

4 The Development of Curriculum and Materials

A Caribbean view

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Howard Fergus defines curriculum as the time-tabled programme of studies of a school or similar institution, as well as its so-called extra-curricular provisions. This includes objectives, content, teaching methods, evaluation techniques, and the way these interrelate to promote learning. He focuses on the components of the curriculum, the logistics of curriculum reform, the production of curriculum materials, and refers to the work of examining boards operating within a regional context. He pays special attention to the challenges and assets of smallness of scale and dependence, characteristics that help to define the context for development in the small states of the Commonwealth.

Sources of curriculum

The ultimate source of curriculum is culture in its broad anthropological sense. This is a dynamic concept embracing all aspects of the life of any social group. In the case of small nation states, one needs to include not only their history but also their continuing disabilities,

certain constraining self-perceptions, some of which derive from their size, and their thrust for independence. Furthermore, the efforts at, or rhetoric pertaining to, curriculum reforms include pronouncements on education by political leaders in these states, which clearly expect education to provide their emergent countries with the capacities and attitudes needed for development and the attainment of real sovereignty.

Many states have found it easier to continue with inherited notions of what is worthwhile knowledge than to respond to new curriculum imperatives based on an indigenous interpretation of culture. This has occurred because, apart from the inertia associated with education systems, small states lack the necessary finance to implement radical curriculum change; and even if they did not, they face the difficulty of breaking from the stranglehold of intellectual dependence on metropolitan countries. Elsewhere Farrugia has cited Malta as a case where the usual material dependence has been extended to the intellectual sphere.¹ This situation exists in most other small nation states. Their intellectual, and by implication, cultural dependence is deep and pervasive. Not only do these states depend on the metropolis for textbooks and ideas, but it is First World scholars who determine what counts for acceptable and legitimate knowledge. Little if any recognition has been given to indigenous and supposedly informal knowledge. The traditional knowledge of rural peoples in agriculture, cuisine, herbal remedies is largely ignored because it has not been built into the discourse of universities by metropolitan scholars. To relegate local culture entirely to informal processes is to send out powerful signals about its value and to perpetuate abject cultural and educational dependence. It is to be hoped that a main aim of curriculum development in these states would be to prepare people to function in their local environment with which they must increasingly identify. In other words, we must begin to correct some of the defects of metropolitan schooling. Revolution will not come in a flood, but the process of modification must begin.

It is not being suggested that disciplined knowledge be replaced in any of these societies. This is neither feasible nor logical. Most of them have a hybrid culture and the metropolitan component is ineradicable. Besides, the administrative elites in these states owe their position to their educational attainment, metropolitan style. They therefore have a vested interest in that kind of schooling and presumably would not like to see it radically altered. Furthermore, continuing dependence on overseas institutions for training and consultancy services serves to reinforce the metropolitan presence. The Euro-Western heritage is real, and so are the financial and practical problems involved in revolutionising curricula based on a totally new concept of organised knowledge. Moreover, the size and economic circumstances of these states are such that, though less so than previously, migration is a fact of life and this means that even though it is not admitted or deliberately pursued, they find themselves, to a greater or lesser extent, educating for export. In consequence, a sizeable number of the populace who migrate from small Commonwealth countries will be handicapped unless they attain some kind of universal academic minimum and internationally negotiable certificates.

One does not necessarily accept Paul Hirst's view that a given number of pre-determined forms of knowledge should constitute the content of education, even if one subscribes to the view that development of intellectual skills is at the heart of the educational enterprise. Mathematics, for instance, is a universal 'language game', a way of comprehending human experience not confined to any class or world group. This does not mean, however, that all the content of traditional subjects has to be copied from abroad. Further, not only should the peoples of the small nation states of the Commonwealth be taught their own history, but they should also be introduced to the history of selected peoples from other parts of the world. All students should be allowed to conduct an inquiry into their own history and culture. In this way, they will develop the skills of historical thinking and investigation by exercising their minds on matters of local relevance. This kind of exercise should lead students to question the

place and value of imported ideas and to put them in their proper perspective. Their curriculum content needs to reflect a new process of socialisation and the development of new attitudes to indigenous culture.

