

SUMMARY OF CONFERENCE DELIBERATIONS

The Variety and Potential of Educational Materials

1. The variety of materials produced for educational purposes was represented in a large and comprehensive exhibition mounted in all four of the conference rooms. Within the exhibition there were examples of some of the equipment available to the teacher - such as video cassette recorders, cassette tape recorders, movie projectors and other items of "hardware", along with the accompanying "software" (films, slides, tapes, cassettes and the like). But much more space and attention was devoted to displays of those kinds of school-made materials which have a longer tradition and which, because they come into being in response to specific classroom needs, lie at, or close to, the heart of the educational process. To comprehend everything represented in the exhibition, and focus the mind on the essential qualities that each item possessed, the conference classified the materials in four categories.
2. Category 1 comprised the items that teachers and pupils could easily make themselves. Some, such as feltboards or flannelboards, were extensions of the chalkboard - itself the most widely-used medium of instruction. The chalkboard has the advantages of cheapness, convenience, immediacy, and adaptability from one kind of lesson to another. It provides the teacher with opportunities for building a lesson step by step, of emphasizing key points, and of adding a visual component to aural communication. The effective use of the chalkboard enhances the prestige of the teacher and provides a focus of attention in the classroom. Where financial resources are slender, the chalkboard is often the only teaching aid in a classroom. Surprisingly, in view of its unique importance and its universality, it is often used ineffectively. Moreover, feltboards and flannelboards are seldom used at all. There was general agreement that more could be done to improve the quality of chalkboard instruction and extend the range of its possibilities in every country, no matter what stage of development it has reached.
3. Other simple and highly effective materials in this category are those that emerge from the children's art work - namely puppets, paintings, collages, and other illustrations. The opportunities for involvement in media making are important in this category.
4. Category 2 comprised those aids produced outside the school that require a basically simple production technology. Characteristically, they are easy to use even by those teachers who lack the confidence to handle more sophisticated equipment. The most readily available are photographs and enlarged pictures, posters, charts and maps - whether designed specifically for educational purposes or not. They are inexpensive, versatile, easily displayed, and open-ended. Among the best commercially-produced materials are educational toys - building blocks, shape trays, spirographs and the like - which support the growth of intellectual, imaginative, manipulative and constructional skills.
5. Category 3 items were more rigid in their requirements in that they depended on an external source of power. Examples are film strips and slides, radios, television sets, movie projectors, and audio- and video-tape recorders. Though their potential contribution to education is immeasurable, they require a degree of organization that many schools cannot provide, and a degree of self-confidence among the users that many teachers do not possess and cannot be expected to possess.

with present levels of training.

6. Category 4 consisted of printed materials, some of which were self-contained and bore no direct relationship to other media, and others which were designed to contribute to a multi-media approach to teaching and learning. To be of real value, both kinds have to be prepared in relation to the social and cultural values and the educational goals of the country in which they are to be used.

7. Though these four categories effectively embraced the range of manufactured materials, a fifth category of traditional and environmental media was also identified. Because the essence of this category lies in personal experience, its characteristics are hard to define. But its importance is undeniable. The qualities of some cultures cannot be adequately represented by any of the manufactured media. A Maori marae, for example, has at the very least to be experienced, perhaps even participated in, before its meaning can be properly understood. The suburban centres of the world - termed "over-developed regions" by the keynote speaker - may have lost more than they have gained by creating for themselves a culture that has become divorced from the roots of folk experience. For this reason, where traditional culture still exists it should be fostered, not so much by the provision of equipment as by the development of expertise in mime and drama and dance, and by engendering a feeling of self-confidence among the participants.

8. As for the environment, it affects education in two ways. First it exists as a study resource - perhaps even a media resource - in its own right. As such it provides the only real-life situation that children can examine; offers opportunities to teach techniques of enquiry; and enables contact to be made with innumerable resource persons of all ages, occupations, and personal characteristics. Second, its influence penetrates every aspect of the classroom and affects both the teacher's and the children's response to the media resources available in school. Thus to the many millions of children in the world who watch television at home for upwards of 25 hours a week, the events and personalities portrayed on the screen are a major component of the environment in which they live. For them the TV lesson is a natural extension of experience. But for children with a different home environment, there could be a conscious or unconscious rejection of the passivity which watching an ETV presentation may engender. This is but one example of the need to match the media with the user, and the conference drew attention to the danger of attempting to impose centrally-produced materials on a diverse audience. Materials should, instead, be either derived from the society in which they are to be used or adapted to it.

