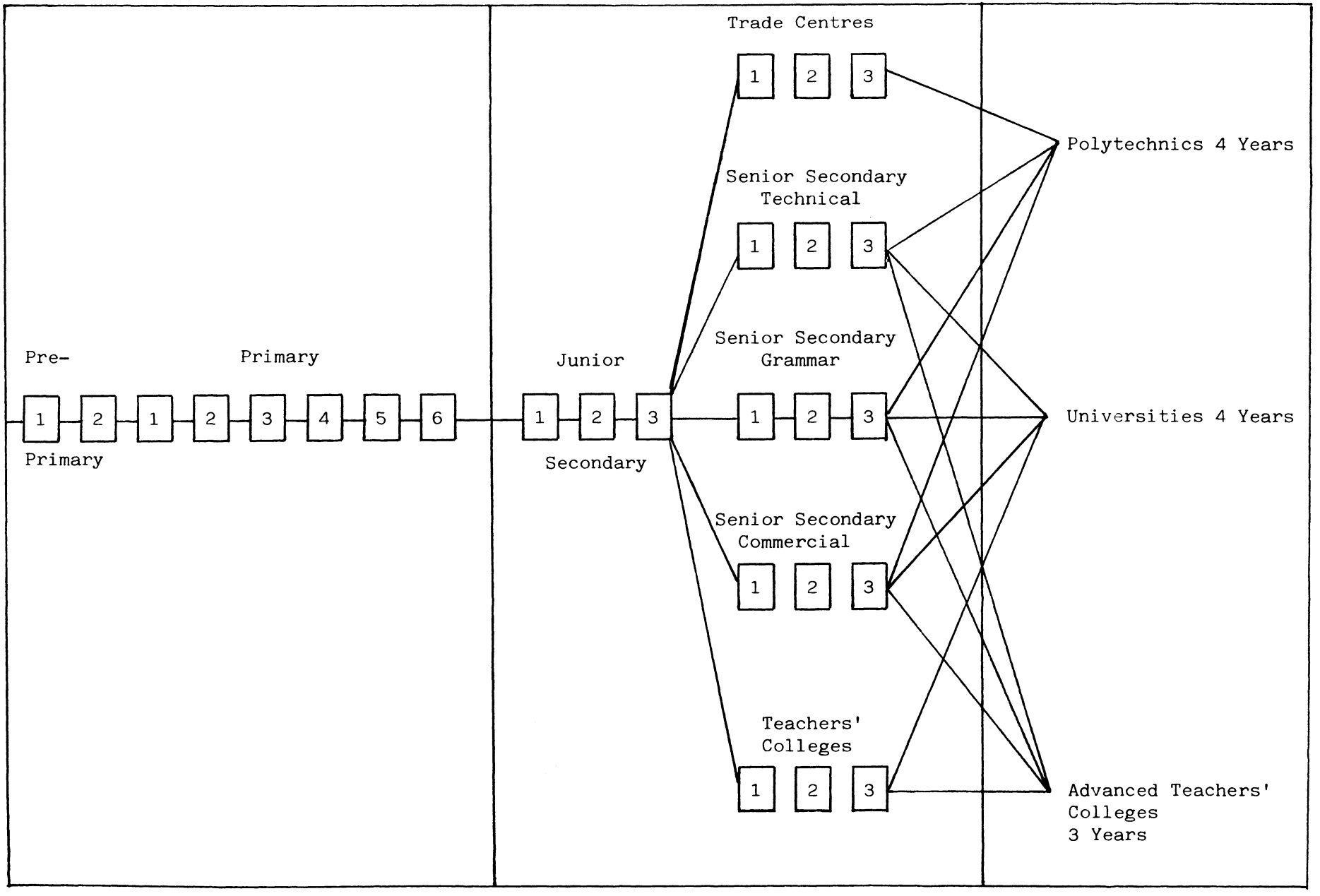


FIGURE 2 : THE STRUCTURE OF NIGERIA'S EDUCATION SYSTEM FROM 1982

education), Mathematics, Kiswahili and English. There is more specialization in the upper secondary level but political education is still compulsory. Tanzania does not have an academic "bias". This is important, for in this way schooling is geared more closely to the needs and actual conditions in the country. The present structure upholds a differentiated curriculum which is designed both to prepare young people early in their secondary schooling to become more productive members of their communities at the same time as providing an extended basic common core.

Ability Streaming Between Schools

The existence of different types of school often means in practice differences in their ability intakes. In general where lower secondary education is not yet universal, the entry examination selects for further schooling the primary leavers who perform best in the examination. The most able of these students are allocated to the schools of their first choice and in this way certain schools become known for their high standards and others are forced to accept lower ones. But even then, in many countries, there is still tremendous pressure for every available school place. In principle many countries are turning away from a policy of ability streaming between schools. In practice, however, there is often wide and unintended variation in the quality of schools and, therefore, unintended streaming. Sometimes quality will vary between rural and urban areas or between one part of a country and another. Sometimes the academic schools will cream off the most able and the less able will settle for technical or vocational schools.

Many countries of the New Commonwealth have policies against ability streaming at the lower secondary level and are very conscious of the need to try to equalize the quality of schools to make policy a reality. Even in the Caribbean where ability streaming between schools is still the norm the policy is under scrutiny. In Guyana where secondary enrolment has expanded at a fast rate since 1976 the most able students are allocated to the five year secondary programme and the less able to the four year community high schools. But provision is being made for transfer between schools. Those countries which have been able to abolish entrance examinations to secondary level find that this loosens one major constraint on the provision of common schooling.