Language

Language, which is a crucial conduit of culture, merits consideration in any study of curriculum in the 'small' Commonwealth. All Caribbean countries have a creole or patois which, while being an adaptation of the European language, has an infusion of African words and African syntax and morphology. It is this language that the majority of the people use to express themselves, tell their stories, sing songs and generally negotiate their lives. Many children start school fluent in this language, but have difficulty acquiring proficiency in standard English. There are implications here for a language policy in this crucial area of communication. Curriculum development cannot ignore this potentially bilingual situation.

The position becomes more complex in the Pacific and Indian Ocean states. Mauritius's chequered colonial history has given her a rich language legacy. French is the main language of commerce and conversation; English the language of instruction and examination. In addition, there are Kreole and some Indian languages as well. A language policy both in Mauritius and the Caribbean has to take into account such matters as the need for at least one language for international communication, which language to introduce first, and whether bilingualism or trilingualism should be aimed at from the outset. In Western Samoa, Samoan has been made the language of schooling for the first seven years. Whatever decisions are made on these issues, the history, culture and creative potential of these languages must find their way into the curriculum. Local languages are important to the process of building a national identity in the quest for independence, and for moulding national cohesion. One must remember, however, that smallness of scale does not necessarily mean that the national linguistic structure is lacking in complexity. The case of Vanuatu testifies to that.

Creole English as a medium for creative writing has gained prominence in the Anglophone Caribbean, and has begun to move from the inferior status of 'broken English' associated with slaves and illiterates to the respectable position of 'nation language' as scholar-poet Edward Brathwaite styles it. It is important to the Caribbean culture of struggle and survival. The literature, whether oral or written, which results from work in Creole, is a powerful unearther of experience as well as being richly entertaining. These pieces must find their way into the curriculum at all levels and teachers and children should themselves be encouraged to use this creative medium.

In the South Pacific, language teaching and learning are more problematic. Some countries have several vernaculars and the pidgin sometimes differs radically from the metropolitan language. The principle of facility in the vernacular language still applies although a choice may have to be made and also a decision has to be made as to whether vernacular literacy should precede introduction to the metropolitan language. In the Seychelles, the single vernacular or Kreole has been made the medium of learning in primary schools. In the quest for bilingualism, smallness may well be an asset as far as unit cost is concerned.

Technical literacy

Manpower needs, even in small island states, are regarded as an important determinant of curriculum. The distinction between manpower needs and culture is an artificial one and is made here for convenience since the economic system is a component of culture. A main aim of curriculum reform in small island states is to provide the economy with skills needed for its functioning and expansion. Vocational and technical training is supposed to be given at least parity of emphasis with literary and academic learning. This stance seems eminently reasonable for it seems to make more sense to teach agriculture rather than Shakespeare to rural people. Caution is however urged. With few exceptions, the small nation states tend to have open economies and a narrow range of economic activities. A

major object of economic planning is the attraction of foreign investors. This means that major economic decisions are made outside the country as well as decisions about the technology that will be employed. Manpower prediction becomes very unreliable in such circumstances. In any case, given the limited range of occupations available in most small states it may not be expedient to spend too much of their limited resources on the expensive equipment needed for job-specific training. Specific job skills risk becoming obsolete as the investment environment changes and economic emphasis shifts. One of the elements missing from the delivery system of many of these small states is a defined job market that stays in focus long enough to enable curriculum planners to make contact with it.

In view of this, what may be termed as technical literacy and vocational orientation is recommended for school systems in these states. Technical literacy subsumes general literacy, by which is meant the acquisition of a functional level of basic academic skills - the ability to compute, comprehend and manipulate verbal and mathematical symbols.

Technical literacy does not preclude training for job skills based on training needs identified as immediate and imminent, so to some extent the manpower planning exercise is still necessary. But it should be used as a guide and revised periodically to capture new trends in the economy and the employment market. The training to be provided can take place either in multi-purpose technical colleges or on-the-job or both. With the high cost of technical education in a society with a limited population it might be more productive for employers to be actively involved in the training or in the funding of technical and vocational education. This can take the form of levies, day releases and the funding of workers' training in adult learning settings. On-the-job training releases funds for investment in the economy or for funding other areas of human resource development such as health. Industry and education institutions should share resources.

