Eighth Commonwealth Education Conference Report

Colombo, Sri Lanka
5-13 August 1980

Commonwealth Secretariat

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Message by the Hon. Ranil Wickremasinghe, Chairman of the Eighth Commonwealth Education Conference, to Her Majesty Queen Elizabeth II, Head of the Commonwealth

Your Majesty

On the occasion of the Eighth Commonwealth Education Conference which opened today in Colombo, I have been requested as its Chairman to convey to your Majesty the sincere greetings of the Conference.

It is twenty-one years since the first formal schemes of co-operation in education in the Commonwealth were established by the Oxford Conference which recognised education as "fundamental to the strength and stability of the Commonwealth, and to social justice and human dignity which must be its inspiration".

With each successive Commonwealth Conference the practical achievements made possible through the Commonwealth association have underlined the value and bonds of co-operation, understanding and friendship. As we continue those efforts to provide our people with education for the individual's and the nation's well-being at this conference, we rededicate ourselves to the principles of the Commonwealth and to the progress of all our countries.

Her Majesty's Reply

I am grateful indeed for the message conveyed by you, as Chairman, on the occasion of the opening of the Eighth Commonwealth Education Conference in Colombo. I know well of the great contribution which these Conferences have made over the years and so I wish you every success for this year, and ask you to pass my warm thanks to all delegates for your kind message.

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Foreword

The Eighth Education Conference in Colombo from 5-13 August 1980 was significant not only for its splendid setting, magnificent opening ceremony and the cordiality of its proceedings but also for the important issues with which it was preoccupied. The Conference confirmed the continuing value of Commonwealth consultation, especially over issues which touch the heart of the Commonwealth association, and the importance of such dialogue in the appreciation of mutual problems.

Since 1974 when the Kingston Conference discussed "Managing Education - Innovation, Implementation and Consolidation", Education Ministers' Conferences have examined various educational themes. The Accra Conference (1977) considered the "Economics of Education" in the face of growing demands on and diminishing returns from national education budgets. At Colombo, Ministers discussed the theme "Education and the Development of Human Resources" against the stern backdrop of shrinking world economies. They welcomed with special pleasure the opportunity for consultation which their private session provided and agreed that the issues which they discussed, no less than the formal programme of the Conference, were a clear justification, if any were needed, for their meetings. With regard to the difficult question of overseas students' fees they agreed that a special process of consultation should be initiated and asked the Secretariat to set up a Commonwealth Consultative Group to examine ways by which student mobility between Commonwealth countries could be fostered and maintained. They also recognised the need for member countries to gear education more effectively to the major priorities of national development policies if education is to fulfil its essential contribution in the economic and social fields.

The Conference endorsed a programme of continuing educational co-operation in many areas such as science, mathematics, technical education, higher education, universal primary and teacher education, book development and educational media, as this Report sets out. In addition, it recommended initiatives in new areas such as non-formal and special education and the education of women and girls. As an essential strategy for determining priorities for action in such a broad spectrum, Ministers outlined criteria including programmes which break important new ground, activities designed to strengthen regional approaches, programmes in the dissemination of educational information, and activities in support of Commonwealth associations in the field of education. Recognising the importance of science, mathematics, technical and vocational education to the development of both the individual and our societies as well as the mutual affinity between these areas of education, the Conference recommended that the next pan-Commonwealth specialist conference should be devoted to the subject of science and technical education with a view to assisting young people in their personal development and in the preparation for the world of work.

The Conference was launched by the President of Sri Lanka and encouraged by the special honour of the presence of both the President and Prime Minister at the inaugural ceremony. The warm and spontaneous tributes which were paid to the host country for so successful a Conference were a reflection of the quality of the dialogue and a recognition of the valuable exchange of experiences which had taken place. These are central to Commonwealth cooperation in education.

In commending this Report to governments, I am delighted and privileged to record on behalf of the Secretariat and all my colleagues, my own appreciation of Sri Lanka's generosity, the excellence of the facilities provided and the warmth of her welcome. I am confident that the recommendations made by the Conference will constitute an essential step in furthering multilateral and bilateral cooperation in education, as well as contributing to the efforts of each member country in making education a stable basis from which to promote national development.

Shridath S. Ramphal
Commonwealth Secretary-General

Conference Arrangements

Background

The first contribution towards planning the Eighth Commonwealth Education Conference was made on the final day of the Seventh Conference when a group of delegates met to review the success of the arrangements for that conference while they were fresh in delegates' minds. Then, at its meeting on 20 October 1977, the Commonwealth Education Liaison Committee appointed a special sub-committee to carry out a more detailed review.

The sub-committee, comprising representatives of Australia, the Bahamas, Barbados, Botswana, Britain, Canada, Fiji, Malawi, Sri Lanka, Swaziland, Tanzania and the Association of Commonwealth Universities, met on 2 March 1978. Its main recommendation was that the next Education Conference should follow the same broad general pattern as the last.

More formal preparations for the Eighth Conference began when, at its meeting on 18 April 1979, the CELC appointed a working party made up of representatives of those countries which had hosted previous Commonwealth Education Conference, a representative of Sri Lanka - the host country for the 1980 Conference - and a representative of one of the newly independent member states, with other CELC members being free to attend if they wished. The working party met on three occasions: 2 May 1979, 4 June 1979 and 11 September 1979. Those who attended one or more of the sessions were Miss S. O'Connor (Australia), Mr J. A. Hunte (Barbados), Mr. L. E. Dawes and Mr. W. A. Dodd (Britain), Mr. M. J. Hellyer (Canada), Major J. B. Takala, Mr. D. V. Jogia and Mr. P. K. Mishra (Fiji), Mr. I. K. Davies (Ghana), Mr. J. M. Gugnani (India), Miss N. Segre (Jamaica), Mrs. P. Ibrahim, Mr. M. Zaidel and Mr. A. H. Harun (Malaysia), Mr. S. O. E. Omene (Nigeria), Mr. Y. L. M. Zawahir (Sri Lanka), Sir Hugh Springer and Mr. E. E. Temple (Association of Commonwealth Universities), and Mr. S. Mahendra (Commonwealth Foundation). A further input to planning was made by Senior Education Officials from 27 member states who met at Marlborough House on 16-17 July 1979 following the IBE Conference in Geneva.

The working party submitted reports for consideration by the CELC at its meetings on 18 June and 31 October 1979, and the following proposals were adopted:

(a) Acting on the invitation of the Government of Sri Lanka, the Conference would be held in the Bandaranaike Memorial International Conference Hall, Colombo, Sri Lanka from Tuesday 5 August to Wednesday 13 August 1980. It would be in two parts, with Ministers attending the second part.

(b) The objectives of the Conference would remain the same as for the Seventh Commonwealth Education Conference, namely:

(i) To review present schemes of Commonwealth co-operation in education, and to recommend ways by which these may be developed and made more effective.

(ii) To focus attention on major educational trends and problems, and identify means by which further Commonwealth co-operation might benefit member countries.

(iii) To consider any other proposals for the advancement of these aims and make recommendations concerning them.

(c) A Steering Committee composed of heads of delegation would meet at the beginning of each part of the Conference in order to plan the proceedings. It would also meet on the last day of the Conference to recommend priorities for future co-operation in education, and at other times if required. Its composition would differ in the two parts of the Conference. In addition, a Conference Bureau would meet at appropriate times to administer the day-to-day arrangements and exchange information on the progress of the deliberations of the committees. On the final day, a small committee would meet to review the Conference and make preliminary suggestions for the structure of the next one.

(d) In the first part of the Conference, officials would review the work being undertaken by the Commonwealth Secretariat in the field of education and make recommendations for consideration by Ministers. Eight sector committees would be formed to deal with different aspects of the programme. In addition, the Chief Professional Officers would meet on two occasions. Discussions would be based on a working paper prepared by the Commonwealth Secretariat supplemented by reports and commissioned studies prepared since the previous Conference and by country papers made available by member states.

(e) The theme of the second part of the Conference would be "Education and the Development of Human Resources". It would be considered in committees which would relate the theme to first and second cycle institutions, tertiary institutions, and non-formal education. Lead papers would be prepared for each of these committees. Also in the second part of the Conference the report of the Meeting of Officials would be examined by Ministers in the light of the second week's discussions, with recommendations for priorities for action being proposed by the Steering Committee for consideration and adoption by a plenary meeting. In addition, a closed session restricted to Ministers and the Commonwealth Secretary-General would be arranged.

Acting on these proposals, the Commonwealth Secretariat commissioned the following lead papers on the Conference theme, *Education and the Development of Human Resources:* "The Role of First and Second Cycle Institutions" - Dr. M. K. Bacchus (Professor, Sociology of Education, Department of Educational Foundations, University of Alberta); "The Role of Tertiary Institutions" - Dr. Keith Legg (Director, Hong Kong Polytechnic); "The Role of Non-Formal Education" - Dr. Manzoor Ahmed, (UNICEF Representative, Addis Ababa); and "The Role of Universities" - Prof. Asavia Wandira (Vice-Chancellor, Makerere University). These papers, slightly abridged, appear on pages 59 to 110 of this Report.

All four lead paper writers subsequently attended the Conference where they participated in the discussions on the Conference theme. In all, the Conference was attended by 179 delegates from 31 member states,

and 13 observers. (See Appendix D.)

The Conference Itself

The Meeting of Officials, which formed the first part of the Conference, lasted from 5-8 August 1980 and was chaired by Mr. Eric J. de Silva, the Secretary for Education of Sri Lanka. The main tasks of the meeting were: (a) to review the activities undertaken by the Education Division of the Commonwealth Secretariat since the Seventh Commonwealth Education Conference held at Accra in 1977; (b) to consider suggestions for future activities including those appearing in the Working Paper presented by the Commonwealth Secretariat and in supporting documents, and (c) to prepare a report containing proposals and recommendations for consideration by the full Conference in the period 11-13 August 1980.

In order to cover the 16 subject areas identified in the Commonwealth Secretariat's working paper on Commonwealth Co-operation in Education, four sector committees met on the first two days and four more on the next two days. Chief Professional Officers also met on two occasions. The allocation of subjects was as follows:

Chief Professional Officers' Committee (Chairman, Mr. E. Rawlins, Barbados): The Collection and Dissemination of Information; Island Developing and Other Specially Disadvantaged States; the Commonwealth Fund for Technical Co-operation.

Sector Committee 1 (Chairman, Mr. W. L. Renwick, New Zealand): Science and Mathematics Education; Technical and Vocational Education and Training.

Sector Committee 2 (Chairman, Mr. Kazi F. Rahman, Bangladesh): Non-Formal Education.

Sector Committee 3 (Chairman, Dr. J. Mwanza, Zambia): Higher Education, the Commonwealth Scholarship and Fellowship Plan; Overseas Students' Fees.

Sector Committee 4 (Chairman, Mr. L. T. Bowen, Guyana): Commonwealth Book Development Programme; Educational Media; Low-cost Teaching Equipment.

Sector Committee 5 (Chairman, Dato Rahman Arshad, Malaysia): Educational Administration and Supervision; Curriculum and Examinations.

Sector Committee 6 (Chairman, Dr. J. M. Mitchell, United Kingdom): Teacher Education; Universal Primary Education.

Sector Committee 7 (Chairman, Mr. J. Carter, Canada): Teaching About the Commonwealth.

Sector Committee 8 (Chairman, Miss J. S. Attah, Nigeria): Special Education; the Education of Women and Girls.

In addition, Sector Committee 3 set up a working party to report on the day-to-day operation of the CSFP to which all countries were invited to send a representative. Those who attended were Dr. A. T. Johns (Chairman) of New Zealand, Prof. D. W. George and Mr. F. Grotowski of Australia, Miss D. Roeser of Canada, Dr. David Kimble of Malawi, Dr. F. S. C. P. Kalpage and Mr. N. Samarasundera of Sri Lanka, Prof. G. R. V. Mmati of Tanzania, Mr. E. E. Temple of the United Kingdom, and Mr. A. Christodoulou of the Association of Commonwealth Universities. The working party's report appears as Appendix B on pages 119 to 121.

The reports of these committees were put together to form the *Report of the Meeting of Officials* for consideration by Ministers during the second week of the Conference, during which time some amendments were made to them.

The second part of the Conference, with the Ministers present, was formally opened on Monday 11 August 1980 at an impressive ceremony which began with the lighting of the traditional oil lamp of Sri Lanka followed by addresses by the Hon. Ranil Wickremasinghe, Minister of Education and Minister of Youth Affairs and Employment of Sri Lanka, the Hon. R. Premadasa, Prime Minister, and H. E. Mr. S. S. Ramphal, Commonwealth Secretary-General. It ended with the inaugural address by H. E. Mr. J. R. Jayewardene, President of the Democratic Socialist Republic of Sri Lanka and a vote of thanks given by the Hon. Dr. D. Mutumbuka, Minister of Education and Culture of Zimbabwe. The addresses by Mr. Ramphal and Mr. Jayewardene are printed in a slightly abridged form in this report. At the first plenary session which followed the opening ceremony, the Hon. Ranil Wickremasinghe was elected Chairman of the Conference, and three committees were formed to consider the Conference theme, "Education and the Development of Human Resources". The committee dealing with the role of first and second cycle institutions was chaired by the Hon. Wal Fife (Australia) with the Hon. L. R. Tull (Barbados) as alternate chairman; that dealing with the role of tertiary institutions by the Hon. J. J. Kamotho (Kenya) with the Hon. S. Sikivou (Fiji) as alternate; and that dealing with the role of non-formal education was chaired by the Hon. B. Shankaranand (India) with the Hon. Mrs. T. Siwale (Tanzania) as alternate. These committees met on 11 and 12 August.

Also on 11 and 12 August, a sub-committee of the Steering Committee, composed of Sir Roy Marshall (Chairman), the chairmen of all but one of the sector committees and of the committee of Chief Professional Officers, met to consider priorities for programme action by the Secretariat over the next triennium arising out of the recommendations of the Conference.