9. In any case, self-confidence in the use of the media rather than the presence, or even availability, of the total range was considered to be the key that turned the lock. Accordingly, little distinction was drawn between developed and developing countries as far as the problem of the use of educational materials is concerned. In both groups of countries there are some teachers who possess, and some who lack, sufficient confidence to make effective use of the resources at their disposal. Wherever confidence is lacking, measures should be taken to create it, and various kinds of pre-service and in-service teacher training programmes were suggested for this purpose. Such programmes should acquaint teachers with the range and potential of the materials available to them, and provide whatever practical experience and technical knowledge is necessary to operate equipment. Some of this "basic tool training" as one of the speakers termed it, could itself be given by means of the new media. For example, broadcasting had already proved its capability of reaching a wide audience of teachers at a relatively low cost. In addition to teacher training, teacher participation in the development and in the evaluation of materials was regarded as essential. Teachers' centres have a valuable role to play in all these functions, particularly if they act in an integrating capacity in curriculum development and the design, production, and use of teaching materials.

10. The need to provide technician services to repair and maintain equipment was also emphasized, and it was felt that technician training should form an intrinsic part of any country's aid programme which involves a gift of audio-visual equipment. Such training might be supplemented, on request, by regular technical visits. A further possibility was that of undertaking maintenance on a regional basis. Some frustration was expressed at the inability of countries to secure internationally-standardized optical and radio equipment, tape recorders, TV sets, and other commercially-produced items. As a result, repairs and servicing are difficult and expensive to undertake. Recipient countries should therefore be given a say in the choice of equipment given to them. Another outcome of international standardization is the opportunity for easy interchange of media.

11. Whenever consideration is being given to the widespread introduction of new media in a society, three factors need to be taken into account. One is that they should fit easily and smoothly into the existing educational process, accommodating whatever levels of sophistication are known to exist. In other words, they should be neither too far in advance of, nor too far behind, the level of development of the society. Another is the necessity to scrutinize their cost-effectiveness and teacher-time effectiveness, and the third is to ensure that the new media serve as a support to the total educational process and in no way as a substitute for essential learning skills. The primary purpose of educational materials is to stimulate and motivate learning, not to attempt to replace it.

The Design and Production of Educational Materials

12. As some of the delegates stressed, the very diversity of the countries represented at the conference made any kind of generalization difficult. Thus a system that works well in island territories such as Tokelau - where populations are numbered in hundreds - is unlikely to be applicable to a sub-continental land mass such as India which contains nearly 600 million people.

13. Nevertheless, though educational practice differs from one part of the Commonwealth to another, it is possible to identify some common principles. One of these is that learning materials intended for use in school should evolve from the requirements of the curriculum rather than from the available hardware or software. The conference believed that the application of this principle was essential because it would ensure that fundamental decisions affecting children's education were based on educational considerations. Once the principle was enunciated, however, it raised the question of how curriculum decisions should be made, and who should make them. The answer was that contributions to curriculum change could come from several sources. One of the most important is the local community and the school, for it is at this level that the curriculum has to operate and be effective. Another source is the university where new subject matter and new insights into children's learning are generated and investigated. Socio-political influences are also sometimes apparent, particularly in former colonies that are creating a new national identity for themselves and in any country that is endeavouring to carry out rapid social change. Examination authorities exert a strong influence, and, especially where they set syllabuses and papers for candidates in overseas countries, their effect on the curriculum was the subject of some sharp criticism by a number of delegates. This criticism was extended to those textbook publishers who rush into print as soon as a new examination syllabus is issued so as to capture the market. Professional and teachers' organizations, curriculum specialists and other individuals, the business community and religious groups also play an important role in initiating curriculum change in many countries.