However, in the Old Commonwealth where compulsory lower secondary schooling is universal the pattern of provision does not show a firm trend towards common schooling. New Zealand has moved towards it, and common schools prevail in Western Australia but some provinces of Canada make separate provision by ability a matter that is often for local decision. In Northern Ireland a system of grammar and secondary modern schools prevails. In England and Wales since the 1950's a slow trend towards common (comprehensive) schooling was reinforced under the recent Labour Government but with the change of government in 1979 the Conservative administration may allow greater freedom of choice to local authorities seeking to develop their own school system.

Ability Streaming within Schools

At the national level only a minority of countries encourage ability streaming within schools at the lower secondary level. Officially most discourage it. Nevertheless, throughout the Commonwealth, policies on how to teach students are in practice determined by the school. At the same time, in principle many countries encourage the idea of making special provisions for individual differences; special education for the handicapped, the disadvantaged, for

slow learners and the gifted, "setting" of students according to their ability in different subjects; and enrichment of programmes in certain aspects of the curriculum. Severe resource constraints may often mean that a hard choice has to be made between the provision of a good quality basic education for all and special provision for special categories of need. At a time of world-wide recession, this may be a problem which affects richer and poorer, larger and smaller nations alike.

Common Core Curriculum

In the New Commonwealth the trend is very definitely for schools to offer a basic core of subjects, usually at least one national language, maths, science and social studies as a minimum. In most countries the core comprises over half the subjects. Singapore and Malaysia distinguish between core compulsory and examinable and core compulsory and non-examinable subjects. Sri Lanka allows no optional element.

In the Old Commonwealth the picture is a little less clear. There is a trend towards the provision of a core curriculum but variations exist even within one country. In Canada, for example, Saskatchewan minimizes the number of compulsory subjects whilst Quebec provides for very little option at the lower secondary level. In Australia there is:

> A general requirement that all students, especially in junior secondary, should undertake English, a branch of mathematics and science, and a humanity. Beyond this very general statement there is open choice of courses.

In England at present:

> There is no nationally determined core curriculum although there have been widespread public debates about the desirability of greater consistency between schools.

This re-thinking reflects concern for standards and the needs of a highly mobile population.

Optional Subjects

In the New Commonwealth the trend towards providing a common and compulsory core of subjects at the lower secondary level is paralleled by official encouragement for students to broaden their education through optional subjects. Obviously, the number and range of these is limited to varying degrees by the amount of resources a country can devote to optional subjects, in particular, by the skills of the teachers and the materials available, and by the timetable (see p. 24). A few countries indicate that these constraints are very real and are highly undesirable when they affect important subjects like physical education or technical and pre-vocational subjects.

In general, most New Commonwealth countries tend to steer students into "optional" studies which are valuable for national development. Sri Lanka, for example, requires students to study one technical subject and either one commercial or one aesthetic subject. In Singapore, likewise, a technical subject is compulsory and in Nigeria agriculture and science are now encouraged as options having been made examinable in the School Certificate.

In the Old Commonwealth there is little direction to schools from the authorities in terms of encouraging particular options. This may, of course, reflect the rich resource base in these countries and the wide range of options locally available. It may also reflect less of an official emphasis towards the encouragement of scientific and technological studies and more of a commitment to the principle of voluntarism. In England currently there is much discussion about how many options should be open to students. In Aspects of Secondary Education in England 1979, HM Inspectors indicate from their review of the schools that the range of options offered to students at the end of the third year of secondary school is too wide and lacks coherence. They argue that a 40:60 ratio of core to optional subjects is unbalanced and that all students should have to study a broad course in science up to the age of sixteen as well as English, mathematics and physical education. They also suggest that abler students' aesthetic experience is often neglected. They reason that staff shortages for the core subjects are created when too many options are available. Thus, important subjects are taught in over-crowded classes. They are also concerned for the less able students that the range of options open to them are restricted to more practical and general subjects and that some of the courses are inappropriate for these students. They point out that a wide-ranging choice of options needs a full-scale support service from specialist careers teachers. These are often in short supply.

Upper Secondary Specialization

This debate in England concerns, of course, the programme up to the end of compulsory schooling. At the upper secondary level, in contrast, most countries are concerned to open up as many optional subjects as possible. At this level students tend to select the subjects in which they have shown most promise on the basis of achievement in the public examinations at the end of lower secondary school. A few countries make one or two subjects compulsory even at this level. Tanzania requires every student to continue his study of political education in the interests of nation-building and on the principle that the more privileged and educated members of the community have a special contribution to make as citizens. Malaysia enforces the study of civics with much the same aim in view. Nigeria encourages the students to choose subjects from four groups in the interest of breadth of study. Cyprus is experimenting with a Lyceum of Optional Subjects at the upper secondary level. Students will study a compulsory core but will choose other subjects freely. This innovation will introduce flexibility into the system which till now has been rigidly streamed into classical, practical-science and economics-commercial lyceums. It is also seen as a way of promoting democracy into the curriculum.

At the upper secondary level then, the trend is probably in the direction of greater curricular differentiation whether within a common school or in different types of institution. If the Nigerian plans for 1982 and the already established structures in Malaysia are clues to future patterns in other countries which have extended common schooling to the end of lower secondary and are thinking through the more specialized needs of the growing numbers of students at the upper end of the secondary schools, then the structure of the future is likely to cater increasingly to specialized technological and scientific manpower needs. Some countries, Malaysia, Singapore and Sri Lanka among them, are vigorously encouraging the ablest students to enter these fields. Scientific and technological courses are now of higher status than general and arts courses. It is possible that the traditional academic/ grammar type of secondary school will be of less significance in the future.

