CHAPTER 2: SIX QUESTIONS PERTAINING TO EDUCATION AND NATIONAL SCALE

1. What range of educational provision can small states support?

1.1 The questionnaire issued by the Commonwealth Secretariat in 1980 (Appendix A) included a section on institutions in which information was sought on current national educational provision and the prospects for institutional expansion in the 1980s. The responses to this section from the sample countries form the basis for an examination of the first of six major questions highlighted in the 8CEC paper relating to education and national scale. Although the term range has clear curricula implications these will be reserved for the third of the six questions discussed under section 3 of this chapter.

1.2 The question is initially political, dealing with the internal national control of educational policy. In some respects the key word in the question is support. Does it mean supported entirely from the domestic economy or is it to include educational sectors and institutions partially or wholly dependent on overseas aid? Does it mean buildings and physical facilities only, or is it to include staffing, in which case we become involved in the question of expertise.

1.3 An examination of what the nations in the sample and other comparable countries actually manage to offer in the way of educational provision indicates an impressive range in quantitative terms. The fact that universal primary education is a feature of all these countries clearly illustrates this, and places these small countries ahead of many larger developing countries in this respect. However, it has to be remembered that none of the small countries in the sample are classified in the Secretariat's **Basic Statistical Data on Selected Countries** (1) as being in the low income category (US$250 per capita income). Consequently their economic level allied to a small population and/or surface area makes universal primary education a fairly easy facility to provide, at least in terms of physical plant. Indeed some countries in the sample have also made the expansion of nursery or kindergarten provision one of their priorities: for example, Guyana, Cyprus (by lowering the age of entry to primary school), Malta and Seychelles.

1.4 It is at the secondary level that difficult choices have to be made between the local, national and international needs of the nation in manpower terms. Several countries in the sample, for example, Malta, Barbados and Cyprus, provide universal secondary education, and though it is not compulsory in the last-named, it is largely taken up. Guyana, Fiji and Seychelles are also near to providing a full secondary sector, though in different forms. However, in all countries in the sample there is a clear understanding of the need to develop more flexible systems so as to relate more closely to local needs without constraining the minority capable of high level expertise in academic terms. It is of course the old universal problem of selection, but more acutely felt as the scale of the nation descends the gradient of the sample. Partly because of the small scale of the commercial economy these nations cannot accommodate all secondary level leavers in employment. To deal with this problem and in an attempt to lesson its impact in the future most countries in the sample have produced new initiatives with institutional expression in the form of the High School Programme in Guyana; the Junior Secondary School thrusts in Botswana and Western Samoa; the Multi-Craft

Centres in Fiji; the Pupil-Workers Scheme in Malta; the Centre for Popular Education in Grenada; the National Youth Service in the Seychelles; the Community High Schools in Kiribati, and the Community Training Centres in Tuvalu.

1.5 Despite these initiatives the status and pull of academic secondary schooling remains high and in some cases invalidates or limits the effective operation of the new institutions. Some countries attack this problem after compulsory schooling, for example, Malta, Barbados (Community College) and Cyprus, but these are all compact islands and have relatively diversified economies where general academic education is a genuinely useful training for managerial and entrepreneurial opportunities. For the poorer countries in the sample, and especially the demographically smaller and/or 'empty' types, the secondary leavers who are unemployed are key targets for a re-orientation to the rural life - an ironic situation indeed! Despite the establishment, development and often keenly relevant work of technical colleges and other further education institutions the academic secondary school image remains deeply installed in the minds of the majority of citizens as the most desirable.

1.6 Many small states are developing some form of integrated post-compulsory provision, for example: the Community College in Barbados, the Belize College of Arts, Science and Technology and the College of The Bahamas. Similar schemes are evident in smaller countries such as a Junior College development in St. Christopher-Nevis, the integration of the Morne educational complex in Saint Lucia and the planned Polytechnic in Seychelles.

1.7 All save one of the sample states have teachers' colleges which until the recent technical thrust offered the first form of further education to become available. The colleges have enjoyed high status. Their training role expanded with the provision of universal primary education and the need for qualified teachers, and they often provide the stepping stone for university entrance and/or professional employment outside education. In some countries the role of the teachers' college is more diffuse and includes in-service education and curriculum development. However, when the presently young teaching force eventually retires or moves to other employment there could be a rapid return to initial training as a priority, at least for a period. By then it is possible that such colleges may be integrated with other tertiary institutions.

1.8 Like the academic secondary school, the university has a special status, but in terms of developing countries large and small, also a special identification with nationalism. Despite the various degrees of incompleteness evident in many small country systems it is not altogether surprising to find that seven had at least part of a university campus and two others had university extension centres. Again, it is necessary to view this from a political as well as an educational angle. To have control of ones own higher education is a significant component of independence, but it is also necessary for that university to be able to meet all professional and technological manpower needs to be really fulfilling its political function. The universities of, or shared by, the sample countries achieve this to varying degrees, and their capability in this respect is not unrelated to population size and/or compactness, and/or being a regional focus country. Both Malta and Guyana have independent universities catering for a wide range of manpower needs; Fiji shares a regional university, the University of the South Pacific but is its headquarters and therefore benefits considerably thereby; Barbados and Botswana have one of the campuses of a university, both of which are likely

to obtain total or increased independence in the not too distant future; Western Samoa has the second, but at present minor campus of the University of the South Pacific which also has extension centres in all parts of its constituent members in the South Pacific. The University of the West Indies has campuses in Jamaica, and Trinidad and Tobago, as well as Barbados, and extension centres in the smaller countries, including two countries in the sample group, Grenada and Belize. Other Commonwealth countries with less than 2 million population that have universities are Lesotho (independent university); Swaziland (shared with Botswana); Mauritius (independent university), and Cyprus is planning to establish an independent university. The last-named sees its university as becoming a regional focus. The issue of the problems of regional universities will be discussed further in the consideration of dependence in Chapter 4.