14. The initial process, however, is relatively simple compared with the tasks that come next. In an ideal situation, these were outlined by the lead speaker on the subject as being planning, writing and designing the curriculum materials needed to implement the proposed changes; testing and revising the materials in pilot projects;

producing, disseminating and using them in the school system; and, finally, evaluating them to see if they need revising, supplementing or replacing. The Open University in Britain is an example of a highly complex operation which has had to establish a balance of this kind. At each stage there are implications that one dare not ignore. These include the context in which the materials will be used, the system of organization in the schools, the level of teacher training, and the facilities and resources available for production. The pace of curriculum development can falter unless a balance is maintained in all these areas.

15. Some of the factors that affect product design and development are essentially political (e.g. central as opposed to local control), professional (e.g. the lack of advisory support for teachers, and the conflict of assessment and advisory roles of inspectors), personal (e.g. promotion to other branches of government service), and economic. Many delegates reported difficulties in persuading governments to accord a sufficiently high priority to the provision of an adequate quantity and variety of educational materials. Occasionally in such circumstances, the sharing of facilities and costs with another organization can help to alleviate the problem. Thus the Australian "Schools of the Air" project makes use of the same two-way radio communications network set up originally for the flying doctor service.

16. In endeavouring to meet the requirements of many different teaching and learning situations in many different countries, and to compete with one another in world markets, manufacturers have produced such a wide range of equipment designed to such different standards that its very diversity can provide a barrier to the successful introduction of new materials in some countries. Although some central purchasing organizations exist which examine the specifications of equipment and select what is needed on a rational basis, a vast amount of equipment is being sold directly to individual teachers and others in the educational system who lack expert knowledge and are consequently at the mercy of persuasive salesmanship. As a result, much of the equipment reaching the classroom is ill-fitted for its purpose, and the provision of replacement parts is much more difficult than when some degree of standardization exists from school to school.

17. Though national advisory bodies may be reluctant to make public their assessments of commercial products, they can perform a valuable function by publishing the requirements of users in such a way that manufacturers would be ill-advised to ignore them. Thus the Council for Educational Technology in Britain obtains a consensus of user opinion through its Working Party on Standards and Specifications for Educational and Training Equipment. It also gives the users a check-list of facilities and performance capabilities they should look for when purchasing equipment, ensures that equipment is evaluated in relation to user specifications, transmits user requirements to manufacturers, and presents a concerted opinion to British standardizing committees and, through them, to international committees. Every specification deals with one piece of equipment, specifying acceptable requirements that will ensure safe and easy handling by inexperienced personnel. They are revised about every two years (or earlier if there are important developments or variations) and issued free to users, purchasing officers, and manufacturers. Extensions of this approach currently being pursued are the examination of the possibility of developing equipment where nothing suitable is available at a reasonable cost, and the preparation of codes of practice so that interchangeability of software can become more feasible.

18. The approach is equally applicable to basic and sophisticated equipment. What matters is that manufacturers should produce the equipment that does the job that teachers want it to do - no matter whether the equipment is a simple chalkboard or a complex closed circuit television system. Hopes were expressed by delegates that this kind of work could be further developed on a regional or even a Commonwealth scale so that specifications could be exchanged and a store of copyright-free materials assembled.

19. It was recommended that the Commonwealth Secretariat should hold consultations with appropriate organizations about the qualities that educational equipment and materials (including books) should possess when they are to be used and stored in extreme climatic conditions, and that research should be undertaken into the possibility of recycling materials (e.g. waste paper) in a school system where the task of collection can be undertaken at little or no cost.

20. Special equipment, and materials of various kinds, are of particular importance in the education of handicapped learners, and the conference recommended that governments should give special consideration to their selection and provision so that handicapped children could, where desired, be educated with normal children and be more closely integrated with the society in which they live.

21. In the development of printed curriculum materials, examples were quoted of projects in which professional expertise was associated with a high degree of teacher involvement - which had in itself contributed to the improvement of teaching. In general, formative evaluation was found to be valuable, and the presence of special field evaluators helpful. Though final production could occasionally be undertaken on a small scale, cost factors usually make it necessary to print large quantities of the materials at any one time.