Over-specialization

To some extent competitive with the trend towards specialization at the upper end of secondary education is the move apparent in some countries to prevent "over-specialization". In India students at the upper secondary level enter either academic or vocational schools but the examinations policy encourages them,"in the interests of flexibility," to choose subjects from a wide range of options across specialized fields. In England too,the Schools Council proposed a replacement of the present General Certificate of Education Advanced Level Examination (GCE 'A' Level), which is normally taken in from one to three subjects, by a new five subject examination. Under this scheme narrow subject specialization would be delayed until the final year of secondary school for students intending to enter higher education. Though the government did not subsequently adopt these proposals they are indicative of a trend towards extending into the upper secondary school the concept of a broad general education once a nine to eleven year schooling is universal.

The tension, of course, is to steer a path which will allow a sufficient number of able young people to gain a high level of competence in subjects of specialization in order that they may profit from high standards at the tertiary level at the same time as encouraging them not to become narrow specialists. For students who wish to continue their studies into upper secondary schools but who do not aspire to enter higher education, the dilemma is to balance a sufficient depth of study in fields of their choice to fulfil their potential with a rounded education which will ensure they become productively useful in a job-market which demands flexibility and adaptability. A number of countries, faced with declining job opportunities for school leavers, are likely to have to face this problem as more young people opt to stay on in school beyond the age of compulsory schooling.

Guildelines and Syllabuses

The concern of countries to gear their educational systems towards national goals of manpower provision, national integration and social justice has, as we have seen, led to rethinking of the aims of the curriculum of schools. This in turn has led to extensive and continuing revision of curriculum guidelines and syllabuses for school subjects.

The general picture throughout the Commonwealth is one of intense activity in ministries, curriculum development units, subject committees, panels and examinations boards with a view to revising the objectives and contents of syllabuses across the whole range of provision. The strongest influence behind these reforms are the need to up-date knowledge, the urgency to increase the relevance of what is learned both to the individual and societal goals and the pressure to adapt the curriculum content to meet the needs of mass schooling at the secondary level.

Prescription

The majority of countries in the Commonwealth issue broad curriculum guidelines for the schools and these are normally prescribed. A large number of countries also prescribe syllabuses in some detail for almost all subjects at the lower secondary level. At the upper secondary level examinations boards tend in effect to take over the same function. The Caribbean Examinations Council has been very active in recent years in this respect. In a few countries, however, guidelines and syllabuses are not prescribed. In India the National Council for Educational Research and Training is influential in

promoting curriculum plans for adaption or adoption by the states. But at the state level Secondary Education Boards are free to follow either these national guidelines or those issued by the State Councils for Educational Research and Training. Sometimes they may even adopt a different set of guidelines. In Australia:

> The status of syllabi varies from State to State (and Territory). In general State authorities issue guidelines for syllabus development at both primary and secondary levels. The implementation of these guidelines and preparation of detailed syllabi on a year by year basis is largely a task for individual schools.

In England, Wales and Northern Ireland no syllabuses are prescribed though optional guidelines are available in most subjects. These are written by HM Inspectorate, the Schools Council, individual curriculum project teams, teachers' centres and subject associations. The public examinations at 16+ largely determine the curriculum of the preceding two years. Many of these have been revised in recent years.

Syllabus Revision

A feature of the 1970's has been the complete re-writing of syllabuses right across the curriculum. Some countries have revised the syllabuses for all subjects (Sri Lanka in 1972 and 1979, Tanzania from 1976, Tonga from 1974). By 1980 Fiji will have completed a wholesale revision started in 1971. In Canada, Nova Scotia uses no syllabus more than five years old and Manitoba is currently undertaking a major review of syllabuses from primary right through secondary school.

Relevance

The revision of core subjects tends to receive attention first: national languages, English, maths, science, social studies or history and geography. But the underlying theme of all syllabus renewal is relevance to the local context. Agricultural education in Nigeria, Southern Africa and the South Pacific is being localized. Language studies are becoming "functional". Local literature is being emphasized alongside local history and geography, art, music and dance. Life-skills relevant to rural communities are emphasized in science, basic numeracy in mathematics and citizenship in civics and social studies.

A number of experiments with new subjects are also geared towards local relevance. Mauritius has introduced economics and sociology and Swaziland, elementary technology and development studies. Canada now includes consumer education, England and Wales, political education and the Seychelles, family life education.

Overloading

One problem generated by the inclusion of new subjects in the curriculum of the school is the overloading of the timetable. As Swaziland's Ministry of Education put it in Current Trends in Educational Policy 1976:

> This progress (in broadening the educational background of students) has, however, caused certain difficulties which show that the existing curriculum pattern is not flexible enough to encompass the new studies which are being introduced and those which in the future may be introduced.
>
> Because teaching time is to be fixed between 40 and 45 periods (26 hours 40 minutes) per week, the time spent on each subject must be reduced whenever a "new" subject is introduced. Consequently, school administrators face the dilemma of trying, on the one hand, to provide a broad education by including new subjects and, on the other hand, to maintain or raise standards in the traditional academic subjects by not reducing the teaching time allocated to them. Obviously a rationalization of this situation is necessary if the aims of giving all pupils a broad general education and a sufficiently high level in the elementary skills are both to be achieved. (p.)

Given the amount of experimentation in the curriculum which is going on, it is likely that this is a problem common to many countries. In Malta, for example, the number of subjects made compulsory from form three has expanded. Arabic has been introduced. The number of periods left for the "general and cultural subjects" has therefore fallen to one. Since, it is suggested, "this is not enough... more use must be made of the mid-day break period". In Papua New Guinea, where English is the medium of instruction, schools and colleges introduce the study of other languages but:

> The introduction of a language of Papua New Guinea into a school would be in addition to the other studies required by the syllabus, in time normally regarded as student time, or elective time, or in Cultural Activities time as part of a balanced cultural activities programme.
> (Education Plan 1976-1980, p.59)

Papua New Guinea's allocations for core and other subjects are shown in Figure 3. In most countries time allocations for subjects are generally specified. The normal number of teaching hours per week is about twenty-six, though the range is from thirteen to twenty-nine. With the introduction of new subjects it looks as if one solution is to extend the teaching hours into extra-curricular time. Certainly, few countries seem to be dropping subjects from the curriculum. Latin and Greek may be fast disappearing but little else is. Indeed, it appears much more difficult to drop subjects than to include new ones, despite the dangers of an overcrowded timetable.