The final day of the Conference began with a meeting of the Steering Committee of Ministers which received the proposals of the sub-committee on programme priorities and prepared a report based on them (Appendix A) for consideration by the Conference. This meeting was followed by a closed meeting of Ministers and by a meeting of a special committee set up by the Conference under the chairmanship of Mr. W. A. Dodd (Britain) to review the structure, procedures and arrangements of the Conference as a first step towards preparing for the next one.

The Conference ended with a plenary session at which the Conference Report consisting of the reports of the sector committees, the theme committees and the Ministerial Steering Committee on programme priorities was adopted. This was followed by an address by Sir Roy Marshall, Chairman of the Commonwealth Education Liaison Committee, summing up its main achievements (see page 55). Expressions of appreciation of the work undertaken by all who had been involved in planning and running the Conference - especially to the Government of Sri Lanka for its excellent resources, facilities and staff - were given by the Canadian, Nigerian and Indian Ministers of Education, and the Commonwealth Secretary-General. The Conference Chairman likewise thanked delegates for their kindness and consideration and brought the Conference to a close.

Report of the Conference

Science and Mathematics Education

1. Science is an experimental subject and its learning is of more value to pupils when they are involved in all aspects of the process of scientific investigation - identifying the problems, collecting information, analysing experimental results or observations, and drawing conclusions. For effective learning, pupils should carry out investigations independently or in small groups where each person involved has a good share of the responsibility in what is being done. For this reason, in many member countries an increasing number of science education programmes are currently being devised on the assumption that school science classrooms or laboratories will contain plentiful supplies of suitable equipment and materials for the pupils. Unfortunately, it is becoming increasingly difficult for the goals of school science to be realised in most developing member countries, partly, it is true, because of the shortage of properly trained science teachers, but also because of the non-availability, inadequacy and ineffective utilisation of teaching aids and equipment.

Low-cost Science Teaching Equipment

2. The high cost of equipment and the heavy dependence of the school systems of many developing member countries on imported equipment continue to engage the attention of the Commonwealth Secretariat. Since the Seventh Commonwealth Education Conference, two successful meetings dealing with low-cost science equipment have been organised, the first for the Africa region (Tanzania, 1977) and the second for the Pacific (Papua New Guinea, 1979). Like their predecessor (Bahamas, 1976) both demonstrated how suitable equipment could be developed hand in hand with school science curricula and revealed member governments' determination to move increasingly towards greater national self-reliance in the procurement of resources while recognising the value of Commonwealth and international co-operation as a vital step in pursuit of that goal.

3. The account of work so far undertaken by the Commonwealth Secretariat on the equipment problem is received with appreciation. Attention is, however, drawn to the fact that Asia has peculiar problems of its own relating to equipment which need to be urgently tackled. *It is recommended, therefore, that the Commonwealth Secretariat should organise a regional seminar-workshop in Asia along similar lines to those held in the Bahamas, Tanzania and Papua New Guinea.* The main emphasis at this meeting should be on the designing of equipment and how it relates to curriculum development.

4. A number of developing member states realise that the best long-term solution to the equipment problem lies in local mass production and are making plans and efforts to become self-reliant in this field. The time is therefore opportune for the Commonwealth Secretariat, in co-operation with other aid agencies where appropriate, to pursue the activities below as a means of following up the regional workshops which have already been held:

(a) Disseminating information to member governments on courses and facilities in centres in Commonwealth countries and elsewhere which could provide training for managers and technicians of production units and educational personnel concerned with the development and production of equipment.

(b) Supporting, when requested, training attachments for managers and middle-level personnel of production units and science education centres.

(c) Providing, when requested, assistance - mainly in the form of expertise - to existing national and regional low-cost equipment centres in Commonwealth developing countries.

(d) Providing, when requested, assistance - mainly in the form of expertise - to set up national and regional low-cost equipment centres. In this regard the proposal for the establishment of a South Pacific Equipment Centre, as recommended by the regional seminar-workshop held in Papua New Guinea in 1979 and subsequently endorsed by the Pacific regional meeting of the Commonwealth Association of Science and Mathematics Educators held in Australia in March 1980, is welcomed. Accordingly, *it is strongly recommended that the Secretariat should immediately consult with member governments in the region and with appropriate regional and international institutions and organisations operating in the area, with a view to establishing a South Pacific Equipment Centre.*

(e) Identifying and providing when requested, suitable consultants to help run national training courses on laboratory management and the use of equipment, teaching aids and chemicals.

(f) Establishing a "bank" or information system of manuals and other resources relating to low-cost, locally produced science equipment. Further, in co-operation with the Commonwealth Association of Science and Mathematics Educators, the Commonwealth Secretariat should publish a comprehensive bibliography which would be regularly updated.

5. It is noted that in response to needs expressed by member governments the Secretariat has commissioned four studies. One of these resulted in the publication, *Development and Production of School Science Equipment: Some Alternative Approaches.* This book - which has been well received by member governments, and by institutions, organisations and individuals concerned with equipment production - draws attention to some of the similarities and differences in the modes of operation and organisation of selected centres. It focuses on problems and considerations which must be taken into account when local production of equipment is being planned. Another study (which has not been published) was investigative: it aimed at helping to improve science and mathematics teaching in the Bahamas. The remaining two

studies are not yet complete. They deal with the use of locally available resources for chemistry teaching with special reference to Africa, and resources for teaching science with special reference to the Caribbean. In this connection also, *it is recommended that the Secretariat should - preferably in co-operation with other agencies - publish teachers' guides on science equipment and materials which could be adopted or adapted to serve ministries of education and teacher training institutions and organisations in member countries.* Examples of topics that could be dealt with are: (a) safety in tropical school science laboratories; and (b) the storage of chemicals and science teaching equipment in tropical conditions.

Co-operation With Other Organisations

6. The Education Division receives journals from science and mathematics teachers' organisations in member countries, and also makes available relevant Secretariat publications to them in return. This is noted with approval, and *it is recommended that the present system whereby information is exchanged between the Secretariat and science and mathematics teachers' organisations in member countries should continue.*

7. The Commonwealth Association of Science and Mathematics Educators (CASME) has recently been accorded the status of a Commonwealth Professional Association. Its membership, which is increasing fast, covers a wide number of countries in all regions of the Commonwealth. The valuable role being played by the Association - through the regional workshops it has organised, its quarterly journal, its special award scheme aimed at promoting effective science teaching especially in developing member countries, etc. - is recorded with appreciation. *It is recommended that where possible the Secretariat should involve CASME, particularly in its field projects. Also the Secretariat should provide continued support, including facilities for printing and distributing publications, to the Association to enable it to make optimum use of its resources to assist national and regional science and mathematics teachers' organisations to develop relevant, innovative projects. Further, it is requested that financial assistance should be made available to enable the Association to hold its proposed 1982 Caribbean Workshop.*

8. It is noted with appreciation that the Secretariat, through funds provided by the CFTC, helped to enable the African Mathematical Union to hold its first Inter-African Seminar in Accra in May 1979. *It is recommended that, subject to resources being available, national and regional mathematics and science teachers' organisations should be given assistance to help them develop effective programmes in member countries.*

Life Sciences

9. Changing circumstances in the world - the depletion of natural resources, conflict between man and man, the environment, population explosion, the pace of scientific and technical development, etc. - call for concern about renewable natural resources including a critical review of the content of science curricula at all levels of the educational system. In this connection *the Secretariat should, if resources are available, investigate ways in which science curricula can reflect future development needs particularly to ensure that life sciences have their proper place in the school curriculum.*

10. The Seventh Commonwealth Education Conference emphasised the need for training and re-training science teachers to fulfil their new roles and responsibilities. This need remains a major concern of member countries. *It is recommended that one way in which the Secretariat could be of service to member countries in this regard is to co-operate, where necessary with other agencies, in designing curricula - including modular units - which draw upon successful examples in member countries. It is further recommended that when such curricula have been produced, the Secretariat should be involved in the training of science teachers to use such curricula effectively.*

Mathematics Teaching Aids and Curricula

11. Teaching aids are important in generating interest and aiding understanding, especially in basic mathematics. This is noteworthy, particularly at a time when universal primary education is providing educational opportunities not only as in the past for pupils with an academic inclination, but for all pupils no matter what their abilities and vocational interests may be. Therefore, depending on the availability of resources, *the Secretariat should carry out and publish a survey of innovative curricula, including those mathematics curricula, which, while being of value to all pupils, are especially useful in the education of future craftsmen and technicians. Also, the Secretariat should carry out a survey on projects relating to the production of basic low-cost aids for mathematics teaching in member countries. This survey should be followed by Secretariat action to explore possibilities or modalities for assisting other states to benefit from the knowledge and experience gained.*

"Pipe-Line" Scheme for Equipment

12. As already noted, the Secretariat is encouraging local production of science teaching equipment as a viable alternative to extensive importation. However, sight should not be lost of the fact that, for a long time to come, Commonwealth developing countries will have to continue to import certain items of equipment. There exists a UNESCO Coupons Scheme aimed at assisting developing countries to overcome the foreign exchange problem involved in importation of equipment. However, while the Coupons Scheme has in general been successful, it has financial limitations in that its convertible currency pool is determined by funds that can be made available through UNESCO and the UNDP. A scheme is therefore considered necessary to supplement UNESCO's efforts in Commonwealth countries. The CASME proposal made at its Fourth Biennial Meeting held in Australia in March 1980 "that the Commonwealth Secretariat should explore the feasibility of setting up a 'pipe-line' scheme by which the Secretariat could accept money in the local currency of the member state wishing to purchase the equipment and pay for it in the currency of the country supplying it" is welcomed. *It is recommended that the results of any feasibility study undertaken should be communicated to member states before the Ninth Commonwealth Education Conference.*

Health Education

13. Health education is emerging as an important issue in most Commonwealth countries, and the subject therefore has clear possibilities for Commonwealth co-operation. The Secretariat's initiatives in this field are endorsed. However, it is noted with regret and concern that more needs to be done in schools and by the society at large to provide knowledge and understanding of the conditions under which the healthy growth and development of individuals and the community may be fostered. In drawing the attention of member governments to the special importance attached to health education, *the Conference strongly recommends that the Secretariat, preferably in co-operation with WHO and other agencies, should consider assisting member countries to develop curricula and related materials dealing with the physical fitness of children and adults; the use and mis-use of drugs including alcohol and tobacco; the growth of desirable attitudes to safety in the home, school, work-place and environment; an awareness of population growth; and the place of team and individual sports in healthy growth.* One form of assistance the Secretariat could provide is to organise a joint regional workshop involving appropriate Secretariat divisions and representatives of appropriate government ministries of the countries concerned. Another would be to help the ministries with the publication of resource booklets for teachers and students.

Technical and Vocational Education and Training

14. Many Commonwealth countries have established technical and vocational education and training systems to meet the growing demands of a technological age, and successive Commonwealth Education Conferences have emphasised the importance of this area of national resource development. Against this background it is essential that Commonwealth co-operation in the field of technical and vocational education and training should be geared to meet the most pressing needs of member countries.

15. The Seventh Commonwealth Education Conference identified five main areas of need: liaison between industry and technical education, technical teacher training, technical education achievement testing, industrial experience, and regional co-operation between technical education institutions. These have constituted the major part of the Commonwealth Secretariat's activity in technical and vocational education and training in the period since the Seventh Commonwealth Education Conference. At their meeting in July 1979, Senior Education Officials reiterated the need to maintain momentum in Commonwealth co-operative action in these areas.

Regional Co-operation Between Technical Education Institutions

16. The Conference welcomes the establishment of the Commonwealth Association of Polytechnics in Africa and notes the progress made by this new regional body since its inauguration in December 1979. The concept of regional co-operation between institutions engaged in technical and vocational education and training, as envisaged by the Seventh CEC, is firmly embodied in the Association and the Conference

commends its plans to establish a service for member institutions in the areas of curriculum development, staff development and the dissemination of technical information and resource materials. It is noted that efforts are being made to obtain assistance from international development agencies in order to meet the costs of a full-time chief officer and to establish the infrastructure of the Association.

17. In the light of experience gained in the formation of the Association and the progress made so far - such as the mounting of a regional workshop on in-service training in collaboration with the Commonwealth Secretariat - it is considered that a second regional association of technical institutions should be established. *It is therefore recommended that the Commonwealth Secretariat should take appropriate steps to establish an association similar to the Commonwealth Association of Polytechnics in Africa in other regions after careful consideration of any special regional, national and institutional aspects.*

Technical Education and Industry

18. Note is taken of the second Seminar-Workshop on Technical Education and Industry held at Ibadan, Nigeria, for Commonwealth African countries in 1978. This workshop complemented the work of the Hong Kong seminar in 1976 and proposed a number of recommendations for improving links between technical institutions and industry. The Conference notes and commends Commonwealth initiatives to create mechanisms to accelerate industrialisation in member states, as recommended by the Commonwealth Ministerial Conference on Industry held in Bangalore in 1979 and subsequently approved by Heads of Government in Lusaka. It is noted that these decisions have led to the setting up of an Industrial Development Unit within the Commonwealth Fund for Technical Co-operation. It is further noted that the action to establish the Industrial Training Unit coincided with the report of the Commonwealth Industrial Training and Experience Programme (CITEP) Working Group which met in London 1978 following a recommendation from the Seventh Commonwealth Education Conference. In view of these parallel lines of action, it was necessary to postpone a decision on the most effective way of implementing the CITEP proposals. It is now expected that the Industrial Development Unit will initiate training activity associated with its specific industrial development projects, since training carried out on a planned and systematic basis is an investment no less important than the provision of plant and working capital. Although the scale of these training activities is less than that envisaged by the CITEP Working Group, it is hoped that the concept of CITEP will be realised as and when resources are available. *It is therefore recommended that the Commonwealth Secretariat adopts a phased approach to the implementation of the CITEP proposals.*

19. Some Commonwealth countries have established formal machinery for industrial training in the form of industrial training boards or councils, and others are taking steps to do so. One result of such activity is a planned approach to industrial training through the use of systematic training schemes. At the same time, the design of technical and vocational courses offered by technical institutions often takes account of industrial elements, and there is a growing awareness of the need to obtain a close match between the two systems. One way to improve the interaction between technical education curricula and associated industrial training programmes is to investigate the progress made in Commonwealth countries on this subject and

disseminate the information in the form of manuals setting out technical subject areas and related planned experience. *It is therefore recommended that the Commonwealth Secretariat should investigate the interaction between technical education curricula and associated industrial training programmes by means of a survey in member countries, followed by the publication of appropriate manuals on the subject.*

Technical Examinations

20. It is noted that a commissioned study on problems encountered in technical examinations has been carried out by the Commonwealth Secretariat in response to a recommendation from the Seventh Commonwealth Education Conference. The study shows that the development of technical examinations in the Commonwealth has followed a number of different patterns. Some countries have national, regional or international examinations; others have a mixture of all three. This situation is likely to remain, since countries tend to choose the system appropriate to their needs.