22. New materials inevitably place the teacher in a new situation and can even change his role. In such circumstances it is important that the change is of a positive and not a negative character. Some countries had inadvisedly attempted to carry out curriculum innovation by means of teacher-proof materials. These had not been as successful as had once been hoped. What is needed instead is a system that supports teachers in the use of those materials that have to be centrally produced, and encourages them to add supplementary materials of their own making. Advisory services in one form or another exist everywhere, but they vary widely in their effectiveness and applicability. To be fully supportive they need to work very closely with the teachers, and the establishment of advisory services at a local level is therefore desirable. Teachers' centres and media resource centres are also of considerable value, particularly where personnel possessing technical expertise are attached to them. A further form of stimulus and support is provided by in-service courses for teachers which the keynote address suggested might have to be made compulsory, and which in some countries are, in fact, compulsory. In general, the greater degree of sophistication of the equipment, the greater is the need to assist teachers in its use.

23. Though the conference recognized the universal need to provide schools with educational materials, the methods of organizing their supply, distribution and management differ from country to country. To begin with, there are fundamental differences attributable to geographical, historical, political and economic circumstances. Thus, developed countries can take for granted the fact that they are able to produce all their print and non-print requirements. For them, imports are a matter of choice. For some developing countries, however, despite their aim of becoming self-sufficient, imports of educational materials are a matter of necessity. Many such imported materials have been originally prepared for another society with different educational needs. Their indiscriminate use can result in a failure to achieve educational goals, and countries should evaluate them carefully to ascertain whether modifications in their design and use are needed to enable them to fit properly into the educational system.

24. Other differences from one country to another are more of an operational character, arising mainly out of the quantity and variety of materials available for education; and further differences are discernible between the supply and management of printed materials on the one hand, and non-print materials on the other. Thus, in the case of printed materials, some countries have set up government-financed units to produce all the textbooks in all the languages used in the school

system. Other countries have left the publication of books to commercial publishers who make their own decisions about relating their books to curriculum and examination needs. As for supplying books to schools, some countries make arrangements to send them to pupils free of charge, others have rental schemes, and still others rely on parental purchases. To add to the variety, some countries encourage a mixture of state and private educational publishing, and employ all three modes of supply.

25. Though alternative choices are always a potential source of strength in an educational system and in an individual school, they raise the problem of selection, and the conference noted that to provide assistance in this matter the Commonwealth Secretariat had prepared and issued a list of criteria for textbook selection intended for use by textbook selection committees and schools. Among the ways of helping teachers to make good use of textbooks and other materials are the provision of teachers' guides and, to a lesser extent, pre-service and in-service courses. A further form of assistance is the provision of background materials, such as library books and similar materials. To support them in their work, teachers need the greatest possible range of these materials, and training in the best ways of organizing those they have and putting them to good use.

26. In addition to the fact that the supply of materials in schools in some developing countries is only a fraction of that in developed countries, many developing countries depend to a much greater extent on books in general - and on textbooks in particular - in their classrooms. In the case of those non-book materials that teachers themselves can make, the two main problems in developing countries are, first, the lack of storage space, and second, the lack of knowledge among teachers of what the materials can accomplish and how they can best be made. In this respect the training given in pre-service and in-service courses is not always as practical as it might be. Moreover, a distinction has to be made between items of equipment that teachers can justly be expected to make and those they cannot. Examples were given by delegates where the use of improvised science equipment by inexperienced teachers had led to the wrong results.

27. With regard to the provision of more sophisticated equipment, several distinct problems were identified. As was to be expected, one of these was sheer cost. To some extent this can be alleviated by sensible choice, and governments were urged when recommending purchases or awarding contracts to take into account qualities of durability and simplicity in preference to ideal standards of refinement and sophistication. A very helpful practice is the provision of lists of commercial hardware available for use in school in which each item is critically evaluated. The conference noted with approval that imports of educational equipment are generally admitted into countries duty-free.

28. Another problem is that the supply of software is often insufficient to enable the hardware to be used effectively. For this reason, when purchases of hardware are being considered, the long-term requirements of accompanying software should be taken into account when drawing up a budget. Where software is supplied to schools on loan, a safe and rapid delivery and recovery system is required. Where large stocks of materials have to be stored - whether in a central depot or a school - the provision of suitable storage units and the preparation of an appropriate filing system are among the best ways of ensuring that software can be maintained properly and located quickly whenever it is wanted. The management of software on a day-to-day basis can often be undertaken by auxiliary school personnel, volunteer parents and student assistants.