Other strategies are possible in addition to the use of extra-curricular time. In India revisions of syllabuses have paid attention to discarding "dead wood" from the content. Streamlined syllabuses in some subjects may do a little to ease the way for new. The trend towards the integration of studies may also economize on time - or it may not.

Integration of Subjects

There is a definite trend towards the integration of subjects at the lower secondary level. The most commonly integrated subjects are in the natural and social sciences. Integrated science replaces physics, chemistry and biology and social science or social studies replaces at least history and geography and possibly also includes civics and an environmental component. Home Economics now replaces domestic science in an expanded concept.

FIGURE 3: TIME PER WEEK ALLOCATED TO SUBJECTS

PAPUA NEW GUINEA

Stage 1: Grades 7 & 8

Subjects are divided into three groups: Core subjects, practical subjects and pastoral subjects. Practical subjects are electives, but on a school rather than an individual student basis.

Subject	Period Allocation	Comments
English	8	Core subjects. These minimum period allocations should not be varied. The Social Science allocation does not include Guidance, which is taught as part of Social Science in Grade 7.
Mathematics	5	
Science	5	
Social Science	5	
Agriculture	4	Practical subjects. Students will take a minimum of any three, including Home Economics for girls and Practical Skills for boys. The period allocations may be varied according to staff availability, etc.
Commerce	4	
Expressive Arts	4	
Practical Skills	4	
Home Economics	4	
Guidance	1	Pastoral subjects
Religious Instructions	1-4	
TOTAL	37-40	

Stage 2: Grades 9 & 10

Subjects are divided into three groups: Core subjects, practical subjects and pastoral subjects. Practical subjects are electives on an individual, rather than a school basis as in Stage 1.

Subject	Period Allocation	Comments
English	8	Core subjects, minimum period allocations should not be varied.
Mathematics	5	
Science	5	
Social Science	5	
Agriculture	4	Practical subjects. Students will take a minimum of any three, including Home Economics for girls. The period allocations may be varied according to staff availability, etc.
Commerce	4	
Expressive Arts	4	
Home Economics	4	
Guidance	1	Pastoral subjects.
Religious Instructions	1-4	
TOTAL	37-40	

Humanities often replaces literature and the expressive arts. Language arts replaces the separate teaching of language and literature.

This trend, however, is not universal. In fact, there are signs of a countervailing one towards the "dis-integration" of subjects. Most countries stand fairly firm on the need for single subject specialization at the upper secondary level but England, Wales and Northern Ireland are currently experiencing a move "back to basics". Saskatchewan, Canada, has encountered some resistence to integration in mathematics and natural sciences and Papua New Guinea recently abandoned experiments in an integrated course for English, Social Science and Commerce at grade seven. Integrated Rural Science and Business Principles for grades seven and eight were replaced by separate courses in Agriculture and Commerce. Social Science, however, integrated from history and geography in the early 1970's was retained.

Materials for Learning

The production of revised and new syllabuses has led to rethinking of policies and strategies for the production of learning materials to accompany them. Many New Commonwealth countries have set up curriculum resource centres and units of a general nature, mostly within ministries of education or closely associated with them. Fiji's Educational Resources Centre is a representative example (Figure 4). There are a few specialist units also such as those for the design of science equipment. Some teachers' colleges and institutes also have schemes for the design and production of materials. Some also produce test and evaluate materials. Teacher involvement is encouraged through curriculum workshops, teachers' centres and subject associations. Sometimes academics are commissioned to write texts or to translate existing texts into local languages. In Tanzania the project work of able students done for examinations is sometimes reproduced for use in other schools as learning material. The work of the National Council for Educational Research and Training in India is representative on a grand scale of many efforts throughout the Commonwealth to design and produce relevant materials:

> By and large, print materials in the form of text books and supplementary readers remain the major teaching/learning materials. At the national level the National Council of Educational Research and Training (NCERT) prepares text-books on various subjects for adoption or adaption by the states... It has a large publishing house, which publishes text books, supplementary readers and a large variety of other educational materials.
>
> The NCERT also designs and develops science kits. These kits are mini-laboratories. The emphasis is now on indigenous low-cost materials. The kits are designed to go with curricular materials produced by NCERT. They prove valuable... in rural schools where facilities for good laboratories may not exist.
>
> The NCERT has a large Central Library of educational films... loaned to schools...

Most other countries too rely mainly on print materials. Though still the major resource, the text book is being supplemented by other low-cost, adaptable and easily reproduced printed materials such as work-sheets, facsimile packs and graded work cards. Multi-media packs are used in countries which can rely on tape, slide-tape and film as well. The use of the overhead projector is rapidly supplementing the black-board in countries which can afford it and where electricity is available.