Technical and vocational literacy and general academic development serve another vital purpose. Because of the unstable

employment situation in small states, rigid training specialisms are not advocated. Persons have to be educated to respond readily to training in a number of areas as economic circumstances dictate. These fragile economies with their shifting job markets warrant the training of creative and versatile citizens or 'polyvalent' persons as they have come to be known. This approach is now one of necessity in a situation that is perhaps even more unpredictable for small economies than for their larger counterparts.

Participation in social and political life

The management and maintenance of independence require the development in citizens of socio-political skills, and this is just as true in small states. This is an important part of the cultural landscape of the ex-colonial Commonwealth and is therefore important in curriculum planning. The political relations of the small states to metropolitan powers, old and new, is the nexus for so much of the continuing colonial freight which they carry, including the psychology of dependence and the feeling that what is foreign is best. The term socio-political defines skills associated with civic values, nation building and community commitment which are intended to prepare students for participation in social and political life and to foster national identity and self-reliance. Children need to learn to identify with the national heritage if political independence is to lead to real sovereignty. If schools can build this kind of sense of identity and commitment whether through social studies, environmental studies, history, language or whatever appropriate subject, perhaps the momentum of the brain drain, an endemic problem of small states might be minimised.

The aesthetic sense

The creative arts are also a crucial aspect of a people's culture, whether in small or large states, sounding as they do the human spirit, capturing subliminal yearnings and aspirations, expressing feelings, and nurturing sensitivity and the creative urge. Every child should be

encouraged to practice or appreciate at least one art form. The arts will open up new and creative avenues of personal enjoyment and this is welcome in an era of cultural penetration in the form of imported television and films, some of which do not enhance sensibility, the photography apart.

The development of an aesthetic sense therefore has to be an aim of these education systems. And the arts need not be confined to classes labelled drama, music, painting and so on. The aesthetic can infuse subjects such as woodwork, metalwork, literature and home economics where it takes the form of designing, arrangement, colour, texture and creative writing as the case may be.

It seems so easy in these relatively poor countries to jettison subjects which do not appear to contribute directly to the economy. This tendency is reinforced by some aid agencies which evince a lopsided concept of development. While one does not wish to see the arts vulgarised to present them for mass merchandising, they have real earning potential especially for tourism. And those who develop proficiency in the arts add another dimension to the polyvalence which has been recommended as a desirable quality of the 'small Commonwealth man'. In its bid to promote pluri-cultural Mauritianism, the Cultural Division of the Mauritius Ministry of Education plans to develop certain components of the culture including drama, fine arts, music, dance and folk art. This is a useful model. It does not mean that our arts have to be totally inward-looking. It does mean that they must be anchored in the culture whatever the varying strands are and they must have internal consistency, honesty and dynamism. The arts should be practised in every school.

Moral awareness

Religion is rooted in the colonial culture of all Commonwealth states, including the smallest ones, and has become a central part of people's lives. The teaching of one or even two dominant religions is fraught with problems, especially in small multi-ethnic countries and communities. Schools can, however, draw on the study of

various religions as a base for the exploration of ethical and moral issues. The aim would be to enhance moral awareness rather than to give religious instructions in the traditional sense.

Curriculum content

From the foregoing discussion, it can be concluded that at least six categories of skills and knowledge should be included in the curriculum of small Commonwealth states. These are:

- basic academic skills with special considerations given to language
- technical and vocational literacy
- life skills
- aesthetic skills
- socio-political skills
- moral awareness skills

Basic academic skills are those skills which enable students to acquire literacy, numeracy, the ability to comprehend and to think logically. Consideration of a language policy is logically linked with a consideration of academic skills. There should be fluency in a metropolitan language, and where opportunity warrants, as in Mauritius, there might be fluency in two. This leaves more options open to the country for international intercourse. Ancestral languages should be developed as a teaching and learning medium and books written in them. Pedagogical and cultural considerations will help to decide at what point each language is introduced.