1.9 A summary response to the first of the six questions would seem to be that the 12 small countries sampled here offer a range of formal educational provision out of proportion to their scale. The countries choose to give priority to this particular form of social investment. Beyond a very low threshold of population size and economic development the political factor overrides all others. However for tertiary education and especially university education the demographic threshold is higher and some form of regional co-operation and sharing is necessary.

1.10 It is also clear that the ideological stance of the government of small countries varies considerably and that this will influence the detailed pattern of provision. For example the characteristics of social priority and centralised planning and control give a certain comparability to the educational thrust of the currently (1982) socialist members of the sample, namely Guyana, Malta, Grenada and Seychelles. Not surprisingly these are the countries with active programmes of pre-school education. Contrasting strongly with this are the equally vigorous but much more variable programmes of say, Botswana, Fiji and Barbados.

1.11 At the lower end of the sample demographically and economically, the high degree of educational aspiration is supported to a proportionally greater extent by overseas aid. This is simply another example of political priorities prevailing. After all, with reference to the section on our smallest sample representative, Tuvalu (see Appendix B), because of the virtual lack of any natural resource base on this tiny fragmented island group, the export of high level manpower is seen as a matter of genuine economic potential.

1.12 In conclusion, while certain elementary constraints on educational provision are obvious in relation to scale, whether economically, spatially or demographically applied, no clear pattern is observable due to the very strong and varied influence of political decisions, and the equally varied range of environmental and historical circumstances within the sample group. All countries in the group are very keen to meet both community needs, especially rural community development, and high level manpower needs. This creates a dilemma, but one which is felt in large countries also. However, this tension is certainly more acutely felt the smaller the country in question.

2. **How can the high cost of systems associated with the provision of traditional forms of education be reduced?**

2.1 The Commonwealth Secretariat's questionnaire (Appendix A) endeavoured to obtain information on the costs and the financing of the education system in small states and the major financial requirements for the 1980s.

2.2 As with the first of the six questions there is a clear political dimension to the concept of cost. Terms such as 'the high cost of systems' are subjective. Depending upon different political viewpoints the cost of educational provision may be reckoned to be on a gradient between high and low. This will often depend on whether one is examining capital expenditure or recurrent expenditure on education, and how each of these relates to other elements in the economy. Another dimension is whether the expected benefit to be derived is a short or long term objective. A further consideration is the proportion of educational expenditure derived from overseas aid and whether this is in any way constrained as to its use.

2.3 As predicted in respect of other aspects of the educational scene in small Commonwealth countries the picture of finance is similarly disparate. The percentage of the national budget spent on education runs from 30 per cent in Botswana through 20 per cent in Fiji and Barbados; 15 per cent in Belize and Grenada; 13 per cent in Seychelles and Cyprus; 12.5 per cent in Guyana; 12 per cent in Western Samoa, to 8 per cent in Malta. Much depends on the particular situation in the year of the survey (1980), as to whether any major initiative was being undertaken in any particular country. Certainly Botswana's very high rate may well be related to an upsurge in national income through mining and the concurrent thrust to provide Junior Secondary Schools in every area. There is also the question of the absolute sums being spent on education and its relation to the absolute number of pupils and students. In other words it could well be that the 8 per cent of Malta is in reality a larger expenditure per head than the 30 per cent of Botswana.

2.4 Given these qualifications, there are certain financial problems which tend to act adversely in respect of educational provision in smaller countries. For example, unit costs tend to be high especially in relation to the provision of specialist staff in secondary and tertiary fields where there tends to be a high staff:student ratio. If expatriate employment is deemed to be necessary, then the unit cost may be greater whether such people work in teaching or in administration. Even if expatriates are on local salary scales there often has to be a provision, or at least a subsidy on accommodation, family passages, and some sort of inducement such as terminal gratuity. Such items affect smaller developing countries more adversely than their larger counterparts because they are likely to contribute a larger part of the educational budget.

2.5 Of particular concern to small countries is the recurrent expenditure arising from an initiative funded by overseas aid, especially if this is a major institutional feature such as a college or university. Such major capital investments tend to institute a curricular inertia as well, so that it becomes very difficult to change direction until the initial holders of established positions retire. Some commentators look upon the University of the West Indies in this light, depicting it as an 'albatross' as far as regional tertiary initiative is concerned because of the very strongly metropolitan model of its foundation as a University College (of London), in 1948. This is not entirely fair, but has to be given some credence. More recent university foundations

in the tropical island zones, such as the University of the South Pacific, the University of Mauritius, the University of Guyana and the two universities in Papua New Guinea seem to have been directed from the outset towards perceived regional or local needs. However, even at other lower levels of educational operation, and especially in the primary sector the recurrent implications of innovation in financial terms can easily be under-estimated. Of course it sometimes happens, especially in the poorer countries that the aid agreement covers recurrent as well as capital costs. In these cases an important dependency element has to be considered.

2.6 Unless the small country is also compact then certain types of administrative cost can be very high indeed. This is especially true of widely scattered archipelago states, particularly if there is also a high level of overall remoteness in relation to sources of educational supplies from other countries. This is to some extent also true of the land based countries like Guyana, Botswana and Belize where the clusters of population are analogous to the islands of an archipelago and may be equally difficult of access. New and different systems of management can be evolved to ameliorate this type of problem, but these geographical difficulties will not go away.