21. There are two possible ways to assist member countries to overcome problems arising from examinations in technical and vocational subjects. One is to strengthen national and regional examination systems through Commonwealth co-operation in the form of assistance to countries and regions and the dissemination of information between member countries. The other is to influence international examination organisations to provide the most appropriate and favourable service to the Commonwealth. Both approaches require investigation, and it is therefore suggested that a group of technical education experts from Commonwealth countries should meet to make a detailed examination of the subject using the commissioned study as a working paper. *It is therefore recommended that the Commonwealth Secretariat set up a working group to formulate proposals for Commonwealth action to assist member countries to overcome problems encountered in technical and vocational examinations. It is also recommended that, when requested, the Commonwealth Secretariat should provide assistance to member governments for the purpose of strengthening their examination systems.*

Technical Teacher Training

22. The Seventh Commonwealth Education Conference placed special emphasis on the need to improve the supply and training of technical teachers and suggested that regional workshops should be held to assist member countries in the training of technical teachers. In response to this suggestion a workshop organised jointly by the Commonwealth Secretariat and the Commonwealth Association of Polytechnics in Africa was held at Mombasa, Kenya in 1980. The Conference endorses the recommendations of the workshop and draws attention to the need to foster the correct attitude among technical teachers to the development needs of their country. Further, it commends this form of co-operation and suggests that further practical assistance should be given to the Association and similar Commonwealth organisations involved in technical teacher staff development.

23. In order to assist other regions of the Commonwealth to meet technical teacher staff development needs, further workshops on in-service staff development should be held. There is a need to assess

carefully the special needs of member countries in a region during the design stage of the workshop. *It is therefore recommended that the Commonwealth Secretariat should organise further workshops on technical teacher training modelled on the Mombasa workshop, with appropriate modifications to suit regional needs.*

24. It is noted that the Commonwealth has maintained a high degree of co-operation with the Economic Commission for Africa in that organisation's project to establish an African Institute for Higher Technical Training and Research. The Conference warmly applauds the efforts of ECA in this important venture and commends the efforts of both the Commonwealth Secretariat and the Economic Commission for Africa. *It recommends that the Commonwealth Secretariat should continue its association with the African Institute for Higher Technical Training and Research and should offer appropriate assistance whenever possible.*

Specialist Conference

25. Commonwealth Specialist Conferences on various educational topics have been held since 1961. At such Conferences key educational issues are studied in depth and appropriate recommendations are formulated. The last Specialist Conferences on science teaching, on technical education, and on mathematics teaching were held 18, 14 and 12 years ago respectively. Since then new developments have taken place in the approaches to and content of science, mathematics and technical subjects. The Seventh Commonwealth Education Conference recognised that these developments made it expedient to discuss and review curricula and teaching techniques at all levels of the educational system. Later, Senior Education Officials, meeting in 1979, drew attention to the affinity between science, mathematics, and technical education and vocational training, and stressed the advantages to be gained by linking science and technology subjects in a combined Specialist Conference. *This view is shared by the Conference which therefore recommends that the next Specialist Conference should be designed to review the experience of member countries in devising curricula that draw upon the subject matter of science, mathematics and technical and vocational subjects with a view to enabling the generality of boys and girls to profit from the study of these subjects both for their personal development and as a preparation for the world of work. It further recommends that this Specialist Conference should be preceded by two interrelated meetings of experts who would identify issues in preparation for its work programme.* In making this recommendation the Conference recognises that the affinity between science, mathematics and technical subjects does not blur their separate identities or diminish their individual importance.

Non-Formal Education

26. The Conference affirms its belief that Non-Formal Education (NFE) has an increasingly important contribution to make to the progress and welfare of individuals, communities and nations. It recognises the importance of non-formal education for national development, and requests governments to give due recognition to the role which this form of education can play in their overall development efforts. To be

effective, non-formal education activities should be an integral part of national strategies for development with the aim of improving the conditions of societies. To achieve this objective, *governments should attempt to increase inter- and intra-ministerial co-operation in the field of non-formal education* so as to co-ordinate all non-formal education programmes offered by governmental and non-governmental agencies.

27. In considering non-formal education, the Conference notes the action taken by the Secretariat since the Seventh CEC, and the publication of the report of the Commonwealth Specialist Conference on Non-Formal Education for Development entitled *Mobilizing Human Resources*. It recognises that unlike formal education - which is supported by a tradition of scholarship, research, and experience at every level - NFE lacks the support of systematic analysis, essential planning, and established regimens of methodology and content. Hence the need exists for a fuller comprehension of the concept, potential, and complexities of NFE, and in this context many countries would benefit from the "collective wisdom" of the Commonwealth for guidance and assistance in their programmes. At the regional level member countries should co-operate and exchange views and expertise on various aspects of NFE.

28. The need for Ministries of Education to be adequately staffed and funded for their growing role in NFE is emphasised.

29. Recognising the significant roles performed by other development departments and non-governmental organisations, *the Conference recommends that member governments consider establishing appropriate structures at various levels of administration for co-ordinating more effectively the non-formal education activities of governmental and non-governmental agencies.*

30. In view of the spectrum of activities and target groups that could be covered by NFE, it is agreed that programmes undertaken by the Secretariat should focus on the sections of society identified in New Delhi as requiring urgent attention. These are the un-schooled and under-schooled children of school age, adolescents and youths and adult illiterates in the rural areas, with special attention being given to the problems of women and their participation in development.

31. *It is strongly recommended that the Secretariat undertakes on an urgent basis a series of major initiatives in non-formal education. The establishment of institutional arrangements in furtherance of non-formal education is recommended.* Such arrangements could include the establishment of a Commonwealth Resource Centre for NFE, smaller regional centres, or other options such as a unit within the Commonwealth Secretariat. The implications of each of these in terms of funding requirements and resources should be examined thoroughly prior to initiating action.

Seminar-Workshops and Training Programmes

32. While regional seminar-workshops may continue to be valuable for certain areas and clientele - especially when designed to influence major policies and create a favourable climate for action - there is in NFE a case for holding sub-regional and national seminar-workshops as a more appropriate and effective strategy. Commonwealth assistance in such programmes would be particularly helpful. *It is therefore*

recommended that the Commonwealth Secretariat should help and support a series of national and sub-regional seminar-workshops and training programmes for personnel concerned with:(a) the encouragement of adults to be active in support of the education of their children; (b) the needs of out-of-school children; and (c) the education of nomadic communities.

33. In view of the fact that unequal access to formal education in respect of girls and women is in some countries a major factor retarding development, steps should be taken to avoid a similar situation arising in regard to their participation in NFE. To this end it is necessary to mobilise support for special programmes for women, and to generate the political will for such a new emphasis, backed by informed and educated public opinion. In this area, *a regional workshop on non-formal education for women should be given first priority by the Commonwealth Secretariat, followed by a series of meetings and training programmes at the sub-regional and national levels.*

Dissemination of Information

34. The Conference recognises the need for the dissemination of information on recent experiments and achievements in the field of NFE, and considers that there are various ways in which this could be achieved. *It recommends that the Commonwealth Secretariat should sponsor a vigorous programme of publications on NFE,* some of which could perhaps be published in association with commercial firms. In addition, key Commonwealth documents and handbooks should be distributed free to member governments in sufficient quantity to enable them to be read widely by the staff of those local institutions and organisations that are most concerned with their contents.

35. The Conference believes that a handbook on case studies of programmes of NFE for women in Commonwealth countries would be extremely useful, and *recommends that one should be produced as a preliminary to holding the regional workshop mentioned in paragraph 33. Research should be commissioned also on ongoing programmes of NFE for out-of-school children in Commonwealth countries with a view to producing a manual on the subject.*

Universities and Non-Formal Education

36. The Conference recognises that universities and institutions of higher learning have a vital role to play as a regards socio-economic development, and notes that they have been active in NFE in a number of countries. Where such involvement is negligible, or non-existent, governments should impress upon the universities the need for their significant involvement in, and support for, NFE. As an additional measure, the good offices of the Association of Commonwealth Universities should be utilised to impress on its membership the vital necessity for their involvement, where feasible, in national programmes of NFE, with special but not exclusive preference being given to research and training.

37. To assist in mobilising the support of universities and other institutions of higher learning, it is considered that a survey and analysis of their current NFE activities should be produced in order

to exchange information and motivate action in this area. *The Conference recommends that the Secretariat should commission research on ongoing activities in NFE in Commonwealth universities with a view to publishing a manual on the subject.*

38. *The Conference recommends that the Secretariat should identify a panel of resource persons who could be called upon, on the basis of practical experience, to contribute to the development of non-formal education in Commonwealth countries.*

Higher Education and the Commonwealth Scholarship and Fellowship Plan

39. In recent years new and significant events have taken place in tertiary education. The most important of these has been the rapid increase in the demand for and provision of higher education in most countries. One of the reasons for this is the growth in the school-going population and the consequent expansion of access into the tertiary sector, particularly to the universities. On the other hand the expansion of higher education provision has created the problem of the educated unemployed in many developed and developing countries.

40. These developments have raised a number of crucial issues for universities and those responsible for higher education. Conscious attempts are being made to make universities relevant to development and to increase the emphasis laid on technical and agricultural education. Rapid technological developments have assisted the expansion of continuing education and distance education, and retraining is now recognised as an urgent necessity. Programmes for the improvement of teaching and learning are now common features in universities.

Improvement of Teaching in Universities

41. The Secretariat programme for the improvement of teaching in universities is to be considered in the light of this background. Since the publication of *Improving University Teaching: a Survey of Programmes in Commonwealth Countries*, new and expanded programmes have been adopted throughout the Commonwealth. *It is recommended therefore that the Secretariat should undertake a second edition of the survey to bring it up to date.*

Universities and Development

42. One of the increasing demands made on higher education institutions today is that they should make a significant contribution to national development. The experience of the past decade has shown that this is best served not by the indiscriminate expansion of educational provision but by making tertiary education more responsive to specific national needs. This could take place in areas such as research and training as well as in meeting the manpower needs for development. The Conference notes the recommendations made by the Specialist Conference on Non-Formal Education held in New Delhi on the subject of the contribution

which universities can make to NFE and the supporting paper prepared by the Secretariat. The important role which universities are called upon to play in promoting NFE, particularly in the areas of research, evaluation, assessment and the training of personnel is recognised.

43. *It is recommended that the Commonwealth Secretariat should convene a meeting of experts/representatives drawn from governments and the universities of the Commonwealth to examine and report on: (a) methods of associating the work of universities more closely with planning and development ministries and their strategies for development, and (b) future structures of higher education in the context of the financial constraints prevailing in developing countries and to make higher education more relevant to future manpower needs.*

Universities and Non-Formal Education

44. *It is recommended that in order to facilitate exchange of information, training and the movement of specialists and the resolution of common developmental problems, the Commonwealth Secretariat should compile a directory of courses and degree programmes in development studies in higher education institutions and research organisations in Commonwealth countries.*

45. *It is recommended that the experts' meeting referred to in paragraph 43 should also:(a) explore ways and means of implementing the proposals made by the New Delhi Conference on NFE on the contributions which universities can make to non-formal education;and (b) examine the increased involvement of universities in non-formal education through strategies such as regional workshops if funds become available.*

Overseas Students' Fees

46. In recent years several countries have increased the fees they charge for overseas students, causing a great deal of hardship to students from Commonwealth countries and affecting significantly the manpower needs of those countries which do not have adequate educational facilities of their own. Many of these countries sponsor their students for training in other Commonwealth countries at both undergraduate and postgraduate levels. Another effect of the increases will be to affect the traditional mobility of students which in the past has helped to maintain Commonwealth links and benefit not only the developing countries but developed countries as well.

47. While it is accepted that decisions regarding the level of fees are purely a domestic matter for the countries concerned, recent sharp increases up to the level of the full economic cost of tuition have added a new dimension of the problem and evoked sharp responses from a large number of developing countries. The decision to have overseas students' fees discussed at this Conference was taken as a result of a resolution passed at the Annual General Meeting of the Association of Commonwealth Universities and a decision taken at a meeting of High Commissioners in London later endorsed by the Commonwealth Education Liaison Committee.

48. Since the Conference apprehends that recent increases in fees for

overseas students will cause considerable hardship to those from developing Commonwealth countries and that the development plans of those countries will be adversely affected, *it is recommended that governments should consider setting reasonable levels of fees for students from Commonwealth countries.*

49. *It is also recommended that governments should consider treating the following categories of students as home students for tuition fees purposes: (a) scholars under the Commonwealth Scholarship and Fellowship Plan; (b) students receiving national awards and those receiving awards from recognised international agencies; and (c) an agreed number of other students from Commonwealth developing countries which do not have adequate educational facilities of their own.*

50. However, while seeking relief from the sharp increase in fees being charged by some countries for overseas students, *the Conference recommends that at the same time: (a) governments should seek to strengthen and expand national and regional facilities in higher education (including those at postgraduate levels) in developing countries, and (b) governments in association with the Secretariat should explore ways by which the financial and other needs for these facilities may be met.*

51. In order to strengthen existing links between Commonwealth countries, *it is recommended that the Secretariat should set up as soon as possible a consultative group to examine ways by which student mobility between Commonwealth countries could be fostered and maintained, and liaise with the Association of Commonwealth Universities for this purpose.*

The Commonwealth Scholarship and Fellowship Plan

52. When the Commonwealth Scholarship and Fellowship Plan was inaugurated at the First Commonwealth Education Conference in Oxford in 1959, one of the main objectives of the founders was that it should be a device to improve and develop the staffing requirements of the new universities that were being established in the colonial and newly independent territories. With this in mind it was agreed that scholarships should be awarded at postgraduate level. It was also agreed that awards should be made on the basis of academic merit and that every participating country should be able to benefit from the scheme.