Like general literacy, technical literacy is preparatory and foundational. Emphasis will, generally speaking, be on industrial arts, commercial arts, agriculture, machine and building skills at an introductory level and the teaching of relating English, mathematics and science.

Life skills build on technical and vocational literacy by giving students a range of skills which will lead to employment after school.

These are likely to be in commerce, industry, agriculture, art and craft, and hotel work, but the mix depends on the country. The life skills programmes should also have a practical bias. It may make more sense to use farmers to teach farming than teachers who are not qualified to demonstrate its viability as a life skill.

Aesthetic skills can be developed through music, dance, drama, creative writing, sculpture and painting, but an aesthetic sense can be fostered through other curriculum subjects. An aim is to develop talent and this means identifying students who need interaction with practising artists and further training. The investigation of folklore and all kinds of indigenous aesthetic expressions should be given special attention.

An aim of socio-political skills is to prepare students for democratic participation in the social and political life of their countries. To do this successfully, they will need to internalise certain values such as self-reliance, patriotism and co-operation. These skills and values can be taught through social studies and other subjects, but are more effective if opportunities are provided for practising them. Expedients such as school councils, work and study, and co-operatives have been tried but without resounding success. Each country must decide what will work, but the principle of actual involvement is a sound one. It is important too, for the school to demonstrate these values in its own operation if students are to adopt them.

The aim of moral awareness is to make students morally mature and balanced in their response to emotive social issues such as abortion, drugs, religious tolerance, war, racism, sex and attitudes to authority. Although moral awareness implies adopting positions and forming attitudes, children can be encouraged to base their beliefs on data and rational inquiry. As with socio-political skills, the ambience of the school and its mode of operating can contribute to the moral maturation of students.

A concluding comment on content seems necessary. In order to facilitate the production of flexible and versatile persons to cope with the uncertainties of employment in many small states, a certain

degree of curriculum integration will be necessary. This does not mean the seamless coat versus distinctive and discrete form argument, although some kind of integration in related knowledge fields such as the sciences may be useful as a means of studying topics in agriculture, nutrition, health and so on. What is being referred to is the assembling of a range of units or modules to enable students to readily acquire multiple skills and knowledge. A student may wish to add some carpentry to plumbing for instance, since that may have a better pay-off than rigid specialisation. This kind of curriculum integration articulates well with technical and vocational literacy and is ideal for the training of the polyvalent handyman.

The role of examinations

Any discussion on reducing the dependency of small nation states leads inevitably to a consideration of the role of overseas examination systems. Examinations, particularly at the secondary level, have determined curriculum instead of the other way round. Local examination systems have to be part of any profound curriculum change. Financial considerations apart, this is not always an easy exercise. A certificate from abroad has an orthodoxy that confers prestige and is proof that the possessor has been able to emulate successfully his metropolitan mentor. And the imperatives of migration and overseas study make it desirable to have academic credentials with wide international currency.

The barriers are not insuperable. The West African Examinations Council has led the way. The Solomon Islands replaced Cambridge 'O' levels with an internal examination some years ago; and New Zealand has assisted South Pacific countries to set up a South Pacific Board of Educational Assessment (SPBEA). Some dependence at the tertiary and even higher secondary level is inevitable, but 'O' level-type examinations must be set locally or regionally if learning is to be localised.

The Caribbean Examinations Council (CXC) provides 'O' level-type (the use of the term 'O' level illustrates our abiding

dependence) examinations for all of the Commonwealth Caribbean states in the region. Their relative socio-cultural homogeneity and similarity of economic profile facilitate co-operation, although geographically they are dispersed. The CXC is worthy of study as a model not only of co-operation among regional states, and between states and multiple aid agencies, but also in its particular design as an examining body. Worthy of note is the way in which it has developed and utilised a pool of expertise in curriculum development, moderating and evaluating examinations across the region. Its conception of curriculum innovation and teacher training as integral aspects of the task of a local examining body has important lessons for small states.