2.7 It is clear then that in various ways, and even given the widely differing economic structures and levels of small Commonwealth countries, such countries tend to suffer from relatively high costs in providing education. The question as posed at the beginning of this section refers to the possibility of reducing expenditure on traditional forms of education - formal institutionalised education. It implies that this type of provision is to continue. One obvious and not necessarily facile answer is to reduce the provision of this type of education. This would not automatically mean that what replaced it would cost less, but given that many of the countries in our sample, and other comparable states, are initiating various forms of local community-based education, there is a possibility of some costs either not arising, or being borne by the community. This is already the case in some of the sample countries in the construction and maintenance of local educational plant, and could well operate more in the field of materials provision and even staffing if the local specific model is taken to its logical conclusion. Obviously the inertia of the teaching profession and the related notion of the 'qualified teacher' will act against such trends, but in view of the fact that even in the very small countries the cost of teachers' salaries constitutes nearly the entire recurrent cost of schooling, something has to be done in this area if the proportionally smaller absolute amount of money left over in such a country is to be enlarged.

2.8 Likewise, greater co-operation with industry, commerce and other private bodies in sandwich courses and other forms of sponsorship could reduce public sector costs in some sections of education, as could more inter-ministerial co-operation. It is clear from the survey that in several countries there is already such co-operation. However in others such as in The Gambia, there has been rivalry, duplication, or at best overlap in the provision of education in, for example, rural areas. If this happens then the overall cost of education to the national budget is likely to rise.

2.9 There has been a tendency in the developed countries for the inertia of the formal system to lumber on long after more effective informal influences have appropriated some of its functions. Clearly there are certain aspects of education for which formal institutions are essential, but smaller developing countries with incomplete systems have the opportunity to avail themselves of

means of distance communication which may assist in cutting costs. This would also mean a restructuring of certain basic assumptions about the efficiency and status of formal, especially secondary schooling and this requires a profound attitudinal change. The problems of acceptance of new initiatives such as Community High Schools in some small countries is an example of local conservatism derived from a colonial model, which if typical of other peripheral communities in small countries - and it may well be - points towards the continuation of a burden of disproportionately high educational expenditure for small countries.

3. **What is the education system's contribution to the development of a more broadly based economy?**

3.1 A third major issue in the Commonwealth Secretariat's questionnaire (Appendix A) was the relationship between education and employment. Information was sought on levels of employment and migration relative to educational attainment.

3.2 An examination of this third question requires initial reference to the variety of economic and occupational structures exhibited by the twelve sample nations and other small Commonwealth countries. It is well known that a strong economic characteristic of small countries is their concentration of output - a dependence on the export or provision of a very small range of goods or services.

3.3 Within the sample the more compact island nations and the land-based nations are the more economically diversified, and policies for furthering the process of diversification are likely to continue. The extent to which education has contributed and/or will contribute further to this process cannot be answered without a brief reference to the vexed issue of relationships between investment in education and the economic growth of a nation. This is pertinent here because whatever the correct theoretical outcome may be, the fact is that in the 1960s and 1970s many newly independent countries presumed a direct relationship. For small countries the heavy investment in education was a disproportionate burden, and now it is generally agreed that in practice educational investment must follow, or be carefully integrated with other infrastructural investment.

3.4 As can be seen under the individual country sections in Appendix B, small countries have, quantitatively, a remarkable level of education provision. The degree to which the manpower potential inherent in that provision can be enhanced in relation to economic growth varies from case to case. In the poorest economies, the concentration phenomenon is proportionally stronger. In Kiribati and Tuvalu much presently depends on marine employment for men and their resultant remittances. Not surprisingly in both countries there is a specialist marine training college to enhance the prospect of employment - clear correspondence between acute economic concentration and educational specialisation. Such economies have no leeway with which to adjust to sudden changes of fortune in the area of concentration. What are the prospects for diversification? In Tuvalu there is virtually no environmental resource except fish for subsistence use; even basic agriculture requires soils to be contrived (an art on the curriculum of the Marine Training School). Tertiary services such as offered by some very small countries, e.g. taxation and banking advantages in the Cayman Islands, are ruled out by the remoteness of such countries as Tuvalu. It may well be that in the not too

distant future, computer and satellite links may make such services possible, but the advantages of improved technology will most likely enable the few small countries already in this field to maintain their hold. So the export of educated manpower becomes an alternative - not always clearly articulated - but a practical response to a situation of limited opportunities. This in turn depends on host countries being willing to admit Tuvaluans to tertiary education and/or employment in competition with their own nationals and the basic educational provision in Tuvalu being able to provide a sufficiently strong academic base for successful entry to higher education.

3.5 Kiribati has somewhat similar economic problems, but there is also some prospect of subsistence affluence as a realistic objective provided population growth is held in check. Apart from this Kiribati is possibly in an inferior position to Tuvalu because of its significantly greater size. It is possible that relatively few successes in the field of educated manpower export could have a relatively large effect on Tuvaluan economic fortunes. For Kiribati, which is much more firmly involved in marine employment - to some extent at the expense of Tuvalu - the switch to academic exports would be more problematical. Consequently education must seek to adjust to the local resource base, and the Community High School scheme was an attempt to begin this adjustment (see Kiribati Country Profile, Appendix B).