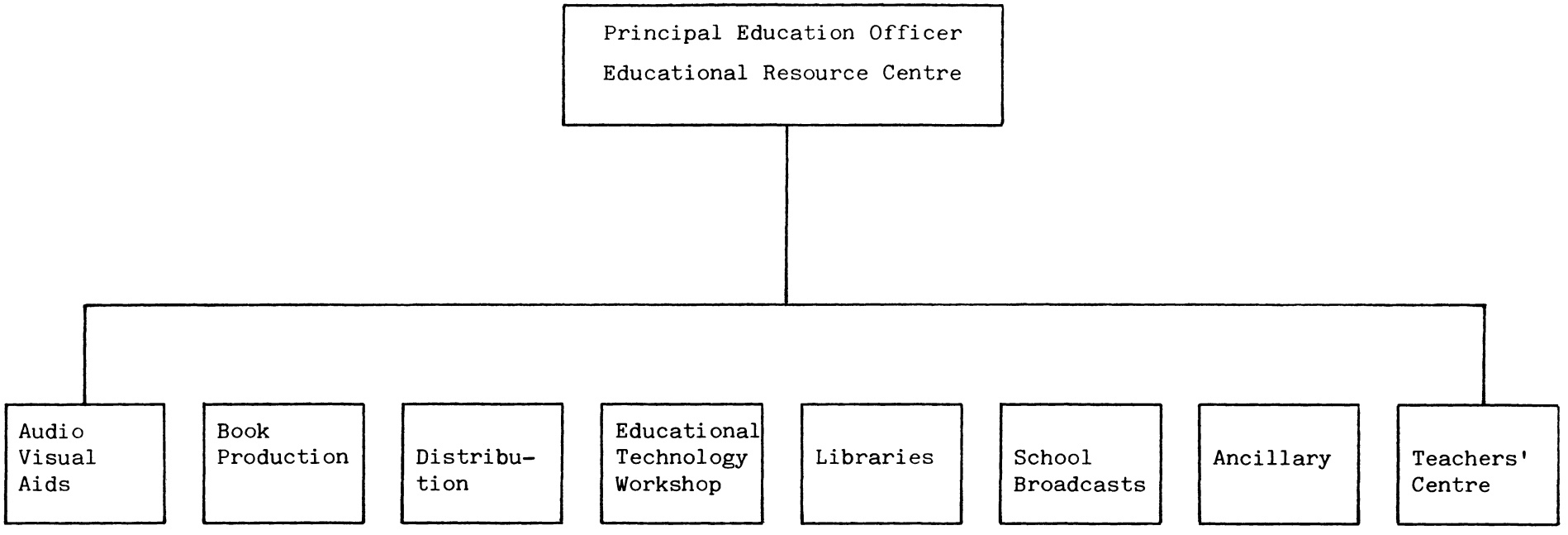


FIGURE 4 : FIJI'S EDUCATIONAL RESOURCE CENTRE

Relevant Locally-Produced, Low-Cost Materials

On the whole, commercially-produced materials are widely used but there is now emphasis on the adaption of these for local use. Increasingly, locally-produced materials made of local resources and at low cost are favoured. Singapore is one exception to this pattern, a fact perhaps which reflects a special context where commercially produced materials are relatively cheap and readily available. In Singapore to date, many teachers have been unwilling to use materials not specifically adapted to their own needs as they do not have the time or skills to produce their own; and since teacher-produced materials are not necessarily the cheapest nor the most presentable, commercially produced materials are currently in favour.

The variety of subjects for which learning materials are being produced anew is enormous but in general the emphasis is on science, maths and social studies. Other areas of attention are remedial materials and materials for the less able. Guyana has designed materials for remedial reading. Singapore has an audio-tape series for slow learners. Other efforts of interest are, Malaysia's resource kits for English at upper secondary level, Singapore's teacher guides and slide series for health education, Swaziland's student texts and filmstrips for agriculture. Northern Ireland is one of a number of countries producing kits for cultural and ethnic studies. Such examples, of course, do not do justice to the amount of locally-relevant materials produced in a variety of imaginative and relatively low-cost ways.

Media

A number of countries use radio for educational purposes at secondary level. Television is less widely used. In general, radio and television programmes are supportive and are intended to enrich school courses. They rarely supplant formal schooling except in the few cases where they are used as part of a distance learning programme. In some countries specialized institutions are in the forefront of the development of materials for the mass media. In Nigeria the Nigerian Educational Technology Centre is active in this field and in Guyana the Radio Broadcasts Unit works closely with the Curriculum Development Centre. Some countries are hampered in developing these facilities by technical difficulties including problems with the quality of media services. India, however, has a well-developed system for delivery of schooling by radio and television for lower secondary level (classes six to ten). All India Radio (AIR) designs programmes and involves educationalists as advisers. The programmes are regularly put out by as many as thirty-two stations and there are facilities for relay to remote areas. More than six thousand programmes are broadcast every year to school children and nearly sixty thousand schools have receivers. Four television stations also produce programmes with language teaching and science predominant. The NCERT is now planning the co-ordination of media programmes with what is being done in schools:

> But there is still a very long tough road to go before it becomes an accepted normal pattern rather than an experimental (one).

In other countries, also, the emphasis is on the use of the mass media for science and language teaching. It is very clear, however, that radio and television programme makers follow the design of subjects as taught in the schools. In very few countries is there evidence that the use of the media has had any significant influence on the design of learning materials used in the schools.

Examinations Policy

Examinations inevitably have a great influence on the sequencing and content of the curriculum. The majority of countries in the New Commonwealth are gradually localizing control of national examinations at the end of the primary school (where they are held) and at the end of lower secondary school. It is worth repetition that localization of control of examinations has removed a major constraint on the development of curricula for national purposes.

Ministries of education have set up a variety of mechanisms for the control of examinations. Malaysia is representative of a widespread pattern whereby a special unit within the ministry, the Examinations Syndicate in this case, controls and runs the Lower Certificate Examinations. In Fiji, as an example of a variation on this theme, the Class Six, Eight and Form Four examinations are run by a panel of examiners for each subject area, drawn from the teachers and the Ministry's Curriculum Development Unit.