The CXC benefits from economies of scale, but unit costs are still high. This is because large numbers of students continue to write overseas examinations. The CXC has itself approached overseas universities to secure acceptability of its certificates. Its syllabi stimulate valuable mental activity and its examinations are less amenable to rote learning. In short, the CXC examinations are, if anything, superior to those being replaced. This is important if new examining bodies are to capture the entire local market, and this is necessary to ensure their economic viability. For if CXC were to become dependent on outside aid, it would no longer be an independent force.

The first indigenous examining bodies tested academic subjects. This reflects the bookish nature of the received school curriculum. Bodies such as City and Guilds, are devised for highly developed industrialised countries and they cannot adequately serve local needs. Local examining boards need to address the examining of technical subjects in these states. This would allow technical education programmes to be closely aligned with local manpower needs. Moreover, if we continue to expend so much effort and scarce resources on examinations which at best test only about the 'top' twelve per cent of our children, then we are sending out powerful signals about how we regard technical training vis-a-vis academic training unless there is a counterbalancing mechanism. By creating two levels of

examinations, the general proficiency which is roughly equal to the traditional 'O' level and the basic proficiency, the CXC manages to provide certification for more students than do the overseas boards. Even so, a large number of students capable of acquiring valuable practical skills escape the examining and certification net.

Strategy for change

Education is but one of many social forces in operation in a society whether it be large or small. It affects and is affected by the other forces that are at work in a dynamic interplay. Too often, education by itself is expected to revolutionise a society. This is more likely to take place if the entire society is progressive and forward looking. Beeby was right in suggesting that curriculum reform was more likely to succeed in a milieu of modernisation conducted by a strong political leader. At the very least, high priority has to be given to curriculum change in government policy. Once the policy for reform is agreed on as a national policy, similar logistical activities have to be undertaken as would be carried out in a larger state. Ministries of education should, however, ensure that the goals of reform are realistic and that it has general public acceptability and support. It is important also to ensure that adequate resources and an appropriate structure are in place to carry out the reform. In small states, the dependence on, and integration with, metropolitan systems may be so deep and the financial resources may be such that incremental rather than fundamental change may be more feasible. The objectives and scope may be narrower, but the success may well be greater.

After these preliminary, but important decisions are made, a national curriculum committee representing wide community interests should be set up. Civil groups, chambers of commerce and industry, arts guilds, teachers associations, parent-teacher associations, and tertiary education are only some that spring to mind. When a government issues a policy or statement of intent on curriculum reform, it should be the job of such a committee or council to elaborate this into broad goals. This committee should keep the

curriculum and its design under periodic review, suggesting changes in the light of evaluation. It should possess the competence to analyse the national culture from time to time and develop criteria for dropping subjects and determining new ones. It should also ensure that the new curricula have the potential to achieve standards at least as high as the old. This is important for popular acceptability especially in small states where people are so preoccupied with the exchange rate of their education on the overseas market.

The actual details of developing curricula should be left to a curriculum unit in the ministry which will set up subject panels. In very small states, this could be the work of a curriculum co-ordinator who co-opts colleagues and teachers. The panels themselves should be made up of teachers, academics and informed lay persons. Lay teacher involvement is critical to any model of curriculum change used; and academics are needed to ensure the validity of the knowledge content in curricula. Government enthusiasm for and commitment to reform must not lead to imposition of curriculum from the top.

The model suggested here is an interactive one. The term interactive is preferred since it better reflects the reality of the power distribution in the curriculum engineering enterprise. Community representatives can and should help to determine what is taught to their young, but it is the teachers who have the greatest control over the *de facto* curriculum.

Lay involvement in curriculum development in these states is particularly crucial since in many of them change had tended to come by administrative fiat. Even when School Boards were used to advise governments, membership was restricted to the politico-economic dominants. Lay people at all levels of society who fund the schools and share in the culture should make a contribution to the dialogue on what knowledge is of most worth for the society. If community representatives share in curriculum decision-making, they have to share in the accountability as well. Indeed, at the secondary level, students are mature enough to understand the thinking behind curriculum change and can also be involved in the curriculum debate.