3.6 Although the Seychelles is, like Kiribati and Tuvalu, a widely scattered archipelago, the permanently inhabited islands are quite close together. Ninety per cent of the population live on the main island, Mahe. This, plus the fact that Mahe is volcanically derived and fertile makes it more comparable to similar environments in the Windward Islands of the West Indies - Dominica, Saint Lucia, Saint Vincent and the Grenadines and, the sample representative in this survey, Grenada. These, countries like Seychelles, are gradually diversifying their economies and the most useful educational contribution to this process has been the enhancement of technical and vocational education. Given political independence and the virtual, and to some extent related disappearance of emigration possibilities, the task facing education is of helping to bring about a change in attitude towards working the local environment, rural and urban, for economic ends. It is doubtful whether existing formal educational structures and curricula are useful for such a task, hence the radical alternatives proposed by Seychelles and Grenada following their respective socialist coups in 1977 and 1979. It remains to be seen whether these community orientated approaches will work, and much will depend on local political will and skill to translate rhetoric into manifest local improvements that will maintain momentum and support. Education is vital to the ultimate success of both these revolutions. The Windward Islands and Seychelles (Mahe) are clearly capable of 'subsistence affluence', plus a significant diversified sector. Their individual compactness and the interconnection of urban and rural life could be an advantage provided - and this is a key question for this particular group of small countries - that presently high rates of population growth are reduced. Herein lies another role for education, and for political will.

3.7 Belize, Guyana and Botswana, the three land-based countries, face a different type of challenge. They already have significant manufacturing developments as well as different forms of agricultural potential. Although Belize is demographically very small, its surface area it is out of all proportion to the island nations, with the exception of Fiji. All three members of this group are geopolitcally constrained, being bordered by 'opposing' countries. They cannot, therefore, play the role of regional focus

as Fiji does, and this limits the possibilities for the development of a large managerial, service and entrepreneurial sector which is the area of the economy most suited to receiving the output of general formal education. However, in the case of Botswana and Guyana the size of the national population is sufficient to contain such a sector within the internal economy provided the basis of that economy at the primary levels of agriculture and extractive industry is sufficiently strong. But we have already seen that the national economic index of these two nations is lower than even most of the smaller islands of the sample. And yet their potential is obviously much greater than the islands, so we must ask not only, how can education assist the diversification of the economy but also, how can education assist the growth of the basic economy? The answer is not at all clear.

3.8 In Guyana, for example, we find one of the most complete of the educational systems in the sample, one of only two countries on the list to have its own independent university. It has already been commented that the University of Guyana has adopted a very flexible approach in relation to perceived manpower development needs, and that elsewhere in the system there is diversification and an enhancement of technical education. What more can be done? Perhaps too much has been done, and the level of public spending has already outrun the present capacity of the economy? Perhaps the potential for human resource development has been constrained by social division and conflict, and an overbearing bureaucracy? It does not seem that smallness of scale per se has very much to do with this situation, but it could well be that the mismatch of different scales is significant. In other words the three indices of scale, geographic, demographic and economic do not accord. The population, while the largest absolute total in our sample, is clearly inadequate for the exploitation of the vast interior, but too large it seems for present economic levels to cope with. To the extent that there is some economic diversification already in key areas of the country, the existing educational provision would seem to be sufficiently well developed to service these needs.

3.9 Botswana also exhibits a mismatch of scales. The relatively small population is mostly clustered along the border with the Republic of South Africa, and there has long been a flow of male labour from Botswana to work in the mines of the Republic. The level of the national economy is very similar to that of Guyana, but its recent rate of growth is greater, due mainly to vigorous mineral exploitation. The education system is less developed than Guyana but is the recipient of a considerable portion of this new income. Is such a policy in respect of educational investment ill-conceived at this stage? Should more be done instead to concentrate on certain areas and sectors where economic diversification seems possible? The style of educational expansion is certainly much more locally adaptable and less centrally planned than in Guyana, but investment in its growth is on a national scale. It would seem that Botswana's economic and educational problems probably relate more to questions of isolation and dependence than to scale per se.

3.10 Applying the question to Malta, Cyprus, Barbados and Fiji, this group contains the members of the sample with the greatest degree of correspondence between economic diversification and educational provision. The phenomenon of economic concentration is less marked, and there are well developed trading, service and manufacturing sectors in each. Educational provision is correspondingly well developed, though there is not a direct match between the output of the system and changing manpower needs, these being free market countries. All four countries recognise the need for

improvement in the technical and vocational fields and all have programmes for this purpose. Why should these four small countries have achieved a relatively higher level of economic diversification than other countries in the sample? Did their education systems, as they developed, help to engender diversity in the economy; and if so is there any message here for other small Commonwealth countries?

3.11 All four countries enjoy a relatively good match between their three indices of scale. Although Malta and Barbados are rather constrained in surface area, this in itself greatly assists the flow of information and the ease of administration necessary in a complex economy. It helps promote closer urban-rural inter-relationships. With the exception of Fiji (unless we treat the outer islands distinctly), these countries are compact. Fiji included, they occupy historically developed trading positions in their respective regions. The long-standing development of trade through, across and between the Mediterranean area, its many components, and its long-standing association with European, Asian and African civilisations have certainly beneffited Malta and Cyprus. Barbados has always been the entrepot for the Eastern Caribbean Commonwealth islands. Usefully detached, about 100 miles into the Atlantic to the east of the Lesser Antilles it enjoyed a much more peaceful colonial history than its neighbours and never changed hands - not an insignificant legacy in education terms. Although not without obvious social problems arising from the experience of slavery, the relatively early introduction of educational opportunity and its subsequent development have certainly enhanced the quality of human resources in accordance with the rapid growth of trading, services and manufacturing, favoured by its regional position. Fiji, though less compact, also has a regional role in the South Pacific, not unlike that of Barbados but on a larger geographical scale. It is the focus of communications, and has within its own considerable land area a capacity for agricultural production unmatched in the region, except for the potential evident in Western Samoa.