53. During the next decade the Plan operated without significant change except that the number of awards gradually increased and more countries came to be included. Some of the newly independent countries themselves became awarding countries. A gradual shift also took place in the nominations which, though still based on merit, took into account the increasing emphasis on national development requirements.

54. An evaluative review of the Plan from its inception up to 1970 was submitted to the Sixth Commonwealth Education Conference which agreed that it had been an unparalleled success and that it had established valuable educational links between member countries. The Seventh CEC re-affirmed the value of the Plan and noted the excellent contribution it continued to make to Commonwealth co-operation in higher education and in meeting the special manpower needs of participating countries.

55. Over the last decade, changes have taken place in higher education which need to be reflected in new objectives and methods of operation

of the Plan. One of these is the increase in fees for overseas students from Commonwealth countries in universities in developed countries. Another is that the CSFP is increasingly being used to meet national manpower needs rather than those of universities alone. A third is the increased recognition being given to the value, appropriateness and excellence of the research and research facilities available in universities of the developing countries.

56. A case study of the administration of the CSFP undertaken by the Commonwealth Secretariat on the recommendation of the Senior Officials Meeting in 1979, reveals a number inadequacies in the Plan which need to be rectified. The issue of overseas fees, too, makes the relation of the Plan to the aid programmes of donor countries a matter of prime importance.

57. Ten years have elapsed since the last review of the CSFP, and these new developments give added urgency to a further review of its objectives, its method of operation and its administration so as to bring it into line with present-day needs. *It is therefore recommended that the Commonwealth Education Liaison Committee (CELC) should appoint a committee to: (a) review the operation of the CSFP for the ten-year period 1971 to 1980; (b) evaluate the extent to which it has achieved its objectives; (c) examine its relationship to other bilateral and multilateral Commonwealth awards schemes so as to maximise the benefits accruing to member states in meeting their development needs; (d) examine the feasibility of setting up an ongoing mechanism for the review of the administration of the CSFP; and (e) make proposals to the Ninth Commonwealth Education Conference.*

58. *It is recommended that Scholarship Agencies should nominate an adequate number of women applicants for awards so that more of them could be selected for the award of scholarships under the Plan.*

59. *It is recommended that the Report of the CSFP should again be published annually and that comments on the Report be included.*

60. *It is recommended that the Secretariat in co-operation with the ACU should publish a further edition of the "Directory of Research Strengths of Universities in the Developing Countries of the Commonwealth".*

The Commonwealth Book Development Programme

61. The main aim of the Commonwealth Book Development Programme in recent years has been to help Commonwealth developing countries to become increasingly self reliant in the preparation, production and distribution of books. Because the main factor handicapping development is the shortage of skilled personnel, the emphasis of the Programme has been on the provision of training. Commonwealth activity has therefore been concentrated on: (a) the content of syllabuses for training people in various sectors of the book industry; (b) methods of training these people; (c) the provision of consultants in response to requests from member states; (d) study visits; and (e) the provision of information on selected book development topics.

62. As an initial step towards the provision of training, a meeting of Commonwealth experts held in London in 1975 identified those sectors of the book industry in Commonwealth developing countries where training was most urgently required, and prepared syllabuses which could be used in teaching the necessary skills. The report of the meeting has been widely circulated, and it is known that some of the syllabuses have been incorporated in training programmes carried out by member states. It would be useful if information about these and other forms of book development training carried out in individual member states could be sent to the Commonwealth Secretariat so that it can be used in modifying and supplementing the existing syllabuses and be disseminated throughout the Commonwealth.

63. In 1977 the Secretariat itself organised a short, highly practical training course based on some of the syllabuses. It was held in the Caribbean region, with Guyana being the host country. The report of the course, *Training in Book Production: Report of the Caribbean Regional Course,* is prepared in such a way that it can be used as a handbook by anyone wishing to run a similar course. Such courses are required in other parts of the Commonwealth in such sectors of the book industry as editing, designing, illustration, book production and distribution, and publishing management. *It is therefore recommended that the Commonwealth Secretariat should hold further book development courses on a regional basis to meet regional needs.* When participants are being selected to attend these courses, priority should be given to those who will be involved in book development training programmes. After the courses are completed, the details of what they accomplished should be communicated to member states.

64. Because such courses are expensive it is realised that the number that can be fully funded by the Secretariat will be severely restricted. The possibility that governments which send participants to regional courses should pay a proportion of their travel and accommodation expenses might therefore be explored. Another feature of regional courses is that they do not always meet the needs of participating countries to an equal extent, and for this reason more national courses should be held. The Secretariat should provide what assistance it can to such courses in the form of advice and the location and provision of experts. If possible it should also assist neighbouring Commonwealth countries with similar needs to send suitable practitioners to national courses as participant-observers with the expectation that on their return they will organise similar courses. In this way, book development skills can be rapidly transmitted throughout a region and, at the same time, be modified to meet local requirements.

65. *It is recommended that the Secretariat, through the mechanism of the CFTC, should continue to provide experts to assist in carrying out their book programmes.* One way by which experts could make a valuable contribution is in holding short courses to train small groups of people to take the raw material of potentially useful publications and convert it into the finished product. The result would be twofold: new books would be produced to meet national or regional needs, and a pool of talent would be created which could be deployed on the production of other titles. Experts are also needed on a long-term basis, particularly when governments are introducing new curricula which require the support of a wide range of educational materials.

66. The Secretariat, through the mechanism of the CFTC, has been able to provide financial assistance to some book development personnel from

Commonwealth developing countries to attend international seminars and workshops and undertake study visits. *It is recommended that the CFTC should continue to give favourable consideration to requests submitted by member states for such awards.* Priority should be given to those who, on their return, will be involved in book development training.

67. One advantage of regional courses, study visits and attachments is that they enable participants to observe book development techniques in countries other than their own. The most highly developed countries have a particular contribution to offer in this respect, and they are urged to continue to provide bilateral assistance to personnel requiring high-level training in the preparation, production and provision of books. Developing countries on their part are urged not to overlook those bilateral arrangements that are open to them.

68. As has already been noted in connection with the book production syllabuses, a special feature of the Commonwealth Book Development Programme is that it concentrates on basic skills which are widely needed and which people can acquire without having to visit developed countries. A further example is the work being undertaken in association with the Commonwealth Library Association in preparing syllabuses for non-professional library staff. Libraries in Commonwealth developing countries rely heavily on people at sub-professional level to undertake a wide range of administrative and support duties, frequently without direct supervision. Government departments are also making use of people with basic library training in administrative and research positions. In order to identify the skills needed by these people to carry out their jobs effectively, a meeting of Commonwealth library experts was held in Fiji in 1979. The training modules they prepared will shortly be produced in a pilot edition for testing throughout the Commonwealth after which they will be revised for publication. Education Ministries are requested to give sympathetic consideration to requests from libraries and other institutions for financial support for these courses for non-professional library staff. The sums involved will be small; the benefits large and widely spread throughout the community.

69. A further example of a project at the grass-roots level is the *Handbook for Teacher Librarians,* first produced by the Commonwealth Secretariat in a pilot edition and shortly to be made available to member states in a form which will enable them to produce local adaptations if they wish. It is intended to help teacher-librarians with no previous experience to organise their libraries and use them to support the educational work of the schools in which they work. Handbooks of this sort have the advantage over courses of being able for a given cost to be of direct assistance to far larger numbers of people. *The Secretariat is therefore recommended to produce other handbooks on book development topics,* working in co-operation with other organisations where appropriate. One example recommended is a guide to the authors of textbooks and general reading books setting out the principles that need to be borne in mind and the techniques that can be used to select and present material effectively. Another is a handbook or kit describing various techniques of low-cost publishing suitable for use in Commonwealth developing countries where the cost of books is a major factor inhibiting educational, social and cultural development. A third is a guide on organising and running book exhibitions which can help to stimulate interest and promote sales.

70. In response to a request from the Seventh Commonwealth Educational

Conference, the Secretariat has published *Paper Production - Prospects for Commonwealth Developing Countries*. It contains outline descriptions of 46 commercial enterprises in various parts of the world that make paper from non-traditional fibres and the sources from which more detailed information can be obtained if Commonwealth developing countries wish to establish similar plants and reduce their dependence on imported paper. *The Secretariat should endeavour to continue to respond to requests for book development information if received from member states.*

71. Another publication, the *Directory of Commonwealth National Bibliographies* has been produced by the Secretariat as a means of helping the flow of books within the Commonwealth. National bibliographies are often the only source of information about the publishing output of a country. They are therefore of great service to acquisition librarians wishing to fill gaps in their collections and to other potential book buyers. The Directory provides details of all the national bibliographies published by Commonwealth countries, including their contents, their cost, and the address from which they can be obtained. *A second, updated edition should be published in the next triennium. In addition, work should be completed on a companion volume, the Directory of Commonwealth Retrospective Bibliographies.* This is intended to help Commonwealth developing countries to locate sources of bibliographic information on material of archival and historical interest and assist their national libraries to prepare retrospective bibliographies of their own in accordance with internationally accepted procedures. A further Secretariat publication which has proved to be very useful since it first appeared in 1973 is *Copyright in the Developing Countries. A third edition should be published in the next triennium.*

72. *In view of the contribution that books and other printed materials make not only to education but to many other aspects of national and cultural development, the Commonwealth Book Development Programme should be regarded as a particularly important area and be given high priority in the Commonwealth Secretariat's work.* Within the Programme, special attention should continue to be given to training, both in the form of courses and of handbooks, and to the provision of information by means of commissioned studies and directories. Care should be taken to ensure that the Programme does not concentrate on any one particular aspect of training at the expense of others because the book industry of any country can succeed only when all its sectors are functioning smoothly together. Care should also be taken to ensure that, as in the past, the Commonwealth Book Development Programme should continue to maintain contact with UNESCO and other appropriate organisations so as to prevent any duplication of effort.

73. In view of the emphasis which the Conference gives to training as stated in paragraph 72, the requests made by previous Commonwealth Education Conferences that the Secretariat should operate a special fund to assist developing member states to obtain materials and equipment for book development purposes should no longer be pursued. Some of the functions of the proposed fund can instead be undertaken by National Book Development Councils. *Where such Councils do not already exist, governments are urged to give serious consideration to the value of establishing them. Where they do exist, governments are urged to give them full support.*

Educational Media

74. In the period that has elapsed since the two linked specialist conferences were held in 1975 to consider materials for learning and teaching (Wellington, New Zealand) and educational broadcasting (Sydney, Australia) the Secretariat's work in connection with educational media has paid particular attention to schools broadcasting, the production of low-cost teaching materials, and correspondence education.

Educational Broadcasting

75. In response to a recommendation from the Seventh Commonwealth Education Conference that the Secretariat should collect and disseminate information on the effectiveness of schools broadcasting, the Education Division has commissioned a study, shortly to be published, which is based on the results of two questionnaires issued through Ministries of Education to schools, broadcasting units and a sample of teachers colleges. The questionnaires reveal that in some member states those who produce school broadcasts and those who use them as part of their teaching programmes would appreciate forms of training to help in improving the effectiveness of schools broadcasting. *It is therefore recommended that the Commonwealth Secretariat, in association with other organisations where appropriate, should produce course outlines suitable for those who produce and those who use educational broadcasts. It should also endeavour to support pilot courses at which the course outlines could be tested before they are distributed throughout the Commonwealth.*

76. Now that the Commonwealth is taking a particular interest in non-formal education, attention should be paid not only to broadcasting for schools but to the support that broadcasts can offer to extension officers who are carrying out NFE projects. As in the case of schools broadcasting, those who produce and those who use the programmes could benefit from training, often by means of courses which are attended both by the broadcasters and the extension workers so as to foster better understanding and closer co-operation. Handbooks and other materials suitable for use in such courses are known to exist, and *it is recommended that the Secretariat, in association with other organisations where appropriate, should endeavour to provide member states with information on how to improve the effectiveness of educational broadcasting.*

77. In response to a recommendation of the Educational Broadcasting Conference held in Sydney in 1975, the Secretariat carried out a feasibility study on the establishment of an audio-visual programme bank. This was discussed at the Commonwealth Broadcasting Association's Conference in Mauritius in 1978 where, although the principle of programme exchange among Commonwealth countries was recognised, the difficulty of establishing a central bank was accepted. Accordingly an alternative proposal was adopted recommending that a catalogue should be prepared listing those programmes which broadcasting organisations could make available to other countries, either free or for payment. In addition it was proposed that the catalogue should contain a special section on programmes for schools. *Should such a catalogue*

be proposed, the Conference recommends that the Education Division of the Commonwealth Secretariat should contribute to the preparation of the schools section.

Low-cost Teaching Equipment

78. In recent years the Secretariat's main emphasis in this field has been on low-cost science equipment. The Secretariat should now endeavour to extend its work to other kinds of low-cost equipment for educational purposes. One possibility would be for the Secretariat, if requests are made by member states to the CFTC, to provide experts to undertake feasibility studies on the establishment of local small-scale industries to manufacture basic equipment required by schools (e.g. chalk and blackboard equipment, world globes and wall maps, instructional materials for literacy and numeracy teaching, and educational playthings). Another would be to identify and provide expertise to advise on the design and manufacture by a technical college or similar institution, of prototype equipment for use in formal and non-formal education (e.g. school furniture, audio-visual equipment, screen printing outfits, tracing tables etc.) Teachers centres are particularly valuable places to which to turn for ideas and information on low-cost teaching equipment. *Accordingly it is recommended that the Secretariat, in association with other organisations as appropriate, should commission a publication on the roles performed by teachers centres in introducing teachers to equipment they can use in the classroom and in assisting them to produce "software" for that equipment and make simple teaching aids from low-cost, locally available materials for their own use.*

79. Many Commonwealth developing countries face the problem of keeping the audio-visual equipment supplied to educational institutions in good working order. Cases exist where a significant proportion of school radio sets are out of action for considerable periods of time. One Commonwealth country is attempting to overcome the problem by means of a mobile repair team; another does so by making use of students during the year in which they participate in the national work-study programme. Other solutions no doubt exist, and *it is recommended that the Secretariat, in association with other organisations as appropriate, should endeavour to disseminate information on ways by which member states are attempting to overcome the problem of maintaining audio-visual equipment in good order.*

Correspondence Education

80. Correspondence education is being used increasingly throughout the Commonwealth. New institutions are springing up to provide a service that conventional educational institutions are unable to supply, and to offer study courses to students who would otherwise be denied the educational opportunities they desire. Some are operated by governments; others by universities which have introduced correspondence courses up to degree level.