Teachers must be assigned a central role in curriculum development. They should participate in discussions at the national and institutional levels, dealing with specific objectives of curriculum, its content, and determining learning activities and developing evaluative techniques. Teachers are the most important agents in the change process, especially in societies where they probably make up the largest body of high level manpower. Their attitudes, perceptions and skills are pivotal to successful curriculum development. But they are likely to be even more conservative in small developing states than in the developed North. Their involvement is itself a re-educative process and it will help to guarantee their commitment to change. Curriculum is not just a change of syllabi and materials, it is a change of people, particularly teachers. To ensure that this change occurs, in-service training specifically linked to the new curricula has to be provided, and given the comparatively high incidence of untrained teachers in small states and the usually rapid teacher turnover rates, teachers' guides and workbooks should be produced to secure effective curriculum implementation and a measure of continuity.

When a new curriculum is formulated, it should be tried before diffusion in the whole system. Important for all countries, this is critical in small states which cannot afford waste and misdirected reform. Implementation will be actually aided by smallness provided also there is a high degree of compactness. Consultants who researched the situation in Montserrat to see how best that country could abolish the Common Entrance at the end of primary school and create a comprehensive system, were able to consult all the key people who would have to implement the system.² This would be near impossible not only in a large country, but also in 'small' archipelago states such as the Solomon Islands and the Seychelles. Any proposed model has to be treated flexibly in states with a high degree of internal isolation, and communication problems. Consultation should proceed at the grassroots from an early stage to ensure that local socio-cultural factors are reflected in the curriculum.

Smallness of scale and dependency obviously make radical, locally oriented curriculum change difficult to achieve in small states.

It is up to each small state to modify continually its metropolitan curriculum legacy in whatever ways local circumstances suggest and permit. The cost of curriculum materials is another deterrent. But meaningful curriculum change can occur if it is given support at the top of the administration in small states.

Developing curriculum materials

This section draws heavily on Caribbean experience. The development of curriculum materials including text books is an integral aspect of curriculum renewal. Dependence on metropolitan countries for curricula and examinations led to a corresponding dependence on texts originating overseas. When Slinger Francisco (Sparrow), the Caribbean calypso laureate, sang lines like: 'Dan is the man in the van'; 'Mr Mike goes to school on a bike'; 'The cow jumped over the moon'; it was the triteness and irrelevance of curriculum content and materials that he was satirising. He was implying that it was difficult for children to identify with the content of their text books. Apart from considerations of identity and self-concept, good pedagogy requires that students' lives and culture be treated in the books from which they are taught. Besides, the trade in imported learning materials meant a continual loss of money to small states. Serious attention began to be given to the problem in the Caribbean after the start of the independence era which may be dated as 1961. Efforts to produce materials locally were, however, limited by lack of funds, technical skills and equipment.

The larger and then more affluent small states made a start by producing supplementary materials and text books in a few subjects at the primary level. These are usually cheaper to produce than books and at the same time, they provide opportunities for the development of some of the skills needed in book production. Some countries set up production units, and in others the education office co-operated with the media unit to produce teaching materials. To cope with problems related to lack of finance and skills, they collaborated with international publishers. This particular strategy allows for some control over book content.

The establishment of the CXC which took curriculum reform seriously, gave added impetus to the production of books to support new syllabi. New areas of content were required to be taught for which no related support materials were available for general distribution. In the history syllabus, for example, two of the themes were: Art Forms in the Caribbean and Religion as a Social Force. There was very little material available on these in a form that was readily assimilable. These and other new areas of knowledge stimulated writing and research of varying quality.