Local, Regional and External Control

At the upper secondary level, in contrast, many countries rely on external examining bodies in co-operation with the Ministry of Education. At present, therefore, a dual system of examinations is operating. The Cambridge Overseas Certificate is still widely used, but regional co-operation is to some extent replacing reliance on external bodies at the lower secondary level. The West African Examinations Council is well established. The Caribbean Examinations Council has been very active. Such co-operation reflects regionalization based largely on countries of the New Commonwealth. In the South Pacific, in contrast, Australia and New Zealand play a direct part in the conduct of examinations of some of the smaller member states in that region. The pattern in the Solomon Islands is an example of the way in which local control is combined with regional co-operation. Since 1978 the Solomon Islands' School Certificate Examinations Board has controlled the School Certificate Examination taken at the end of form five. This is set by teachers appointed by the Board with ten consultants from the University of the South Pacific, the University of Papua New Guinea and the University of New England (New South Wales, Australia).

Currently few countries of the New Commonwealth have moved all the way towards localizing examinations at both lower and upper secondary levels. Even where regional co-operation is traditionally close, problems in maintaining it are many, as shown by the recent decision of Botswana to leave the Botswana-Lesotho-Swaziland Council and to take administrative control of its own junior certificate examination. Nevertheless, two factors are likely to intensify the trend towards local and regional control of examinations; the concern for relevance in the curriculum and the need for countries to have autonomy to expand and adapt their schooling systems as the pressure for mass secondary schooling intensifies.

Primary Leaving/Secondary Entrance Examinations

In the New Commonwealth some countries, Malaysia for instance, have no primary leaving/secondary entrance examination at a national level. Malaysia has a very high level of enrolment at the lower secondary level. But, in other countries where, for socio-economic reasons, students are unable to take advantage of available secondary schooling, the primary school leaver needs a certificate as public recognition of his achievement. Unless, or until, a nine to ten year basic education is both free and compulsory (or voluntary enrolment is high) it is very difficult indeed for a country to do away with examinations for selection of some sort at the end of primary school.

The Seychelles is in the fortunate position of having a very high voluntary enrolment rate. It intends soon to introduce a ninth year of schooling on a voluntary and free basis. The Junior Secondary Entrance Examination will then be phased out. In Tonga the seven year basic cycle is free and compulsory but a secondary entrance examination is still necessary because of the limited number of school places available at the beginning of the secondary level. In Singapore there is a secondary entrance examination after five years of free but voluntary schooling. This selects students for extended basic schooling or vocational training. A number of countries are still in the process of achieving a five year or so basic schooling for all. Secondary school expansion, therefore, must compete with the expansion of primary education and must remain severely limited for the time being. In these cases the primary leaving examination is likely to be retained for the foreseeable future.

Lower Secondary Examinations

Most countries in the New Commonwealth have a public examination at the end of lower secondary schooling (after nine or ten years of basic education). Examples would be the Lower Certificate of Education in Malaysia, (Figure 5 p.32) or the Matriculation in India. Since most students leave school at this point the examination may serve both as a leaving certificate and as a selective device for entry to upper secondary schools. Guyana provides a flexible examination system whereby students can gain a certificate of achievement which recognizes their efforts if they have to leave school after Form Three of the Community High School Programme (Proficiency Examination Part 1) or if they are able to complete the course in form four (Part 2). There is also the Caribbean Examinations Council examination for able students at Form Five.

A number of countries operate external or regional examinations as well as local ones at the end of the lower secondary programme. These examinations usually cater for the ablest students who aim to continue their studies. The Cambridge Overseas Certificate and the Caribbean Examinations Council General Certificate are external and regional examples respectively of these and the Malaysian Certificate of Education taken at the end of Form Five after eleven years of schooling is a locally-run example which is intended to replace Cambridge.