81. In order to disseminate information about correspondence education, the Secretariat recently published the third edition of its survey, *Correspondence Institutions in the Commonwealth*, which provides details of courses at more than twice as many university, government and non-profit-making institutions as existed when the previous edition was

published in 1976. It also draws attention to those national councils for the accreditation of correspondence institutions that have been established in Commonwealth countries so as to ensure that high educational and professional standards are maintained by correspondence institutions.

82. As with all services that are in rapidly increasing demand, correspondence education suffers from insufficient numbers of skilled personnel. Training is therefore an urgent need. In order to make a Commonwealth contribution to meeting this need, *it is recommended that the Secretariat should design curricula for training course writers, editors and administrators of correspondence material for use in formal and non-formal education. It should also endeavour to organise pilot courses to test the curricula.*

Educational Administration and Supervision

83. The Commonwealth Secretariat continues to promote the training of personnel in the field of educational administration and supervision. In the three-year period following the Seventh Commonwealth Education Conference a series of regional training courses has been undertaken. The host countries were Kenya in 1977, Fiji in 1978 and Barbados in 1979. Together the courses catered for administrators from 35 countries, and the participants included school principals, district education officers, and inspectors. From subsequent liaison visits, and from information forwarded to the Commonwealth Secretariat, it appears that the courses have made a useful impact in the participant countries. Nevertheless, it is necessary for an evaluation to be built specifically into exercises of this nature in the future.

84. Regional training programmes should complement national training activities, and the training of trainers should remain a central objective of Commonwealth initiatives in this field. It is important that regional activity should stimulate and assist national training developments, although it is recognised that the diversity of educational systems in the Commonwealth is such that programmes must, as a prerequisite, establish clearly defined and common management concerns.

85. The identification of needs must go hand in hand with the preparation of courses which enable participants to return to their home countries with the ability to develop new activities or undertake essential tasks in a more professional manner. This points to the need for Commonwealth training activities to concentrate more closely on specific tasks or groups, for example in curriculum development or in the training of District Education Officers. In this way training packages or units should be tailor-made to the requirements of a country or region.

86. It is noted that the pilot edition of the Commonwealth Secretariat's *Handbook for Educational Supervisors,* which was studied and commented on by participants at the three regional courses, is currently being revised and will shortly be published so as to provide guidelines for those involved in the training of educational administrators. In addition, the Secretariat has collaborated with the Commonwealth Council for Educational Administration in the publication of a third edition of

the *Commonwealth Directory of Qualifications and Courses in Educational Administration*. The published reports of the training courses have, where possible, included examples of the material used on the courses so that they may perform a training function elsewhere in the Commonwealth.

87. In the field of educational administration, it is essential that the Commonwealth Secretariat should avoid duplication of effort in relation to the work of national, regional and other international organisations, and that in the planning and the execution of recommendations the closest possible co-operation with appropriate bodies in the field should be effected.

88. In undertaking any of the proposals that follow, the Commonwealth Secretariat should recognise the diversity of national and regional training requirements and be aware of the clearly defined needs of the institutions, countries or regions in question.

89. *It is recommended that the Secretariat should, in association with bodies such as CCEA, continue to provide information about facilities available for the training of educational administrators from developing countries. It is also recommended that the Commonwealth Secretariat should endeavour to provide national and regional institutions, on request, with consultants in order that their own training programmes may be strengthened, for example in the development of training curricula.*

90. *The Commonwealth Secretariat should explore the possibility that existing institutions with an educational administration training capacity should develop or expand regional training capabilities.* Should such institutions, governments, or other agencies seek to establish a regional training centre as part of a host institution, *the Secretariat should facilitate discussions for this purpose and be asked to assist if necessary with the provision of expertise for the establishment of this new capability.*

91. *It is recommended that the Commonwealth Secretariat should seek to increase liaison and co-ordination amongst existing training institutions for educational administration through the exchange of information and by attachments.* It may be appropriate in some regions for the Commonwealth Secretariat to encourage the development of regional associations.

92. It is noted that the courses have highlighted the need for training materials to be developed and circulated as widely as possible. *It is recommended that the Commonwealth Secretariat should assist this process by collecting and disseminating information on the availability of training resources, such as books and audio-visual materials, which are currently in use in Commonwealth countries.* The sources of these materials should be clearly identified.

93. *It is recommended that the Secretariat develop a series of guidebooks outlining the approaches to the training of administrators in selected task areas and providing examples of exercises which can be adopted or adapted for national training programmes.* There is clear cross reference here to other sectors of the Education Division's work, especially in the areas of teacher education and curriculum development. The draft guidebooks should be prepared by practitioners in consultation with Ministries of Education. They may then be examined and if necessary modified by regional or national workshops, but if the latter

course is taken administrators from countries within the region should be invited to participate. Such workshops would in themselves offer a valuable training exercise for the regions or countries in which they are held. The guidebooks should then be published by the Commonwealth Secretariat for widespread distribution.

94. *It is recommended that the Secretariat should continue to collaborate with the Commonwealth Council for Educational Administration, in particular in the production of casebooks for educational administrators working in schools and institutions of higher education.* It is proposed that the casebooks should examine case study methodology and include case studies from a variety of Commonwealth countries, keeping the needs of the developing countries particularly in mind.

95. The forms of assistance required by different countries and regions of the Commonwealth vary according to the size of the countries concerned, the type of educational system they have, and the nature of the existing training provision. It is imperative that courses or study visits relate to clear objectives and the particular requirements of specific groups of administrators within the region in question. This necessitates the precise identification of needs in the planning process.

96. Senior Education Officials at their meeting in London in 1979 pointed to the need to promote the study of innovative practices amongst policy makers by means of short intensive regional seminars. *It is recommended, for example, that at these seminars educational planners and policy makers study alternative and complementary approaches to management development, overseas training, in-service programmes, attachments, the employment of consultants, and other methods used for the professional development of educational administrators.* The co-ordinated development of managerial training is likely to come from and be sustained by senior officials. Such seminars should facilitate a valuable exchange of national experience and policy which should contribute to the further exchange of management development. Seminars of this type would benefit from inter-divisional co-operation within the Commonwealth Secretariat, especially with the Division of Applied Studies in Government.

97. *It is recommended that the Education Division should also seek to obtain information from governments willing to offer study attachments for education officials from other member states and match them with the requests that it receives.*

98. From the experience of the three regional training courses held from 1977 to 1979, it is noted that, especially for the smaller member states, courses of 10 to 12 weeks in length may pose difficult manpower problems at home. However, the length of a course must take account of the level and needs of the potential participants. *It is recommended that courses should be held to concentrate upon the work of specific role groups such as school principals or focus upon particular task areas.* Courses should be carefully evaluated and, wherever possible, participants should on their return home undertake projects designed during the course. This type of procedure requires preparatory agreement and planning with member countries and, if appropriate, with the host institutions as well. The Commonwealth Secretariat should consider offering programmes of this type on a naticnal as well as a regional basis.

99. In regard to funding and assistance for national courses,endorsement

is given to *the recommendation of the Seventh Commonwealth Education Conference that governments should consider making provision in their normal budgets for training personnel in educational administration and supervision and that the Commonwealth Secretariat should consider the provision of consultants to help run these courses. Also, the Commonwealth Secretariat should, on request, assist with the identification of consultants for national training programmes and provide information on potential attachments and training opportunities.*

100. Many educational administrators work in relative isolation. *It is therefore recommended that the Commonwealth Secretariat should seek to foster links among national associations on a regional and pan-Commonwealth basis, a process that can be assisted through liaison visits and the dissemination of information.*

Curriculum and Examinations

101. For the past three years curriculum development has not been an area of priority in the work of the Commonwealth Secretariat although curriculum and examination matters have been undertaken in connection with programmes of in-service teacher education, the production of low-cost science teaching materials, technical education, book development, and teaching about the Commonwealth.

102. In response to a recommendation of the Seventh CEC, a survey of recent curriculum reforms in secondary schools in Commonwealth countries will shortly be published. Besides describing a great variety of specific reforms and programmes, the survey proposes areas in which Commonwealth co-operation may be appropriate. It points to the fact that curriculum development should be a team effort, thereby requiring orientation and training for a number of categories of personnel.

103. The Commonwealth Secretariat should promote an interest in curriculum development in a more vigorous way, allowing personnel from different sectors of the educational system to appreciate and develop their interlocking roles in the curriculum development process.

104. Recognising that countries are at different stages in curriculum development and training, *it is recommended that a survey be undertaken to identify the major concerns of member states in the field of curriculum development and implementation.*

105. In most Commonwealth developing countries there is a need to localise curriculum development expertise. *It is recommended that the Commonwealth Secretariat on request should continue to assist the training of curriculum developers, and that - where appropriate - consultants should be provided for curriculum development projects.*

106. *It is recommended that particular attention be paid to the provision of training opportunities in the form of courses or attachments for administrators responsible for curriculum implementation.* In different Commonwealth countries the needs and the groups that are identified for training will vary. This proposal should be closely associated with the recommendations on the training of educational administrators.

107. Many countries are conscious of their inability to move away from the academic model of secondary education. *It is therefore recommended that a survey, or case studies, be undertaken on alternative curricula to the traditional inherited secondary curriculum.*

108. Because curriculum innovation often fails to take note of the needs of the community, and in particular of the employer of the school leaver, *it is recommended that the Commonwealth Secretariat should undertake a study to identify the ways by which the specific needs of employers and others in the community can be best incorporated in curriculum development.*

Examinations

109. As with curriculum development, the subject of examinations has received low priority since the Accra Conference. However, it is noted that the Commonwealth Secretariat has provided funds to enable personnel from regional examination councils to visit other regions. The Commonwealth Secretariat has also supported the extension of the International Baccalaureate Examination to Commonwealth countries as a means of facilitating the mobility of students in fostering international co-operation. In addition, a special study on technical examinations has been undertaken.

110. It is proposed that the Secretariat make reference to the recommendations of the Commonwealth Seminar on Public Examinations held in Accra in 1973. *It is recommended that two studies be undertaken: the first to consider the constraints which the examination system may place on curriculum development in Commonwealth countries, and the second to examine how public attitudes in regard to the sanctity of examinations may be changed.*

111. Many Commonwealth countries are dependent upon overseas examination boards, which may not always be responsive to the specific objectives of developing countries. *It is recommended that the Secretariat undertake a commissioned study on the extent to which developing member countries are dependent on overseas examining boards and the ways in which member countries and the examining boards can work closely together to meet national needs.*

112. Conscious of the problem of developing a national examination capacity, *the Commonwealth Secretariat should give regard to requests for the training of decision makers in the examination field. It is further recommended that governments should encourage training in evaluation and not just in the technical aspects of establishing examinations.*

113. The problems of examination equivalence, and the recognition of new examinations inside and outside a country, are matters which affect many countries, particularly those just starting their own examination capability. *It is recommended that the Commonwealth Secretariat study the problems of examination equivalence and that information on the development of successful international recognition in some member countries be disseminated as widely as possible.*

114. *It is recommended that the Commonwealth Secretariat should disseminate information from those countries which have a national research capacity in evaluation and assessment to member states embarking on the localisation of examination systems.*

Teacher Education

115. Previous Commonwealth Education Conferences have recognised the key role of teachers in improving education and have sought to highlight issues considered crucial to such improvement. One of the issues repeatedly raised has been the need to give priority to the relevance and effectiveness of the pre-service and in-service training of teachers. Another has been the need to improve teacher morale by encouraging greater participation by teachers in professional matters. A third has been the need to create career structures for teachers, tutors and supervisors so as to allow greater job mobility without prejudice to careers. A fourth has been the need to increase and improve teacher support services.

116. A series of regional workshops conducted by the Commonwealth Secretariat between 1977 and 1979 on in-service teacher education has tackled some of these issues; first by gathering information through country reports on policies and practice in in-service teacher education in member countries, and then by examining the kinds of problem that contribute to the reduced effectiveness of some teachers. The Caribbean workshop, for example, sought to assist member countries by setting in-service teacher education squarely within a total strategy for teacher education. The Asia workshop tried to give assistance by examining ways in which teachers can be prepared for the new roles being thrust upon them as a result of new ideas concerning schooling and community involvement in education. The African workshop, by investigating realistic alternatives to conventional methods of training teachers, provided an answer to the urgent need of many countries to produce large numbers of teachers in the shortest possible time. The Conference therefore notes with approval that in order to draw together the information gathered at these workshops and highlight the issues that remain to be solved, the Commonwealth Secretariat is currently commissioning a publication entiled *In-Service Teacher Education in the Commonwealth*.