29. The problem of servicing is particularly acute in tropical countries where the effects of dust, damp and heat are added to normal wear and tear. To preserve the life of equipment, teachers should be made aware of the basic precautions they should carry out. A simple maintenance check-list for teachers has been found to be

effective in one country and has helped to bring about financial saving. In addition, training courses are of help to teachers in carrying out simple repairs, and, equally important, in enabling them to distinguish between the sorts of jobs that they themselves can do and those that require the skill of an expert.

30. The provision of an adequately-stocked and well-staffed service for supplying replacement items and spare parts, and for carrying out repairs, is essential. As in the case of the supply of **software**, funds for this service should be taken into account when budgetary provision for the purchase of new equipment is being made.

31. In evaluating educational equipment and materials, both the cost of providing them and the benefits to be obtained from their use have to be taken into account.

The Use of Educational Materials in Teaching and Learning Situations

32. Within the overall theme of the use of educational materials in teaching and learning situation, the conference identified the following four topics of special interest: individualized learning, group teaching, mass delivery systems, and non-formal education. Though each of these topics was found to have its own particular characteristics and to present its own problems, there were also some areas of overlap and some points of common concern.

Individualized Learning

33. Before any effective individualized learning programme can be planned, it is necessary to have precise information on the abilities and attainments of the individuals who will take the course, an equally precise and realistic statement of the educational objectives to be achieved by the students, and a process by which the learner's progress can be continually assessed. This progress should be measured in its own terms and not in comparison with that of other students. Once these pre-conditions are met, individualized learning provides unrivalled opportunities for pupils to learn in their own way and at their own pace from whatever media and materials are available to them.

34. Programmes for individualized learning sometimes involve the building of specialized plant and the purchase of specialized equipment, and they usually require the assistance of teacher aides, resource personnel, and specialists such as librarians and technical experts. In addition, the range of materials required by the learner necessitates the provision of adequate storage units and retrieval systems.

35. The successful development of individualized learning depends to a great extent on the sensitivity of the personnel administering the system. Those at the centre, who may not themselves be educators, have to be aware of the range of factors, including costs and organizational changes, that the system requires. Those in school have to be capable of meeting the demands of continuous professional interaction with their colleagues, because individualized learning is ill-suited to the traditional isolation of the classroom teacher. They also have to be able to diagnose the particular learning needs of individual pupils, and to know what methods and materials they should employ to meet those needs. This is an essential professional skill which should be developed when teachers are being trained. As for supervisors and inspectors, they have a vital role to play in the initiation, development, and dissemination of systems of individualized learning. They should therefore be knowledgeable about research developments in the field, and participate in teacher education programmes.

Group Teaching

36. The conference identified four kinds of group teaching. The first of these is team teaching in which a team of teachers, usually working in the same subject area,

plan the instructional programme together. Each major presentation is given by one of the team to a large number of students (perhaps over a hundred) in a lecture room equipped with a wide variety of aids, after which the students and teachers meet in small groups to follow up the presentation. Some of the advantages of the system are that even in large schools all the students can be taught by the teacher best suited to the occasion, that the most appropriate media are available, and that there is scope for in-depth follow-up work in small groups. Some of the disadvantages are that the presentation is often a passive experience, that students have to be able to write fluently, that the demands on teacher time are considerable, that it is difficult to make allowance for individual pupil differences, and that detailed advance planning and administrative procedures have to be undertaken.

37. The second, syndicate teaching is essentially a method by which groups of teachers meet to organize planning, instruction, and evaluation: hence it is intended more for the development of teachers than pupils. It can be of particular benefit to new entrants to the profession. Co-operative teaching differs in that it concentrates on teachers interacting inside, rather than outside, the classroom, and on flexible grouping and active discovery-type learning for the pupils.

38. The fourth kind of group teaching, remedial teaching, entails firstly identifying children who need a particular form of instruction to overcome a particular learning difficulty, secondly, constructing a teaching programme to suit their needs, and thirdly making arrangements to withdraw the children from the class for brief periods so as to teach them in small groups until they can be reintegrated into the class as a whole. Though the need for remedial teaching is apparent in every school, its success depends on selecting the right teachers with the right skills, and on sufficient time being available to them to do the work.