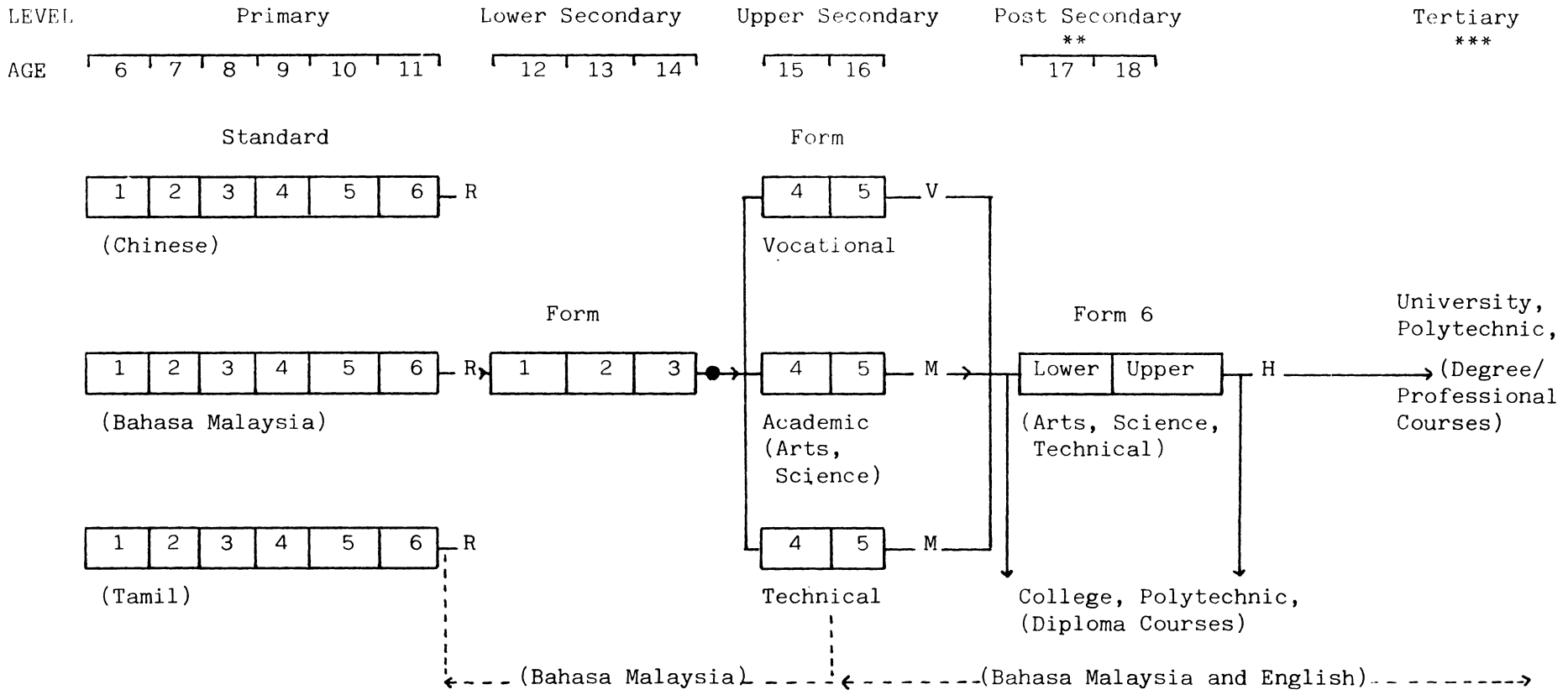
Reducing the Number of Examinations

Some countries of the Old Commonwealth are reducing the number of examinations held at the secondary level. These countries have all, of course, now achieved universal schooling for ten or so years. They have no need, therefore, for examinations at the end of primary school to sort out the students who will enter secondary school. The trend towards a common school at the lower secondary level, where it exists, also obviates the need for selective entrance examinations for these are not needed to sort out students for different categories of secondary shool.

In Canada and some states of Australia there are no public examinations at the lower secondary school level. Tests for achievement and proficiency are run at the local or school level. In England, Wales and Northern Ireland examinations are held but are not compulsory. At the end of the higher secondary level almost all countries have a public examination. External boards are still very much a part of the system in New Commonwealth countries at this level. Western Australia has no public examination except for the Tertiary Examinations, held at the end of the twelfth year of schooling:

> From 1975, a single level examination called the Tertiary Admissions Examination became the responsibility of the

FIGURE 5 : SCHOOL SYSTEM OF MALAYSIA 1979*



( ) indicates main medium of instruction

Public Examinations

- ● Lower Certificate of Education (LCE)
- V Malaysian Vocational Certificate (MVC)
- M Malaysian Certificate of Education (MCE)
- H Higher School Certificate (HSC)
- R Remove classes are transitional classes of one year's duration provided to give intensive language lessons to pupils who have to change their medium of learning from Chinese or Tamil at the primary level to Bahasa Malaysia at the secondary level. An extra year must be added to the ages of pupils who proceed from the Remove classes.

* Adapted from: MALAYSIA, Ministry of Education. Education in Malaysia 1974, p.98.

** Sixth Form classes, teacher training institutions, polytechnics and other institutions offering Diploma Courses.

*** Universities and other institutions offering Professional Courses.

> Board of Secondary Education. Establishment of the TAE allowed the introduction of ..... internal school assessment and hence greater involvement in schools in the determination of academic outcomes at Year 12. Deliberate attempts by superintendents and principals to encourage wider participation in decision making was aimed at establishing a greater sense of involvement by teachers, parents and students ..... The follow-on from this reduction in the examination nexus between secondary and tertiary institutions appears to be an increasing trend towards diversity within state secondary schools. Rather than secondary education being aimed at one final examination, schools seem much more willing to undertake ..... school based programmes, largely designed to meet ..... local requirements. This process has not been discouraged by the departmental administration which has laid down guidelines for the development of such school based programmes .....

In Canada an accepted alternative to the final examination is the accreditation system. New Zealand and Malaysia combine accreditation with examinations. In Saskatchewan, students accumulate credits for courses taken through years ten, eleven and twelve. The system builds in flexibility for students who may be unable to complete grade twelve for they may leave school with a number of credits at any stage. In countries which experience progressive drop-out throughout the secondary level and wish to avoid having public examinations every two years or so the credit system provides a well established alternative.

Increase in the Number of Examinations

England and Wales have recently been looking at the system of examinations in operation. At present, there are two levels of the General Certificate of Education (GCE), ordinary level ('O'), normally taken at age sixteen, and advanced level ('A') taken at age eighteen. At sixteen there is also the Certificate of Secondary Education (CSE), grade one of which is comparable to an 'O' Level pass. No examinations are compulsory though most students attempt at least one subject. There is the possibility that these two examinations may be amalgamated but the matter is controversial, technically difficult and by no means settled. Alongside this attempt to reduce the number of examinations at sixteen plus there are proposals to establish a new Certificate of Extended Education (CEE), designed for students who are unable to achieve an 'O' Level pass or its equivalent but who wish to continue in school beyond the compulsory age for one year. This proposal for a new examination must be seen in the light of a context of universal secondary education to sixteen and high levels of unemployment for school leavers. The Schools Council proposals for two new examinations to replace advanced level was discussed on page . Though not accepted by the government it is indicative again of a trend towards the democratization of upper secondary level education.

The likelihood is that most countries will phase out a primary leaving certificate if and when compulsory common schooling is introduced at the lower secondary level. For the foreseeable future it is likely that the majority of students will leave school after a basic nine to ten year programme. It is, therefore, probable that students, employers and the community will demand the retention of some form of secondary leaving certificate based on performance levels. For countries where students drop out progressively before nine or ten years it is reasonable to suggest that students need some form of certification after years six, seven and eight. It is likely therefore in many countries that a significant reduction in the number of examinations will take place.