117. A continuing need in teacher education revealed by the regional workshops that have been organised by the Commonwealth Secretariat is for strengthening teacher support services. A considerable number of countries are able to provide only limited support for their teachers and, as a result, teachers often work in relative isolation very much on a self-help basis. As a result, to take one common example, schools broadcasts may be underutilised, not because they are of no value but because few teachers have been trained in how to make good use of them. *In view of the headway being made in schools broadcasting and in community development involving teachers in the use of educational media, it is recommended that teachers be given both pre-service and in-service training in the effective utilisation of media for education.*

118. Similar needs exist for assistance with the development and efficient management of such support services as repair and maintenance units for audio-visual equipment, school libraries, and teachers' centres. Therefore, *it is recommended that the Commonwealth Secretariat should organise regional workshops on teacher support services for those who have - or are soon to have - responsibility for managing them.*

119. Developments of considerable interest have been taking place in recent years in Commonwealth countries in the field of teacher education. For example, the National Teachers Institute in Nigeria has developed a training strategy which enables teachers to learn on the job by means of individualised study materials sent by post. This enables them to earn while they learn. India's Centre for Educational Technology has devised training programmes for teachers using radio so as to enable courses to be conducted for more than 10,000 teachers at one time. Sandwich courses and other methods of training teachers are also used in training institutions throughout the Commonwealth. Therefore, *it is recommended that the Commonwealth Secretariat, in consultation with the governments concerned, should survey and analyse the strategies and recent achievements in the pre-service training of teachers, with special but not exclusive reference to the developing countries of the Commonwealth, and make this information available in a succinct format to member countries.*

120. An area of need identified frequently in the in-service teacher education workshops organised by the Commonwealth Secretariat is for some kind of in-service training to be made available for tutors who have been posted to teachers' colleges straight from university or with only limited teaching experience. Such tutors could benefit from guidance in such matters as lecturing techniques, small group teaching, individualised study methods and micro-teaching. However, in order to avoid engaging in a publishing programme beyond its available resources, *it is recommended that the Commonwealth Secretariat should conduct a study of the needs of teacher educators in countries of the Commonwealth and consider producing a limited number of multi-media self-study modules to meet those needs.*

121. As more and more countries move towards UPE, the range of ability of pupils becomes wider. Teachers trained before such developments took place find themselves increasingly ill-equipped in such essential skills as diagnostic testing and remedial teaching. Likewise, teachers whose training pre-dates the coming of educational technology are frequently apprehensive about making use of it. Consequently there is a need to devise methods of giving help to teachers in such areas. As a contribution to the solution of these problems *it is recommended that the Commonwealth Secretariat should commission a number of case studies of in-service teacher education programmes dealing with specific problems - such as diagnostic testing, remedial teaching and maintenance of audio-visual equipment - that would be helpful to member countries.*

Universal Primary Education

122. Costing is an issue which affects all levels of education. The two main factors that have to be taken into account are the annual budgetary allocation for education and the allocation between the various levels. Thus, in distributing the sum allocated to education, some countries may decide to give priority to primary education; others to university education. Frequently certain patterns and traditions in budgeting for education at different levels persist over a time. However, costing of education depends on the objectives and the priorities of education as perceived by different governments.

123. Universal primary education has been conceived by most member countries as an objective of prime importance, and minimising costs in primary education is one way of achieving it. However, if costs in primary education are minimised, the money thus saved may not be spent on primary education at all; instead, it may be allocated to other sectors of education or to other areas of national development. In such circumstances, the savings achieved do not benefit the quantity or quality of primary education. For this reason, when efforts are being made to minimise the costs of primary education, they should be directed at those areas where quality and output are not affected. Cost effectiveness should therefore be studied, and *it is recommended that the Commonwealth Secretariat should commission a study of ways of minimising the cost of universal primary schooling without loss of efficiency*. This study would contain information on such matters as low-cost instructional materials and buildings, and the maximisation of existing school and community resources.

Basic Education

124. Providing universal primary education for populations increasing at a rate of two to three per cent per year, where 25 to 30 per cent of the national budget may already be absorbed in providing schooling for an enrolment of only 50 per cent, is a daunting prospect for those countries that face this problem. It has stimulated a pressing search for alternatives to the conventional system and a fundamental reappraisal of educational aims.

125. In rural areas particularly, children without schooling are not necessarily the ones who present problems in the community. An illiterate boy looking after a herd of cattle may be in charge of a greater capital investment than the daily turn-over of a local bank; yet he is fully integrated with the community. On the other hand, a child who has had limited conventional schooling may well be a problem. His education may have created barriers between him and the traditions and culture of his community. Moreover, the curriculum he has followed may have given him unrealistic expectations of future prospects of employment.

126. The double concern of inappropriate curricula and escalating costs has led governments and UNESCO to a consideration of "basic education" as a means of resolving the problem. By concentrating attention on vocational skills, functional literacy and numeracy, and training for healthy and happy living, basic education seeks to meet at reasonable cost the minimum learning needs of all. *In order to assist those member states that are interested in modifying primary curricula so as to get maximum benefit from limited resources, the Commonwealth Secretariat should commission a study of successful practice in member countries in respect of basic education and forms of community schooling in order to identify the factors which make for success and the best ways of making such education available.*

Teaching and Learning about the Commonwealth

127. As a result of the initiative taken by the Seventh Commonwealth Education Conference, Commonwealth Heads of Government at their meeting in London in June 1977 endorsed the need for greater efforts to increase information, understanding and appreciation of the Commonwealth and the activities being undertaken within its framework. They also expressed the hope that member governments would encourage teaching about the Commonwealth in schools, colleges, and adult education programmes. Accordingly, in the last triennium the Education Division added teaching about the Commonwealth to the list of functions with which it deals.

Objectives

128. In order to serve as a basis for programmes of teaching and learning about the Commonwealth undertaken by member states and by the Secretariat, it is necessary to define the objectives of such programmes. The following objectives are therefore proposed:

(a) Acquisition of knowledge of facts, events, concepts, chronology and personalities etc. related to the study of the Commonwealth.

(b) Developing thinking processes about the Commonwealth, components of which are analysis,interpretation, comparison, weighing of evidence, forming hypotheses, distinguishing, drawing inferences and generalisations, judging and evaluating.

(c) Appreciation of the Commonwealth and the development of positive attitudes such as co-operation, respect for one's culture and the culture of others, and respect for all individuals irrespective of race, nationality and language.

(d) Development of certain practical skills arising from programmes of learning about the Commonwealth.

Source Book and Handbook for Teaching about the Commonwealth

129. Proposals for these two publications have been considered by the Conference and there is general agreement that a source book of material suitable for teaching about the Commonwealth would be in keeping with the overall objectives of the programme and should be developed along with the handbook which could serve as a manual for the use of the source materials. *It is recommended, therefore, that the Commonwealth Secretariat should commission both a resource book and a handbook for teacher-educators to assist member countries to design and formulate their own programmes and curricula for teaching and learning about the Commonwealth.* This handbook should take the form of a guide to the use of the source materials. The source book and the handbook could be used by other education agencies such as those involved in non-formal education to develop their own curricula.

Commonwealth Day and the Commonwealth Posters

130. In order to publicise Commonwealth Day the Secretariat has supplied member states with copies of a poster specially designed each year by Canada. In 1978, 20,000 were distributed; in 1979, 55,000; and in 1980, 120,000. Member states are invited to submit designs for future years, possibly in the form of an educational wall chart rather than a poster. On the reverse side of the 1979, 1980 and 1981 posters there is a Commonwealth map updated from year to year, intended for teaching purposes. *It is recommended that the Commonwealth Secretariat should continue the publication of the Commonwealth Day poster and map, and that its distribution should be increased subject to the availability of funds.* In the selection of the designs and the accompanying texts, the Secretariat should ensure that they give expression on the total concept of a living Commonwealth, and care should be taken to respect the sensitivities of member nations. Governments are urged to reply without delay on the Secretariat's letter sent out each year to learn what numbers they require. They are also urged to ensure that the posters sent to them are distributed to schools, colleges, and institutions dealing with non-formal education such as community centres. It is suggested that preference should be given to distribution among schools.

131. It is noted with satisfaction that the practice of celebrating Commonwealth Day in schools is spreading in Commonwealth countries. Ministries of Education are urged to encourage the observance of Commonwealth Day and to send information on Commonwealth Day activities in schools to the Commonwealth Secretariat so that they can be passed on to member states in search of new ideas.

Twinning of Schools in Commonwealth Countries

132. Among the recommendations of the Workshop on Teaching about the Commonwealth conducted by the African Social Studies Programme (ASSP) that relating to twinning schools is specially relevant to the achievement of the objectives of the programme. *It is therefore recommended that Ministries of Education encourage and assist schools (and, through them, individual students) to twin with their counterparts in other Commonwealth countries so that by correspondence with each other, by exchanging materials, and by other means, they can build close and continuing relationships.*

Multi-Lateral Teacher Exchange Scheme

133. In response to a remit from the Seventh Commonwealth Education Conference, a background paper on the feasibility of a multi-lateral teacher exchange scheme has been prepared for consideration by the present Conference. It is noted that although the proposed scheme would strengthen links between Commonwealth countries and serve as a means of disseminating information about them, its funding would pose considerable problems. *It is therefore recommended that in view of the logistical and financial problems involved, the Commonwealth Secretariat should limit its contribution to offering assistance to the extension of existing bi-lateral schemes.*

Examination Topics on the Commonwealth

134. At the Seventh Commonwealth Education Conference, the Secretariat was asked to prepare a report on Commonwealth topics in examinations set in Britain which could serve as a basis for similar studies elsewhere. Accordingly, a background paper on the subject was prepared for the ASSP workshop in Nairobi in 1978. It surveyed both the syllabuses (particularly those in History and Geography) on which the O-level papers of the various examining boards are based, and the question papers set in 1977. The Nairobi workshop recommended that in framing questions on the Commonwealth, examining boards in Commonwealth countries should include issues that have arisen since the formation of the modern Commonwealth. This paper has been distributed to Ministries of Education and to a number of regional examination boards in the Commonwealth. *It is recommended that member states that deem it desirable should, through Ministries of Education or examining bodies, take suitable action to include Commonwealth topics dealing with co-operation and conflict, similarities and differences and new relationships aimed at improving the quality of life of the peoples of the Commonwealth particularly in O-level History and Geography examination papers.*

Commonwealth Literature Exhibitions

135. Following the recommendation of the Seventh Commonwealth Education Conference that the Commonwealth Secretariat should spread information about Commonwealth literature throughout the Commonwealth, a small committee composed of experts on the subject and some CELC members met and proposed a number of practical measures. The most important of these was that member states should hold exhibitions of about 150 Commonwealth novels and books of short stories, poetry and plays. A list of recommended titles issued jointly by the Commonwealth Secretariat and the Working Party on Library Holdings of Commonwealth Literature (c/o the Commonwealth Institute) has since been published. Member states are invited to hold exhibitions of books, written by Commonwealth authors, supplementing the basic titles with others of their choice. In addition to any assistance that may be available from the Commonwealth Secretariat in connection with such exhibitions, assistance may be sought from appropriate non-governmental organisations.

Commonwealth Bibliographies

136. The Seventh Commonwealth Education Conference also recommended that the Secretariat should give some support to Commonwealth bibliographies. This has been done by commissioning a study of retrospective bibliographies as a companion volume to *Commonwealth National Bibliographies* which the Secretariat published in 1977; by beginning to advertise the national bibliographies of Commonwealth developing countries in selected professional journals; and by providing a small subsidy to the bibliographic numbers of the "Journal of Commonwealth Literature". *It is recommended that the Commonwealth Secretariat should continue to give modest support to the compilation of bibliographies of Commonwealth literature, taking care to avoid duplication of similar efforts by other organisations.*

Co-operation with other Organisations

137. It is noted that a number of organisations exist whose specific purpose is the dissemination of information about the people and cultures of Commonwealth countries. The contribution they can make towards the programme for teaching about the Commonwealth is considerable. Accordingly, it is recommended that in the development of the programme for teaching and learning about the Commonwealth, the Commonwealth Secretariat should work in close co-operation with organisations which are concerned with fostering and promoting Commonwealth education, arts and culture.

Special Education

138. The special educational needs of children and adults who suffer from physical or mental disablement is a subject of deep concern to education authorities in all Commonwealth countries. Previous Commonwealth Education Conferences have recognised these special needs, and in the early 1970s the Commonwealth Secretariat carried out a number of surveys leading to the publication of material on special education. Since that time there has been very little Secretariat activity in this sector of education because the resources of the Education Division have been fully committed to other work. Because of this, and in recognition of UNESCO's intention to declare 1981 as "The Year of the Disabled", Senior Education Officials at their meeting in 1979 agreed that special education should be considered by the Eighth CEC. The Conference welcomes the possibility of a renewal of Secretariat activity in this important area of education.

139. The terminology used to describe the special character of education for children and adults who suffer from disablement is far from definite. Terms in common use are "special education", "education for the handicapped" and, in some cases, the description of a particular form of disablement. The use of the term "special" clearly indicates that this is an area of work outside the scope of normal education, and the Conference recognises that this description is generally more acceptable than the use of the word "handicapped". However, there is a need to find an internationally recognised title for those educational processes specific to children and adults who suffer from disablement, and it is hoped that the designation of 1981 as "The Year of the Disabled" will generate world-wide interest in their education and possibly lead to conclusions on terminology.

Low-Cost Equipment

140. One of the greatest difficulties facing teachers and administrators in special education is the high initial cost of teaching aids and the subsequent expense of maintenance. Often these difficulties are exacerbated by meagre budget provisions and a dependance on distant suppliers. In order to alleviate some of these difficulties there is a need to provide practical assistance to special education practitioners to enable them to make the best use of resources. One way is to produce a study which will examine possible methods of designing and manufacturing low-cost equipment, with an emphasis on new technology including the use

of inexpensive electronic devices. *It is therefore recommended that the Commonwealth Secretariat should commission a study on low-cost equipment for use in special education.* The study should pay special attention to the use of new technology and also to the possible modification of existing equipment.

141. Many teachers in special education are highly skilled in the use of teaching aids but lack experience and knowledge of their design and manufacture. In order to enable their professional experience to be utilised in the development of low-cost equipment, they should, where possible, be involved in the design and prototype manufacture stage. It therefore seems that the development of such equipment could best be undertaken by teams consisting of special education teachers who are experienced in the use of special education teaching aids and technicians qualified in the design and manufacture of electro-mechanical devices. *It is therefore recommended that the Commonwealth Secretariat should organise regional workshops in which practitioners engaged in special education and technical specialists work together to design and construct prototype equipment for use in special education. The Commonwealth Secretariat should disseminate information on the design and manufacture of such equipment through the publication of reports based on the outputs of the workshops.* One of the working documents for such workshops could be the commissioned study on low-cost equipment.