39. Though in some countries excellent group projects have been carried out where the environment is the only resource, other countries have been able to support group teaching with specially-designed buildings and a wide range of equipment and materials. Teachers need to be trained in the techniques of group teaching, and, when this has been done, they need the active support of parents, the community in general, and the head teacher in particular in order for the benefits of their training to be put into effect.

40. Certain other requirements for successful group teaching were also identified by the conference. One of these is that pupils should understand not only the purpose for which groups have been created but also the roles of the individual members within the groups. Another is that a teacher should prepare materials well in advance, and organize groups in such a way that he can readily assist them whenever the necessity arises. Because small group teaching is only one of a number of ways of organizing instruction, it should be used with discretion and not as a replacement for individual instruction.

Mass Delivery Systems

41. Mass delivery systems are often practised in the context of distance learning; nevertheless they are distinct concepts. Distance learning implies the separation in space and/or time of teacher and learner. Mass delivery systems involve the use of the same basic media by large numbers of learners. Broadcasting and correspondence education often combine them, though the latter does not always utilize a mass delivery system.

42. Educational objectives should be paramount in deciding whether to set up mass delivery systems, and which system to use. For most educational situations the means of enabling individual learning to take place has to be incorporated within the mass delivery system (e.g. through personal tutors in correspondence education or the provision of support materials for teachers and pupils). The separation of

teacher and learner means that special arrangements have to be made to ensure adequate feedback and evaluation.

43. Because of the scale and complexity of the operation, team work is essential. The composition of the team and the relative responsibilities of its members may differ in different circumstances. In "instructional" television, for example, those with teaching experience may take precedence, whilst in "enrichment" programmes those with production experience will usually have the greater responsibility. In general, good classroom teachers become good distance teachers, no matter whether they go into radio, television, or correspondence education. What they often lack on transfer is a career structure which enables them to move easily into, within, and out of the service. Where this failing exists, it should be remedied.

44. From the point of view of cost effectiveness, mass delivery systems normally require large audiences. However, in special circumstances (e.g. the education of small groups of key people such as teachers and doctors or isolated people such as farmers) social need should be accepted as the paramount consideration.

45. The training of teachers in the classroom use of mass delivery systems is essential if they are to be used effectively. This instruction is best integrated into teachers' general professional education rather than in courses restricted to the use of such systems. The necessary pre-service and in-service training should be a normal employment expectation for all teachers who might use mass delivery systems.

Non-Formal Learning

46. Countries need both formal and non-formal educational growth; with the balance between them varying considerably from country to country. Although non-formal education is characterized by a lack of rigidity in style and content, it requires educational decisions, design and planning. The less structured the approach, the more thought, planning and initiative are needed for successful implementation. Though approaches to non-formal education vary from country to country, the aim everywhere is to provide learning opportunities for those for whom school-based formal learning is inappropriate or inaccessible. It is often developed to meet the needs of a local community, and is heavily dependent on the human and material resources of that community.

47. During the conference many examples were given of non-formal systems which have developed because formal education has not been able to reach people in remote or economically poor areas. Often in these communities there is a tendency for a negative attitude to exist towards formal education. One successful approach in these circumstances has been to initiate an economically beneficial work activity, and gradually introduce an educational content until the people reach a level at which they can, if they choose, re-enter the formal educational system. For example, after initiators of one particular programme in India had held meetings with members of a community to ascertain their needs, learning experiences were centred on the planting and growing of wheat, on making pottery from local clay, on stitching clothes, and on producing saleable articles from local materials. Emanating as they do from community needs, programmes of this kind help to weld communities into stronger and more integrated social units.

48. If programmes of non-formal education are to be effective, considerable motivation, initiative and personal leadership are required from within the community. Sometimes the most helpful input from outside consists of leadership training.