Examination Requirements

But, more important perhaps than the number of examinations is the purpose for which they are run and what they are intended to assess. Currently the emphasis is on achievement at a certain level on a subject basis. Various models are represented in the Commonwealth.

In the New Commonwealth the favoured model at the lower secondary level is for a pass to be contingent upon good grades in core subjects, ranging from two to six subjects according to the country. Apart from this requirement a free range of optional subjects is possible, practical constraints apart.

Another model is where a minimum number of subjects must be passed (core subjects may also be specified as prerequisites for a pass). A similar model is where a certain aggregate score must be attained. In Botswana, for example, a student must pass four subjects plus English and obtain an average score of 40 or more out of 100 when the marks of six of the subjects are added together. The requirement for English indicates the importance of this language for higher studies and is a stipulation common to many countries. In Tanzania, the list of subjects which must be passed is Kiswahili, social science, natural science or commerce, maths, a foreign language and political education.

Nigeria and India exemplify a model where the student must pass a subject or number of subjects from certain groups. This device may force the student to specialize in arts, sciences, technical or commercial subjects, or more usually, it may force the student to study generally across the range of specialist fields.

New Zealand recently phased out the group-pass model in favour of the scheme favoured in England, Wales and Northern Ireland and in Singapore and Sri Lanka. In these countries a student may offer as few or as many subjects (usually no more than ten) as he wishes. He can obtain a certificate in any one of these. In Singapore a minimum grade of six is necessary for a pass. In England there is no pass grade but students are ranged from A to E. Cyprus is in the process of limiting the scope of its final school leaving examinations to a few subjects only:

> We believe that this weight-lifting will help the pupils to get rid of an, in many ways, purposeless stress that the examinations create and, moreover, will give them time and impulse for creative work on substantial matters. With the limitation of the examinations the possibilities of promotions are increased and thus the pupils have more chances to continue their studies to higher levels.
> (Dr C A Sophianos, Minister of Education, Basic Issues of Educational Policy, n.d., p.20)

Science and Technology

At the higher secondary level most countries allow students to self-select into a free range of options for examination purposes. Over recent years there has been a major shift in the New Commonwealth towards a preference for scientific and technological subjects and away from the arts. This trend is not so apparent in the Old Commonwealth. England and Wales reports a continuing emphasis on the arts, a trend common to the other Old Commonwealth countries.

Modes of Assessment

As we have seen, many countries are progressively de-emphasizing public examinations. Instead they are moving towards internal school-based assessment for evaluative and diagnostic purposes. Tests and examinations are held as occasion demands or on a "continuous" basis instead of at fixed weekly, termly or yearly intervals. Assessment is becoming less a matter of judging students' performance at discrete intervals for predictive purposes and more a matter of monitoring progress, diagnosing weaknesses and their possible causes, and indicating guidelines for remedial action.

Teacher-based Assessment

"Continuous" testing indicates that teacher-based assessment is now widely used either as a substitute for external assessment or in conjunction with it. In Tanzania as much as fifty percent of the assessment for public examinations is teacher-based and in Cyprus it is sixty percent. Teacher-based assessment takes many forms. In Tanzania, the teacher evaluates the character and productive work of the student as well as his academic work in accordance with the principles of African Socialism and Self-Reliance. In Nigeria and Botswana the teachers assess the practical aspects of scientific and practical subjects for public examinations. In Barbados and St Lucia teachers assess students' projects and assignments in local history. In England and Wales for 'O' Level GCE and the CSE the choice of whether assessment should be teacher-based or external is left to the school to decide. These examinations are conducted by the examining boards in three modes. In Mode One, examinations are conducted by examining boards on syllabuses set and published by the board. In Mode Two examinations are conducted by the examining boards on syllabuses devised by individual schools or groups of schools and approved by the board. In Mode Three the examinations are set and marked internally by individual schools but moderated by the boards on syllabuses devised by individual schools or groups of schools. Mode One is the traditional approach and is still the usual practice though increasingly there is a measure of teacher involvement. Mode Two is used by both GCE and CSE boards although not to any great extent, (only 2.5% in 1977 for CSE). Mode Three is more widely used by the CSE boards. (In 1977 about twenty-five percent of the CSE subject entries nationally were in Mode Three.) Clearly teachers in England and Wales are somewhat cautious about taking on the additional work and responsibility involved in preparing their own examinations. Many still prefer the more conservative approach of externally conducted examinations.

Objective Testing

In both internal and external assessment there has been a strong trend in favour of the easily-marked objective tests, multiple choice questions and tests for specific skills and aptitudes. Essay-type examinations have recently been somewhat out of favour. Objective tests have the advantage of being marked by computer as in Malaysia and Mauritius but they do need good item-banking of questions if the questions are to vary. Singapore is currently building up its item bank for this purpose. The other main problem is that questions are difficult to compile and require skilled handling if they are to test the knowledge, skills and aptitudes for which they are intended. Also, skills tested by the writing of essays may be neglected in the curriculum if essay writing for examinations is not a requirement.

Formal Examinations Again?

It is noteworthy that despite the very firm trend towards teacher-based assessment and continuous testing there are signs of a move in the opposite direction. Some Canadian provinces are re-introducing formal examinations. Papua New Guinea is rethinking its recent experiment whereby the teachers are responsible for three-quarters of the assessment, and is considering a move back to external assessment of formal examinations. There is a need to examine the reasons for this trend. One may be a lack of expertise or commitment among teachers in techniques of assessment; another may be the problem of standardizing school-based assessment nationally. Another possibility is that communities, parents and employers have greater confidence in the traditional modes of assessment which they judge to be fair.