Special Education Facilities in Ordinary Schools

142. There is a growing awareness that the seclusion of disabled children and adults in special institutions may have detrimental effects on their total development. A number of countries have established schemes whereby disabled children can be accommodated into ordinary educational institutions. However, two problems may be encountered in implementing such integrated programmes. The first is that teachers of children without disabilities often lack the special skills and understanding possessed by special education teachers. The other is that the physical facilities in most ordinary schools do not cater for the needs of disabled children. *It is therefore recommended that the Commonwealth Secretariat should organise a meeting of experts from Commonwealth countries to: (a) investigate the design of training courses for teachers involved in special education work in schools in order to formulate training schemes; and (b) consider the physical facilities required for students in special education.*

143. Before commencing to undertake action to implement these recommendations, the Secretariat should ensure that in doing so it will not duplicate work being undertaken by UNESCO and other international agencies.

Education of Women and Girls

144. The Conference emphasises that the education of women and girls deserves the highest priority in national and Commonwealth programmes. *In recognition of this, the Conference recommends that future Commonwealth Education Conferences should give high priority to the subject which should be considered in all sector committees.*

145. Social attitudes are culturally conditioned. Thus it is difficult to eradicate them, and this has special significance for those on whom responsibility rests for educating the young to contribute to the societies in which they live. Implications for action include not only the classroom, but also more importantly the family unit and the community. What is learned at home is reinforced in the classroom. This is at present manifested in most countries in the discrimination between the sexes in the school system in respect of access, opportunities and offerings.

146. In some developing countries there are gross examples of such discriminatory practices. In 1976 it was estimated that 79 per cent of the 712 million girls in the world under 15 years of age were in the developing countries. Very few of them have sufficient access to education or skill training. Thus a recent United Nations report has shown that agricultural training for girls compared with boys is in the ratio of about 7:19 although women make up one-third to one-half of the world's agricultural labour force. But even in countries where educational opportunities are present, there is still a preference for giving education to the boy rather than to the girl if a choice has to be made. No society can afford to justify such discriminatory behaviour, for it deprives the nation of its most valuable resource - the physical and intellectual abilities of the individual. In seeking to meet the problem, it is necessary to recognise that discriminatory practices are expressed unconsciously by those who are unaware of the extent to which sex stereotypes influence thinking and behaviour.

147. By virtue of their traditional role in society, women are well placed to influence the physical and mental well-being of the family and can favourably influence the advancement of national development. At present, however, there is gross under-utilisation of human resources due to restrictive attitudes and conditions. In order for women to acquire the knowledge and skills necessary to participate fully in the development of the community, there is urgent need for vast and persistent programmes of public education for the masses especially in the developing countries. While re-orientation of male attitudes is essential, it is also important to prepare women psychologically and socially for education and change.

148. A further instance of imbalance in educational participation is evidenced in the high rate of wastage through girls dropping out of the school system. In many countries there is a need to motivate the parents. Rather than conduct research into the causal factors for this type of wastage as much of this information is already available a more useful activity would be the interchange of information on strategies that can be adopted to reduce the disparities between the sexes in the utilisation of educational opportunities. *The Commonwealth Secretariat should facilitate the exchange of information in respect of measures which have been adopted successfully by member countries to reduce:(a) sex disparities in participation in education; and (b) the incidence of early leaving or dropping out of school.*

149. While legislation is necessary, and almost all countries have proclaimed the equality of all its citizens, a wide gap may exist between the principles enshrined in a constitution and what happens in practice. A positive social climate is essential for the full participation of girls in the education system. *The Conference recommends that the Commonwealth Secretariat should organise a workshop on the socio-economic implications of sex stereotyping as reflected in education and make recommendations for action.*

150. However, even where there is equal access to education, cultural conditioning restricts subject preferences and location choices of girls and women. Similarly the cultural prejudices of employers limit avenues of employment and vocational training opportunities. For this reason, policy makers and employers should be made aware of the need to expand vocational and technical training and employment opportunities for women. Women themselves should be motivated to utilise available opportunities. In view of the fact that cultural attitudes tend to limit women to traditionally "feminine" areas of vocational and technical employment in many countries, *the Conference recommends that the Commonwealth Secretariat should assist in the organisation of national workshops:(a) to make policy makers and employers aware of the need for increased accessibility to vocational training, technical education, and employment of women; and (b) to motivate and counsel women to enrol in all areas of vocational and technical training. The Conference also recommends member governments to provide more facilities in formal and non-formal vocational and technical education for women, and in particular to include women in all training schemes for national development.*

151. As a measure to counter sex stereotypes, the preparation of non-sexist educational materials for schools is necessary. However, as the Australian and Canadian experience indicates, this is a long and slow process. Further the elimination of sex stereotypes in textbooks and supplementary reading materials by itself is not sufficient. This has to be augmented by a campaign to change the negative attitudes reflected in mass media.

152. As a measure to ensure further participation in Commonwealth awards, *it is recommended that Scholarship Agencies should nominate an adequate number of women applicants for awards so that more of them could be selected on merit for the award of scholarships under the Plan.*

Island Developing and other Specially Disadvantaged States

153. Of the 44 member states of the Commonwealth there are 25 with populations under two million. Nineteen are island states each having fewer than one million people.

154. At the Seventh Education Conference in Ghana, the Seychelles country paper stimulated discussion on the educational problems of small island states. In the three years since that paper was published, the Commonwealth has devoted special attention to island developing and other specially disadvantaged member states. Commonwealth Finance Ministers at their meeting in Barbados in 1977 noted ".... the special characteristics of small island economies, particularly their fragile nature, extreme dependence on exports and imports, high dependence on capital inflows, and in some cases the lack of natural resources. They stressed that per capita income was not necessarily a reliable criterion for the quantity and quality of assistance needed by these countries. They urged the international community to adopt a more flexible and realistic approach to the requirements of these countries and special measures to assist them." Since then, this concern has been the subject of special attention at Commonwealth meetings, culminating in the endorsement by Heads of Government in Lusaka in 1979 of a special

programme of action to assist the island developing and other specially disadvantaged member countries.

155. The problems of education in the smallest member countries were examined by Senior Education Officials at their meeting in London in July 1979. At the meeting it was recommended that a study be prepared for the Eighth Commonwealth Education Conference. In response to this remit, the Education Division gathered information from a variety of sources. A questionnaire sent to 34 member states, associated states and dependent territories, established education system profiles, policies and plans for the 1980s. It also obtained reaction to a Secretariat proposal on the potential development role of technical colleges in small states. In addition, advice from individuals and institutions was obtained by members of the Education Division during their liaison visits to 16 of the countries included in the survey.

156. Though the countries have been categorised under one broad head, each is distinctive and unique in its geographical and cultural setting and has its own development problems. Those small states that are compact, densely populated and essentially urban in character do not see their way in the world in the same way as those consisting of scattered archipelagos with predominantly rural populations. Countries with well established educational systems and with a long tradition of formal education for all members of society, follow policies different in tenor, form and level to those of predominantly subsistence societies striving to establish universal primary education. Cultural mores, the resource base, and developmental objectives all contribute to a unique mix from which educational tradition stems and to which educational policy should be addressed.

157. The Commonwealth includes a large number of small states. But it is by no means the only international organisation with a direct concern for their development. The Commonwealth Secretariat should not only increase its contact with the small island developing countries and disadvantaged states through liaison visits and information exchange, but also work in close association with international organisations and countries which have a particular concern in their aid programmes with these issues in order that initiatives already in existence are fully understood.

158. At the same time the Education Division should, along with other functional divisions in the Commonwealth Secretariat, seek to play its part in a co-ordinated approach to the problems of the countries in question. In this way, the views and policies of Ministries other than Education can be taken into account and, where necessary, synthesised.

159. *It is recommended that the first part of the Secretariat's survey which analyses the significance of scale, isolation, and dependence upon the development of education systems should be supplemented and then published by the Commonwealth Secretariat.*

160. *It is recommended that the Secretariat develop its informational base and that of the island developing and other disadvantaged states over the next three years through initiatives that will provide opportunities for the small states of the Commonwealth to meet together to examine the diversity and commonality of educational need.* In this way the feasibility and appropriateness of specific projects may be tested, recognising that discussion should not be protracted if proposals put forward by member states require urgent consideration. *It is further recommended that any recommendations flowing from the meetings*

calling for new funding policies by CFTC should be viewed sympathetically by the Commonwealth Secretariat.

161. It is considered that three meetings should enable all small states of the Commonwealth to have their circumstances and policies for development reviewed in the company of similar such states. The meetings may be regional or they may reflect specific themes. The meetings should be held to examine the problems of effecting and supporting appropriate innovation in the field of technical and vocational education and training, recognising that this will have different connotations in different countries. In identifying the needs and the problems of implementation, attention should be given to the constraints of distance and the possible role of distance learning. Attention too must be given to the difficulties faced by countries without graduate and postgraduate training facilities which have the additional burden of meeting increased fees for their students overseas. Effective arrangements should be sought to meet this problem. A further important and related theme is the role of technical and vocational education and training for manpower development. International co-ordination is essential, and it is recommended that organisations and countries which have a specific concern for these issues should attend the regional meetings.

The Collection and Dissemination of Information

162. As successive Commonwealth Education Conferences have stressed, one of the main tasks of the Education Division is to communicate educational information to member states. The recommendations that follow are concerned with improving the system by which the Division collects information, stores and retrieves it effectively, and disseminates it throughout the Commonwealth.

163. One of the ways by which the Education Division obtains information is from the liaison visits paid to member states by members of staff. These visits have been found to be mutually useful, and their duration might well be extended. *It is therefore recommended that the staff of the Education Division should continue to pay liaison visits to member states and that prior consultation should be undertaken to determine the most suitable time and duration of each visit.* Where possible, visits should be arranged to coincide with regional educational meetings and conferences being organised by member states.

164. In view of the success and usefulness of the Senior Education Officials Meeting held in 1979, *the Education Division should arrange a similar meeting in the period between the Eighth and Ninth Commonwealth Education Conferences.* In order to minimise costs, the meeting should again be held immediately after a major international education conference at which a large number of officials are expected to be present.

165. The country papers prepared for the major conferences arranged by the Education Division also contribute valuable information on educational developments in member states. Even minor meetings, such as regional workshops, for which country papers as such are not prepared, frequently make use of background papers. Though these are of a specialist nature, the material they contain is of interest to far more people than those

who are able to attend the meetings themselves, and the Division therefore incorporates them in its reports and other publications. To develop this multiplier effect a stage further, *it is recommended that the Division should organise some of its future meetings in such a way that they can contribute directly to handbooks, training manuals and other publications designed for use throughout the Commonwealth.* These publications should continue to be supplemented by commissioned studies on the subject areas being undertaken by the Division. The Division's proposal to strengthen its publishing programme by giving additional emphasis to handbooks and similar publications is therefore endorsed.

166. A considerable volume of information reaches the Division in the form of educational books, journals, reports and miscellaneous documents which are retained for reference purposes. Member states are urged to ensure that relevant information on educational matters is sent to the Education Division on a continuing basis so as to enable it to carry out its clearing-house functions effectively. They are also urged to exchange information amongst themselves, taking advantage of the existence of Commonwealth Desk Officers in order to do so.

167. The Secretariat should continue to send a copy of each of its publications to the Permanent Secretary in the Ministry of Education (or Secretary for Education) and the Commonwealth Desk Officer. In addition, it should continue to send the appropriate number of copies to CELC representatives in London for onward distribution to member states. If possible further copies should be made available if requests are received for them from Commonwealth Desk Officers. In order to ensure that the distribution procedure is working satisfactorily, the Education Division should from time to time send lists of newly issued publications to Commonwealth Desk Officers and enquire whether they have been received. On their part, Ministries of Education should ensure that those officers who have been assigned to Commonwealth Desk duties are in regular communication with the Education Division and are drawing the attention of appropriate officials, institutions and organisations to the publications they receive.

168. From 1966 until 1976, the Division published a regular newsletter as part of its clearing-house activities. Then, owing to lack of the staff needed to supervise the collection and retrieval of information and to edit material for publication, the newsletter ceased to be issued. Since then the Division has not been able to inform those who work in education ministries and institutions throughout the Commonwealth about current and proposed programmes of co-operation in education or about developments described in documents received by the Division. *Subject to the availability of resources, the Education Division should endeavour to resume publication of its newsletter, preferably at quarterly intervals, so as to provide Ministries of Education and educational institutions throughout the Commonwealth with much-needed information on educational developments and innovations.*

169. As part of its clearing-house function, the Commonwealth Secretariat seeks to pass on to member countries information thought to be of interest to them. However, very little guidance has been received from member countries as to the particular sectors of education for which such information is desired nor to which departments or institutions such information should be sent. As a first step towards this service *it is recommended that the Commonwealth Secretariat should institute an abstracting service on curriculum development, educational planning and research and teacher education and make this available on a regular basis to those institutions which will benefit from it.*

Commonwealth Fund for Technical Co-operation

170. The valuable contribution which the CFTC continues to make to educational development and to the education and training of the middle- and higher-level manpower required for economic and social development in an increasing number of developing countries, is noted with appreciation. The Fund's activities have, during the last triennium, included: (a) the provision of advisory and operational experts to developing countries; (b) the provision of various types of awards for study and training programmes undertaken in developing countries; (c) the funding of the Academic Exchange Programme; (d) support for training courses, seminars and workshops arranged by the Education Division and other divisions of the Secretariat and other organisations; and (e) support for the preparation and publication of directories.

171. It is noted that the Fund's resources come from voluntary contributions made by Commonwealth governments, and therefore the degree of support for educational activities undertaken by the Secretariat is dependent on the contributions that governments are able to provide to the Fund. Accordingly, *in view of the increasingly important role which the Fund is playing in the development programmes of developing member countries, it is recommended that all member countries should increase their level of support to the Fund so that it can provide more assistance for education and training activities of benefit to developing countries, including the implementation of many of the recommendations of the Eighth Commonwealth Education Conference. It is further recommended that governments should, as far as possible, endeavour to make their contributions promptly.*

172. It is noted with appreciation that the procedures by which governments are able to obtain support for their developmental projects from the CFTC are not as complex as those of some other aid agencies. However, there may be occasions when member governments can benefit from assistance in formulating their proposals. For this reason the Commonwealth Secretariat, when requested to do so, should endeavour to provide them with expert advice in order to help them to formulate project proposals before they are officially submitted to the CFTC. Where educational projects arising out of the recommendations are concerned, member governments may find it useful to inform the Education Division of any requests being made to the CFTC.