3.12 It would seem therefore that the more developed countries in the sample are characterised by a relatively diversified economy and that the relative completeness and flexibility of their educational systems fits well with this. This state of affairs seems to relate to scale only in the relatively high degree of matching between the three indices of scale which leads to a compactness that has a number of practical benefits. It does not seem that any general educational lessons can be usefully transmitted to the other types of small countries in the sample or beyond. They have much less favoured locations in respect of trading, some have problems associated with underpopulation, geopolitical conflict, remoteness and fragmentation.

4. How can the development of an appropriate curriculum for the school system be best initiated and sustained?

4.1. The fourth section in the Commonwealth Secretariat's questionnaire (Appendix A) concentrated upon the curriculum especially as this relates to first and second level education. It sought too to elicit information on the main curriculum initiatives upon which countries are embarking in the 1980s.

4.2 The curriculum, in its various forms - content, method, visible and hidden - is the crux of any educational operation. Whatever the broad objective, it is individually received to an extent which is very difficult to quantify, especially in the long term view of its possible contribution to the

development of each member of the group, community or nation. Claims and assumptions as to the likely outcomes of curricula initiatives in detail are therefore often exaggerated. This being so, it is necessary to be extremely circumspect about the use of words such as appropriate and relevant, unless linked with some proven method of ascertaining appropriateness according to a range of criteria which are themselves grounded in the needs of the country in question. It is self evident that there can be no question of suggesting that there could be a certain type of curriculum that would suit the range of scales evident even in our sample group. It must also be clearly recognised that although the Commonwealth Secretariat's questionnaire concentrated on the school system this is a very narrow view of education, and may be unnecessarily restrictive in considering the overall needs of education in very small countries. This is not a case for de-schooling but rather for close co-operation, even integration between schooling, other formal sectors, and non-formal and informal educational providers in the best use of scarce facilities and resources.

4.3 Most small countries, including nearly all the sample states, have added to their educational costs in recent times by establishing some sort of curriculum development centre or department. Such institutions spring partly from the new orthodoxy syndrome in educational provision determined by trends in metropolitan countries, and partly from the apparent need in a post-independent context to utilise the education system in enhancing, even in some cases effecting, a national cohesion and identity.

4.4 However, in very small countries especially, and developing countries in general, the outside origins of much of the material - particularly books - does not assist the task of relating to and surviving in the sometimes very limited environmental context concerned. To this extent the materials production aspect of curriculum centres can play a vital role. This is more a question of educational technology (see section 6 of this chapter) than of curriculum, which has to do with the perceived learning needs of the population. In a small country there is an increased tension at the interface between locale specific needs and the wider needs of nationhood and its associated, nationalised bureaucracy.

4.5 Given the strong influence of informal educational processes, and especially where materials and expertise are at a premium, it would seem to be sensible to include in the formal curriculum only those elements which cannot be learned or learned so effectively, outside of the institutional context (2). It is a curious state of affairs when contemporary curriculum designers are being urged to include on the formal timetable areas of local culture that owe their endangered state largely to the the effects of metropolitan schooling.

4.6 Too great an identification between curriculum and formal educational structures also invites the flawed strategy of attempting a curriculum reform, however desirable, through the device of structural reform. The creation of new structures is not only disproportionately costly for many small states, but induces reaction if they seem to conflict with the conventional wisdom that generally equates educational propriety and status with formal academic learning. In the range of small countries we have considered above, the model of the academic school has been firmly implanted by the colonial, and especially, mission experience. Most members of the educated elites achieved their current status, and related benefits through success in this type of schooling. Consequently, to expect the mass of the population, be they

urban or rural, to accept radically different structures is naive in the extreme. But curriculum change does not necessarily involve radical structural reform. There can be, indeed has to be an accommodation between formal notions of school and the informal education derived from living. The establishment and operation of a curriculum unit staffed by returnees from curriculum courses overseas is not necessarily the most effective way of achieving this accommodation.

4.7 A good example of this is in the technical and vocational area where the setting up of new structures - and there are several examples listed below - may in itself hinder the popular acceptance of this area of education quite correctly identified by the Commonwealth Secretariat in its 8CEC papers as being one of priority for small member states.

4.8 It should be possible to utilise curriculum design skills to fuse technical and vocational aspects of education with the so-called academic model already operating. One way to achieve this is to give priority to adult education and attempt to get across at this level the range of economic options open to the country in question, particularly if it is a small island nation where before political independence formal academic education was a preparation for emigration. Such an option is no longer open in most cases, and the most imaginative and realistic innovations in curricula reform in the sample countries reviewed above are those attempting to relate to local environmental constraints and opportunities. The liberal use of labels such as technical, vocational and polytechnic in a spurious and polemical way can endanger the possibility of these potentially very useful areas of educational experience being accepted by local communities.

4.9 A particularly important area of the local environment that has received effective support from curriculum units in small countries is that of language. In many cases, small developing countries are remarkably internally diverse in this respect (3). They are always at the least bilingual, as between the metropolitan colonial language and the social language of the people which, in turn may be at least partially derived from the former - as with West Indian and Seychelles creole languages and S.E. Asian and Pacific pidgin. Localisation of primary level texts and other materials has rightly been a priority concern in several of the sample states, most notably in Western Samoa.