49. Another factor that has been found to contribute to success is the active co-operation of people employed in different government agencies, such as education,

health, agriculture, and social welfare. Quite often this can be obtained at the operational level even when national budgets stipulate that financial support can be provided from only one source. Even so, it is best when the programme forms an integral part of the national development plan and is financed accordingly. Where it can be achieved, the co-operation of voluntary organizations - such as youth groups and religious organizations - is valuable and should be encouraged, as community leaders often emerge from these bodies. The provision of materials is essential to the programme: many can be obtained from diverse sources; some have to be specially and expertly prepared.

50. Problems of administration are linked to problems of finance. One of the tasks of administrators is to provide the stimulus for full community-based development involving a good deal of self-help on the part of the participants. Provided that inspectors and advisers act in support of this principle, they can serve as important a function in non-formal as they do in formal education in evaluating projects and determining whether government funds are being spent wisely.

Programmes of Training and Supervision for the Efficient Use of Educational Materials

51. In order to ensure that educational materials are put to best advantage, teachers have to be able to select, organize and use them well. Unfortunately, many teachers have not discovered, or been made aware of, the potential of the materials that are at their disposal. More teacher preparation is required in the form of pre-service and in-service courses which themselves should be more closely linked than they often are at present. Both types should aim at generating competence and confidence in all who take them, and be practical and realistic in content. They should include some training in the preparation and use of equipment; they should concentrate on procedures that are directly transferable to the classroom; and, where appropriate, they should involve teachers at different levels and with different kinds of experience. All those people who staff the courses should make full and frequent use of the educational materials that are available to them. Audio-visual tutors can serve as advisers, co-ordinators and consultants to staff and students.

52. In organizing courses, different arrangements have to be devised to meet different circumstances. District training centres are appropriate where populations are concentrated, mobile services where they are reasonably dispersed. Radio and satellite communication may prove to be the most effective method for very large, densely populated countries, and for small, scattered island communities.

53. Strategies for ensuring that teachers attend the courses also vary according to circumstance. Voluntary attendance during vacations or for evening sessions is perhaps the most desirable and least costly procedure, but it is not always effective in reaching the teachers who most need to be trained. At the other extreme, releasing teachers from classroom duties can ensure full attendance, but at the cost of disrupting school organization. Other possible incentives include salary increments and crossing efficiency bars. In practice, compromises of one kind or another are common. New possibilities should be considered, as, for example, seconding those teachers who can contribute particularly valuable classroom experience to training institutions for short periods of time.

54. The dissemination of knowledge about the use of educational materials is linked with teacher training in that any teachers who have undertaken a course are potential sources of information in their schools. Other forms of information dissemination also exist. For example, in some places correspondence courses have helped to establish a theoretical base for the organization and selection of teaching materials. In others, manufacturers of equipment conduct courses and issue publications with a view to promoting their products. Generally, those

disseminating information within the education system (e.g. education authorities and teachers' organizations) should endeavour to use existing channels of communication and encourage involvement and interaction at all levels of the educational service.

Commonwealth Co-operation in the Manufacture, Supply and Use of Educational Materials

55. One of the tasks of the Commonwealth Secretariat is to encourage and foster regional co-operation among member countries in the field of education - identifying trends and responding to expressed needs. Four of the main ways in which this is done are organizing conferences, seminars and workshops; carrying out research; collecting and disseminating information; and supporting training courses. The Commonwealth Secretariat is in close touch with many international organizations and agencies, and, in order to prevent duplication of effort, often works in association with them.

56. In addition, the Commonwealth Secretariat keeps in close touch with professional associations and teachers' organizations, particularly in their task of fostering educational development not only on a national basis but also among Commonwealth countries.

57. Commonwealth countries are also linked through bilateral educational programmes. These form a very valuable complement to programmes involving multi-lateral aid.

58. In order to strengthen an understanding of the modern Commonwealth, the conference urged member countries to include teaching about the Commonwealth as part of their school curriculum. In addition, hopes were expressed that member countries would prepare and provide master sets of material about themselves for use by others on a copyright-free basis, with assistance, where necessary, from the Commonwealth Secretariat.

59. Recommendations for Commonwealth co-operation in the field of learning materials included investigating the design of, and disseminating information on, educational equipment; assisting the interchange of educators between Commonwealth countries so as to enable them to gain insight into teaching practices and the preparation and provision of educational materials; and encouraging and providing assistance for national and regional programmes relating to educational materials.