With a quick commercial eye, metropolitan publishers with their experience, expertise and efficient marketing mechanisms, swooped onto the market. Some texts were speedily produced without or with only minimal guidance of CXC curriculum developers and without the collaboration of Caribbean scholars and teachers. As a result, books with distorted and stereotyped views and outdated information have found their way into the hands of children. Other more responsible publishers, as well as exercising better business acumen, enlisted the services of Caribbean scholars and teachers, some of whom have been closely associated with the development of the new syllabi. As a result, a number of creditable books are extant. Of even greater significance is the fact that a number of teachers' associations have produced mimeographed supplementary materials and launched journals with the specific aim of publishing materials to assist teachers to teach new syllabi. Some articles illustrate the working of new marking and moderation schemes, and demonstrate how some unfamiliar topics can be taught, and some give bibliographic guides.

A study of these pioneering efforts in the Caribbean as well as in other parts of the 'small' Commonwealth, together with a consideration of the needs and disabilities of small states, yield insights for certain proposals regarding the development of curriculum materials. These relate mainly to the use of local materials, the training and utilisation of local personnel, and regional and international co-operation.

It is becoming established for a curriculum project to include

the production of teachers' guides and texts as part of the general diffusion phase. Over the past few years, for instance, a USAID primary education project has been on stream in the Commonwealth Eastern Caribbean small states. Active consideration is now being given to the publication of supporting texts. This should become the pattern in all such projects involving small states.

In order to co-ordinate and facilitate properly the production of materials some minimal staff is needed. Ideally, the curriculum unit should have a production arm; but where this is not financially feasible, a graphic artist should be employed to work with selected teachers. Graphic information and pictorial messages are important to curriculum materials. Authors as well as illustrators should be deeply involved in the environment. Teachers should therefore be periodically released to assist with materials production. They are the ones qualified professionally to decide on the kind of material - students' worksheets, illustrative materials, stimulus pieces and diagrams - that will reinforce the skills that are to be learned. They can also help to ensure local relevance and potential for the attainment of national objectives.

Workshops should be planned to enable selected teachers to learn to produce teaching materials from materials available in the environment. Cartons, tins, food wrappers, seeds can all be put to use. Sierra Leone has successfully utilised local environmental materials in developing teaching materials; and Guyana has developed some expertise in the production of science equipment to aid learning. At the same time, these teachers can be taught the use of simple machines which greatly aid the processes of production and reproduction. Many multi-purpose machines are on the market and curriculum units should be equipped with some to facilitate their work.

Regional co-operation in materials production can help to offset the problems of scale and, where applicable, penury of small states. This can take the form of sharing expertise especially in the field of arts related to material and book production. This has the advantage of having specialists who share cultural backgrounds and assumptions with the recipient territory. Sharing can also take the

form of joint production of materials to support regional syllabi and also joint production of books. Mathematics, science and English book series, for instance, lend themselves to such co-operation. Localisation of curriculum does not necessarily or ideally mean total exclusion of other cultures, especially the cultures of neighbours with whom one shares historical experiences. Regional themes and issues can be captured in curriculum and curriculum materials.

Independence in materials production in small states is not envisaged in the medium run, although much can be achieved by setting up regional publishing houses. As a matter of policy, international publishers should work in collaboration with local ministries of education when they are producing for the small states' markets. It is critical for local teachers and educators and scholars to control and direct the content of teaching materials. However, in a free market situation, it is difficult to ensure this. So where textbooks are independently put on the market by international commercial publishers, local scholars and educators must be vigilant, reviewing the material and providing guidance on its value and use.

Aid agencies can assist in materials production by funding training to give teachers, writers and artists the skills needed. This can often be done on a regional basis. It is becoming standard practice for curriculum development projects to include a materials production component. This is welcome for books, visual aids, equipment and other materials are as much a part of curriculum development as is related teacher training.

Concluding comment

Curriculum in small states should be rooted in local culture and concerns. These concerns include facilitating social and economic development and employment generation. But one has to be careful about the assumptions that are made about the relationship between a particular brand of education and employment opportunities in open and flexible economies. Education should give everyone

fundamental academic skills and broadened technical and pre-vocational training, among other things. The guiding principles are vision and versatility. Like the curriculum itself, curriculum materials must reflect local culture, imagery, symbolisms and values. In reinforcing learning, 'reading' at least helps to make the man. Polyvalent man must also be Caribbean man, South Pacific man, or Southern African man as the case may be.

References

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