4.10 Many of the small countries in this sample, and comparable Commonwealth counterparts happen to be regionally grouped, and major curriculum initiatives have been attempted through links with developed countries in the given region - such as Australia and New Zealand in the case of the South Pacific and USA and Canada in the Caribbean and/or through new regional institutions such as examination boards and universities. More detailed consideration of the curricula implications of regional co-operation between groups of small countries is given in Chapter 4 but one very useful service provided by such links is that of the dissemination of information on particular curriculum innovations in individual countries (4).

4.11 The main curricula initiatives of individual sample states are mentioned under various sections of Appendix B. Also, the Commonwealth Secretariat has recently published an account of curriculum change at secondary level in member states (5). The chapters below (3 and 4) on Isolation and Dependence inevitably include further treatment of curriculum issues. In consequence of these three facts, this particular section has been confined to

a discussion of the question as posed in the 8CEC paper. The very narrow interpretation of curriculum implied in the parameter of 'school system', and the dubious predictive power implied in the use of the word 'appropriate' may be revealing in themselves. The mystique of a science of education has costs which can affect small countries disproportionately. It would seem that in such countries there is a particular need for the integration of effort and approach involving all sections of educational provision. A more useful question to have posed in respect of the outcome of the Commonwealth Secretariat's survey, bearing in mind its specific concern with scale, would have been: "How can curricula concepts and practices developed in respect of schooling in large developed countries be adopted for application to the holistic perception of education necessitated by national smallness?"

5. How can local expertise be developed and encouraged?

5.1 In the Commonwealth Secretariat questionnaire (Appendix A) which preceded the 8CEC paper the notion of expertise was applied to the manpower available to the education system of small member states. Since the character and operation of such systems is broadly determined by the political, commercial and in some cases spiritual leadership of each small nation, the sort of education experienced by these elites, especially in the post-independence era is also relevant.

5.2 Consequently there are at least five areas of local expertise to be considered in relation to this question: national leadership expertise as exhibited or required by politicans, civil servants and leaders in other walks of life; expertise in educational administration; expertise in the teaching force; expertise in support services including for example curriculum advisers and reprographic operatives; and expertise in the various areas of non-formal and informal educational provision.

5.3 One of the few obvious effects of national smallness of scale defined demographically is the limited pool of human talent available. Before independence, when in many such countries the emigration often necessitated by progress up the ladder of formal education tended to become permanent, disproportionately large numbers of talented individuals were lost. That is not to say that those who returned and remained were in any way inferior, but they were certainly fewer than they might have been. At the level of national leadership in several key areas therefore the potential pool of talent has been reduced both quantitatively and qualitatively, and one of the main agents of this process has been the accessibility and nature of formal education itself - an ironical but not unpredictable outcome of the combination of smallness and colonialism.

5.4 At the present very difficult time for small independent countries, economically and politically exceptional talent and the acquisition by national elites, however selected or identified, of the range and flexibility of expertise inherent in the highest levels of leadership should be a priority consideration.

5.5 For the education system itself such qualities are also needed in the leadership of its various components and at all levels of educational administration. In general the qualities required when national parameters are significantly limited are those associated with adaptability and the polymath. It is therefore particularly difficult for such countries to promote these

objectives through an inherited philosophy of education that favours extreme specialisation. And yet it would appear that education policies in small countries will increasingly need to reduce disparities between urban and rural education through increased and sophisticated integration between formal, non-formal and informal sources of education.

5.6 The administration of education is a daunting and difficult task in such circumstances, and because of the necessarily limited pool of human talent, there is a sharper fall in the gradient of expertise in this field as between smaller and larger countries. Even within regions of small countries such difficulties of comparability occur in this field that there exists a constraint on the potential for regional co-operation in education, though in terms of particular individual personnel it is self-evidently not the case that a direct correspondence exists between administrative talent and size of the country. However, this is evident in terms of a pool of administrative expertise. Staff development programmes in educational administration should include a large number of short experiences and workshops designed to promote immediate expertise needs, rather than concentrating on sending a few administrators on long-term courses of educational administration in metropolitan countries. This question is also linked with the trend towards localisation of manpower in educational administration and changing patterns of expatriate manpower needs.

5.7 Expatriates, and this is clear from many of the sample states, still tend to be disproportionately evident not only in educational administration, but also in school administration and specialist teaching roles in secondary schools. This is related not only to expertise but also to the career aspirations of the relatively limited number of local graduates in small countries, most of whom prefer work outside formal education - a factor inhibiting localisation of high level educational expertise. Expatriates in education in small countries tend to be concentrated in the academic secondary sector as specialist teachers, particularly in science subjects. This is a reflection of the inertia of curriculum development at this level as part and parcel of the inherited metropolitan model of schooling. Is the type of specialisation in individual sciences at this level a vital aspect of the formal education of small country children? This question is also relevant to large countries, developed as well as developing, but in small countries it is a disproportionatley urgent issue. If it is not then curriculum reform can cope with the problem. Unless and until that occurs, and it will be a difficult reform in terms of inherited perceptions of curriculur propriety, then the heavy cost of expatriate labour* will continue to be a problem for small Commonwealth countries. Several of the countries in the sample have of course been able and/or willing to invest heavily in the localisation of expertise in such areas. There is then no expatriate problem, but a different one of the internalising of specialisation in the local education system.

5.8 In some small Commonwealth countries which are compact and enjoy entrepreneurial or other economic opportunities formal educational investment and quality tend to be at high levels. The content and output of the system corresponds well with employment stuctures and opportunities, so the quality of expertise tends to be very high. Paradoxically this causes other problems

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* Expatriates are often now on local salary scales, but there are also the questions of passages, accommodation and sometimes extra inducements such as terminal gratuities.

of lack of promotion opportunities due to the scale of the country which if very small may also have very few opportunities for talented and ambitious educationalists in educational administration or tertiary education. In such circumstances there might be some value to be gained by a special Commonwealth scheme of staff development involving exchanges and other movements between small member states sharing similar problems of educational expertise.

5.9 However, the most general problem of expertise is that of the nature of training and certification of teachers for the primary schools, given that universal primary education is now a reality in most small Commonwealth countries. Our sample set of twelve countries range in this respect from several with a 100 per cent qualified teaching force at this level to a few with only about half the force trained. There is of course a considerable problem as to what constitutes qualified in any respect of comparability. All members of the sample now see in-service training as an important on-going operation capable of supporting plans for curriculum change. In at least one case, Grenada, there has been a fusion between initial and in-service training so as to hasten the day of a fully qualified teaching force, and also provide a form of training less divorced from local realities. The Grenada scheme, backed by the University of the West Indies is one that other small countries may well find attractive as a model.

5.10 Secondary school teacher training is much less well developed in small countries. Academic secondary schools often employ untrained graduates, and junior secondary schools take primary trained teachers in several countries. It may well be that in the junior secondary sector, a development favoured by many Commonwealth countries, lies the greatest mismatch between training and task. Although usually conceived as ultimately being a universal sector, the junior secondary schools are as yet unable to accept the entire age range of the sector in most small countries. This has translated them into the situation of being regarded as second choice selective schools, and in this context the specialist capability of many staff members is found wanting.

5.11 The many teachers colleges established in the 1960s in small countries have played in fact a much wider role as often the only facility for further and higher education, and a route to almost any tertiary career. This role has declined as other tertiary institutions have emerged, especially in the technical field. For small countries there is always the problem of a lower margin of error in planning staff development needs, and a proportionally heavy cost to be borne in providing cover for staff away on further training. There are, however, some quantitative advantages of smallness in this respect, and the main problem is a qualitative one, especially in terms of the content of teacher education. Problems of accessibility of workshops and other in-service provisions are very severe in multi-island countries and it would probably be better for there to be more frequent visitations of short duration to outlying areas by outside advisers who can provide a comparative dimension. If the opposite method is used, some small countries find it impossible to afford the cost of sufficient numbers attending a centralised or regional meeting to make it worthwhile. On the other hand if the small country is compact, the take-up for in-service opportunities tends to be high, and as flexibility and adaptability become increasingly important the required transformation of teacher attitudes and capabilities in terms of local parameters and resource development is more likely to be achieved.

5.12 The smaller the scale of the country the more the significance of a good understanding of the components of the local environment and the patterns of

human ecology that have developed there. The most valuable additions to teacher and leadership expertise alike will be those enabling the use of the total environment as a resource for learning.

6. **How can small states increase the level of self-reliance in the production and servicing of school buildings and equipment?**

6.1 This pertains to the section of the Commonwealth Secretariat questionnaire (Appendix A) which requested information on the capital equipment and the hardware of education systems. These are two distinct elements although there are some important links between them.

6.2 First there is the question of the construction and maintenance of school buildings. In small countries the Ministry of Education rarely has the capacity to carry out either of these tasks, and there are many examples of inadequate structure and design. Clearly there is a need for inter-ministerial co-operation. The school building is the local symbol of education, and a pattern adopted in some parts of rural Mexico may be of interest to small Commonwealth countries. That is, the building department provides proper foundations and reliable structures but the local community clothes these in the accepted style of the area, including roofing. Thus the goodwill and effort of the local community is supported by appropriate levels of technology, and a structure that is culturally acceptable. Something along these lines, though more locally controlled, is taking place in rural Botswana. Possibly of more significance in small and otherwise disadvantaged countries is the physical construction and maintenance of links between individual schools and the Ministry of Education, by which is meant systems of transportation and communication supporting information and basic supplies. This is a particular problem in the large area/low population density states and in the multi-island states. In both cases considerable disparities of accessibility and provision tend to occur.

6.3 Educational technology may be considered from two different angles, institutional and spatial: in other words, the two extremes of scale. At the institutional level, that is in the individual school, if self-reliance is to be the objective then the level of technology inherent in any given piece of apparatus must not exceed the level of capacity in that institution to maintain it, store it securely and operate it effectively. Many small Commonwealth countries are in tropical locations and the atmospheric toll on electrical and mechanical devices is severe. The scale of complexity of the technology must therefore correspond with the scale of other resources needed to utilise it effectively, the most important of which is the human resource. Given that the capacity to handle this aspect of educational support was by far the weakest of the six areas comprising the Commonwealth Secretariat survey, this implies a considerable challenge for technical education in the countries concerned. It is likely that in small countries the technical college will be the main repository of expertise able to assist with the maintenance and repair of apparatus. This capacity could be formalised into an official role, and incorporated in the training courses for college students.

6.4 In the field of science some very good work has been done, notably at Njala University College, Sierra Leone, on the utilisation of local environmental resources for both the construction of pieces of apparatus, and also the general exemplification of concepts and processes. Much could be gained from the wider dissemination of this work and its possible extension into the area of appropriate educational technology.

6.5 The spatial aspect of educational technology has to do with distance learning, and is particularly useful in large sparsely populated countries, multi-island countries and regional links in education. Thus its role is directly concerned with problems of scale by, in effect, reducing vast distances to the scale of individual human contact. One of the earlier forms of distance learning, correspondence courses, can now be associated with modern means of telecommunication, and if some of the basic problems of technical expertise can be resolved, then there is no reason why even the smallest country should not provide an educational service out of all proportion to its limited scale. Of particular note in this field among the countries in the sample are the Botswana Extension College and the use of satellite communications by the University of the South Pacific Extension Service. The latter, together with the two universities in Papua New Guinea operates an enormous range of contacts from the resolution of individual personal problems to the provision of mass lectures to an audience scattered across the region (6).

6.6 It is obvious that any development in educational technology, institutional or spatial, brings with it, especially for a small country, issues of interdependence which must somehow, in their resolution, meet with local needs and with the maintenance of the cultural integrity of the human groups involved. Provided this can be done then even the smallest country's educational provision can include high quality audio-visual material at a very modest cost.

7. The question of scale reviewed

7.1 Further comments on scale in relation to isolation and dependence will be made in the concluding section of this paper. Suffice it here to discuss briefly the evident relationships between scale and education that have emerged thus far.

7.2 In general it would appear to be the case that, while there must obviously be educational implications of extremes of scale, however defined as between the giant nations of the Commonwealth (i.e. India, Canada, Nigeria and Australia) and the microstate (e.g. Gibraltar, Montserrat and Tuvalu), there is no regular gradient or obvious cut-off point as between 'small' and other relative terms typifying notional national scale. Consequently the idea of setting an arbitrary demographic threshold such as 2 million as a parameter for 'smallness' places serious intellectual constraints on any attempt to analyse a presumed relationship between 'smallness of national scale' and the 'nature and operation of educational systems'. The fact that the concept of scale is capable of definition by at least three sets of indices, namely demographic, economic and spatial, and that they rarely correspond in respect of actual national units also makes the idea of some sort of composite national scale difficult to determine. It would require considerably more analysis than the remit for this paper will allow. However two concepts emerge with which to attempt further analysis: correspondence of measures of scale as between the three sets of indices, and national compactness, also according to the concordance of selected variables.

7.3 It was found above that correspondence between two of the variables of national scale was not unusual, but between all three it was rare. The fact that one of the variables, population size, had been ascribed greater status by its identification with the remit of the paper somewhat increased the problems of comparison. Nonetheless it became fairly clear that a high level

of correspondence was evident only between the lower ranges of each variable: at the microstate level. In other words if the general concept of 'smallness' has any validity it seems that it could not be applied to any state with more than about 100,000 population, an economic level by GNP per capita of approximately US$1,000 p.a., and a surface area of 1,000 sq. km. These are very subjective thresholds of smallness and further research would be needed including a disaggregation of each variable on a qualitative basis. However, above these general levels there seemed to be increasingly less correspondence, so that at the top of the sample list we find Guyana and Botswana with enormous land areas relative to population and very low economic levels.

7.4 Compactness requires of a state that there can be a combination of territorial unification, and no empty land; economic diversity by sector and occupation; high population density and a degree of social cohesion. It became clear above that where the conditions for compactness were best satisfied in the sample (Barbados, Cyprus, Malta and to a considerably lesser extent, Fiji), the operation of formal education systems seemed most in tune with the other systems comprising the nation. This is simply because the more diversified and 'modern' the economy, the greater the potential usefulness of traditional institutionalised learning. Conversely the poorer the index of compactness the greater the likelihood of serious disparity in educational provision and consequent need for radical compensatory measures of some sort. Before leaving the concept of compactness it must also be noted that the nations in the sample exhibiting this characteristic have all been, historically and geographically, favourably placed in terms of opportunities for trading and the resulting capacity for reprocessing of materials for valued added outcomes.

7.5 It must not be forgotten that the provision of education is ultimately an outcome of political decision. If we were to add variables in this field, further significant relationships between scales of population size, economy and surface area might become evident. As Chick, quoted by Kay, has stated in respect of the use of modern technology for distance learning (i.e, scale adjustment) in the South Pacific:

> "A statellite system could help overcome the communications problems that face the Pacific Islands. The trouble that stands in the way of better communication between island nations is political and commercial rather than technological. The links exist and the governments can utilise them if the will is there". (7).

7.6. This brings us to another aspect of scale and education, namely that formal institutionalised education systems are normally closely associated with national identity. The frame of reference is national - there are very few other activities that citizens of most nations are positively required by law to undertake. This being so, the scale of perception may bear some relationship to the other variants of scale insofar as they influence educational provision and practice. We are talking here about smallness of outlook which is not necessarily a negative thing. In as much as small nations experience difficulties in providing a range of educational provision comparable to that of larger countries, then the outcome is not directly a result of scale per se, but of a mismatch between the scale of national resources and the scale of national policies in respect of education.

7.7 In conclusion, it may be stated that at the level of generalisation ascribed to this exercise, there does not seem to be a firm relationship between education and scale other than a fairly obvious finding that smaller nations tend to encounter similar educational problems to larger nations, but to an intensified degree. Also, at the extremes of correspondence of smallness variables, education systems become increasingly incomplete as the terminal level of provision drops. If, however, we were to go beyond the scope of this paper and ask a different set of questions relating to detailed components of each of the questions above and their patterns of operations, we might well find some relationships with the concept of scale per se. That would require considerable research, but is politically worthy of the undertaking.

7.8 It would seem therefore that in somewhat the same way as education appears to have more indirect than direct relationships to scale, so scale becomes more meaningful when considered in harness with two other variables tending to disadvantage small countries, namely isolation and dependence.

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