Southern Africa

173. It is noted with appreciation that CFTC programmes have been organised for Southern Africa, including the Commonwealth Programme for Namibia. More needs to be done, however, as plans for Namibia's independence continue to receive increasing attention by the international community. Therefore, *it is recommended that the CFTC and other aid agencies should continue to expand their training programmes to prepare Namibians for the post-independence development of their country.*

The Role of First and Second Cycle Institutions

174. During the 1960s the view was widely held that education is a human right, and that if a country provided it for everyone it would lead automatically to economic development because the human resources would have been enhanced. In short, human resources were considered to be the ultimate basis for the wealth of the nation. This view led to a rapid expansion of education which favoured the modern sector in the twofold belief that this sector would spear-head development and that occupational structures and manpower needs in developing countries must be similar to those in developed countries. The traditional sector was consequently neglected.

175. During the 197Os this view came under challenge. It was found that those countries which had followed the theory most vigorously were facing serious unemployment problems amongst their secondary school leavers and higher education graduates. The vast sums of money invested in secondary and tertiary education at the expense of primary education were not achieving development. New strategies therefore began to appear, aimed at widening the base of the educational pyramid. Universal primary education (UPE) became a national aim in many countries resulting in a new wave of educational expenditure. More recently still it has become apparent by those developing countries which have attained UPE that this path does not necessarily lead to development either. Western patterns of education and curricula geared to examinations have not only failed to cure the crisis in education but have aggravated the condition with what has been termed the "diploma disease". Thus the crisis in education to which Philip Coombs drew attention more than ten years ago remains a live issue today.

176. Solutions to the crisis are being sought in every country. In some of them fundamental debates are leading to completely new directions for the system.

177. Because of the dual roles played by education, an inherent conflict exists whenever the subject is discussed. One the one hand, education acts as a formative agent, shaping the character, attitudes and values of the child; on the other it acts as a transmission agent, passing knowledge, experience and skills from one generation to another. Tension can also arise from the way that education is expected both to preserve the cultural heritage - a conservation role - and to bring change and development - an innovative role.

178. Some governments have been at pains to see that the dual roles of education are carefully balanced. Governments also have a duty to ensure that education serves national development aims. However, instituting change requires an element of popular support. Thus, due recognition has to be taken of any potentially adverse reaction of parents, teachers and educational administrators, and even students themselves to change. For example, teachers and educational administrators are part of the system and, as a result, tend to resist change. Parents often oppose change because their aims, attitudes and aspirations for their children are related to the status quo. Yet there is

cause for encouragement in the fact that in some countries parents are beginning to seek some form of technical education for their children in preference to the traditional route to white-collar jobs. Moreover, there are cases where the income of artisans is catching up with, or has already overtaken, that of office workers and teachers, thus creating favourable attitudes towards formerly despised occupations. Another encouraging change of attitude is to be seen in the acceptance by parents in a number of countries of delayed entry to school so that children who leave after six to eight years of primary education are sufficiently mature to be self supporting or employable.

179. A growing problem, not only in countries that are still developing but in those that are highly developed, is that of unemployment. Even in those that claim to have full employment there is often a substantial amount of under-employment. Often education is blamed for this situation with the claim that the curriculum is not relevant to the manpower needs of the nation. Such blame must be accepted where, in fact, the curriculum is irrelevant, but it also needs to be said that full employment is more directly related to the economic well-being of the world than the curriculum followed in any individual country. Employability is better achieved by giving pupils an education which, while equipping them with basic skills, also ensures that they can cope with changing circumstances. A measure of the relevance of an individual's education is the extent to which, after leaving school, he makes use of what he has been taught in making his way through life. It is a reflection on much contemporary education that so many pupils when they leave school make so little use of it and have to learn so much more before they can take up and hold even quite simple jobs.

180. The cost of education, especially if it is for all, is a problem daunting in its magnitude for under-developed countries. It has led to serious consideration being given to the concept of basic education through which functional skills in literacy and numeracy are taught together with those vocational and life skills that are essential for healthy, happy living and good citizenship. Every cost saving that can be made without loss of efficiency in teaching is to be welcomed.

181. But just as it is difficult on economic grounds to justify closing the door of education to any child wanting to learn, so it is undesirable to close the door after that child has been given a fixed number of years of schooling. Lifelong learning and access to some form of educational support, however slight, would seem to be something that everyone needs in a world where change is so rapid that no fixed term of schooling can suffice to last for the whole of an individual's lifetime.

182. The key element of an educational system is the curriculum, for it encapsulates the aims of education as interpreted by those who have designed it. It is for this reason that in the present crisis in education the curriculum is receiving so much attention. The servant of the curriculum is the examination, though some critics complain that this relationship appears to have become reversed. Nevertheless, the purpose of examinations, and of the bodies that organise them either nationally or regionally, is to ensure that the curriculum is taught satisfactorily. Thus examining bodies are to be encouraged so long as they serve this role.

183. An element of education that has sadly been lost in much curriculum development is that of traditional education. The child who lives in the village, helping his parents in the home or on the farm, and who

works with others not in competition but in co-operation, is growing up in the environment of traditional education. He sees and feels the elements of nature and he learns to live in harmony with them. The skills, qualities and values so acquired are worth encouraging but it is doubtful whether the formal system of education as practised today can offer anything so closely in tune with traditional values. Instead, when a child enters the formal education system he is exposed to competition from the very beginning. He no longer sees the co-operation so familiar in the village, and he no longer lives close to nature. He loses appreciation for the environment, and learns instead to exploit it for his own advantage. It is to be hoped that recognition of the extent of the loss will soon be recognised and that the best traditional values will be re-introduced into modern education.

184. One of the most difficult but perhaps most important steps that governments can take to develop human resources through education is to encourage co-operation between the various ministries (such as education, manpower, labour, health and social services) which have a concern for people and the quality of life. Such co-operation is needed partly to avoid duplication and partly because departments cannot function properly in isolation. Indeed, unless co-operation is seen as necessary and is pursued as a deliberate objective, there will be a disjunction between human resources development and utilisation. In today's world, no country can afford this wastage.

185. The effects of the economic crisis on development, including educational development, may be as far reaching for individual countries as those that occur in time of war, and the crisis in education is equally far reaching in its effects. However in all the debate and discussion concerning education, it is important not to lose sight of that central and vital fact that education is about children and their development. No plan or system of education can be considered good that prevents children from developing their potential, and no educational change is desirable that results in a poorer quality of life for the growing child than he would enjoy without it. Even in times of economic difficulty, this must be the test of what is good and bad in education.

The Role of Tertiary Institutions

186. In the development decade of the 1970s, it was generally accepted that education played a key role in development and that the expansion of higher education would lead automatically to social and economic progress. There was, in addition, a growing social demand for university education which was the gateway to privilege and preferment. Of the various levels of education, it was thought that higher education held the key to development. Both social and economic demand combined inevitably to produce a very rapid expansion of university education. One unexpected result of this was the proliferation of graduates mainly with liberal arts degrees, leading in many countries to the problem of the educated unemployed. Today, graduate unemployment in some areas co-exists with the scarcity of trained personnel in others. Universities in these countries cannot afford to provide education for the sake of education alone, and university education particularly has reached a point where it has to be related to the day-to-day needs of the community. Countries often have to adopt trial and error methods in order to prevent unwanted surpluses of graduates in any particular field becoming so large that they cannot be absorbed.

187. Universities and other higher education institutions should take cognizance of national needs in planning their courses of study. They should also play a more positive role by involving themselves in the tasks of determining manpower needs and improving the utilisation of manpower resources. Ideally, there should be an input-output model so that products of higher education institutions are found employment as soon as they graduate. Governments would like to ensure that the graduates produced by universities match the manpower requirements of their countries. This has implications for university autonomy.

188. Autonomy is an essential feature of university administration based on the British model. Developing countries, however, are often faced with a conflict between the autonomy of the university and the role of the government. Governments have to recognise the needs of the community and adapt education in accordance with those needs. They have also to maximise the use of limited financial resources. Universities, which are traditionally conservative and rigid in their approach to change, may not adequately respond to these demands if left to themselves. As a result, governments of developing countries sometimes insist on universities adapting their courses to national needs and even dictating what the country requires from them. This can make it difficult to maintain academic excellence and standards, and it is therefore necessary to establish and maintain meaningful dialogue between ministries of education and universities on the one hand and the universities and the community on the other.

189. The urgency of the need for this dialogue cannot be over-emphasised in the context of development. Experience in some developing countries shows that universities can and do innovate in response to community needs as identified by governments. Many universities and academics are bound by attitudes and models derived from the élitist and conservative character of the traditional concept of the university with its orientation towards the advancement of a minority. This concept however, has been gradually changing in the face of present-day realities. On the one hand, governments now make demands on universities which force them to be flexible with regard to accepted structures and courses. On the other, the expansion of universities in response to social demand has created its own tensions and problems. Universities have therefore to become more relevant to development and be linked more closely with the work of planning and development ministries. The demand for purely academic degrees has to be rechannelled to technical training and vocational education. Universities have today the additional responsibility of playing a greater role in the planning process of countries so as to know what is required of them. Each country has to evolve its own pattern suited to local needs and requirements.

190. In recent years, universities in developed countries have taken on a new responsibility - that of educating the community. This takes a variety of forms. The scope of a university degree now includes retraining courses to cater for those who have missed the opportunity of a university education and for those who need specific qualifications such as business studies, economics and industrial relations. These usually take the form of intensive short-term courses made available both by universities and by polytechnics. It may well be that the need for these courses is even greater in developing countries, and they should therefore pay more attention to introducing this kind of training and course work instead of relying so heavily on the traditional degree and diploma. Tertiary institutions, universities included, should undertake all forms of training at both degree and diploma levels.

191. Universities, however, should not neglect their proper role of teaching the community which has sometimes suffered due to the rapid expansion of numbers and the extent of the functions they are called upon to perform. It is for this reason that the Commonwealth Secretariat has become involved in the improvement of teaching in universities. Although on the periphery of the Secretariat's responsibilities, the project is academically valuable, and *the Secretariat should therefore undertake a second edition of the "Survey of Programmes for the Improvement of Teaching in Commonwealth Universities"* so as to include new programmes that have been introduced since the last survey.

192. Fundamental research is usually confined to universities and does not always include research that has immediate practical application. It is often considered by governments to be a luxury and does not attract their funds. Applied research, in contrast, is frequently done in research institutions outside universities, has immediate relevance for development, and attracts funds more readily. However, university research is essential as it enriches teaching: the two should normally go hand in hand. Provision should therefore be made to increase the research potential within universities. In today's context, however, such research should wherever possible be relevent to development problems.

193. To maintain research of high quality in universities, it is necessary that adequately qualified personnel should be made available to universities and the training of such personnel should be given high priority. Assistance from bilateral and multilateral agencies should be sought for this purpose. To maintain the quality of university teaching, good teachers are as necessary as good researchers. Some developing countries often face the problem of staff instability particularly where there is a preponderance of expatriate staff or where local staff go abroad in search of greener pastures. Most universities in developing countries still require broad based programmes for staff development.

194. The recent increase of tuition fees in some countries - even to the point of charging the full economic cost - has become a burning issue between developed and developing countries of the Commonwealth. Some countries have been charging differential fees for some time, but the problem has now become acute as it affects a larger number of students from developing countries and is likely to disrupt the developmental plans of these countries and their programmes for human resources development. Developing countries are traditionally dependent on these same sources within the Commonwealth for assistance. However, developed countries are forced sometimes to adopt policies such as the reduction of public expenditure to put their economies in sound order, and these may affect overseas students.

The Role of Non-Formal Education

195. As has often been pointed out, the term "non-formal education" is unsatisfactory because it appears to give a negative connotation to what in fact consists of very positive activities which meet very real areas of human need. This handicap is best avoided by concentrating attention not on the definition but on approaches which meet a particular need using planning techniques and organisations appropriate to the need in question. It should also be noted that however inadequate the term may be, the significance of the concept lies in creating the

awareness that education is not synonymous with schooling and that many systematic and vital learning activities take place outside the school. Therefore any planning for the development of the individual, the community, and the nation, must take account of the totality of organised education including components other than the formal institutions.

196. Non-formal education has a role to play in the alleviation of human deprivation in two main areas. The first is that of the expansion of basic educational opportunities at all levels in particular to meet the needs of such target groups as un-schooled and under-schooled children, young people without employment and hope, and adult illiterates. The needs of women also deserve special attention. At the same time NFE is a useful instrument in motivating parents to ensure that their children benefit from whatever formal educational opportunities are open to them.

197. Secondly, non-formal education has a major role to play in the provision of basic services. For essential services to reach people in areas such as health, sanitation, agriculture and housing in a meaningful and purposeful way, people must be involved by right in the planning and execution of their development. Where development programmes envisage promotion or expansion of such services, it is vital that NFE programmes reach the target population in order to ensure they understand the significance of the proposed programmes and to prepare them for the changes that will take place in their lives.

198. For many countries the means of providing technical and vocational education and training is of great importance. It is often the case that training opportunities are provided by governmental or non-governmental organisations not always associated with ministries of education. Industrial training boards, multicraft centres and village polytechnics offer courses or apprenticeships designed to increase the potential of the people and increase their opportunity of finding gainful employment.

199. These efforts presuppose the availability of employment opportunities at the end of the training process. Where these do not exist the objective of NFE would appear to be to develop people with sufficient self-assurance to become economically active on their own account rather than being dependent on the provision of paid employment. One example is that of Sri Lanka which is opening "holding units" in temples, schools and community centres to help to create a bridge between formal education and the world of work. Those leaving primary, secondary and even tertiary institutions are being given opportunities to acquire the skills they need to meet the manpower needs of the country (e.g. office management, stenography, typing, carpentry, sewing, and motor mechanics).

200. In any programme of adult education, it is necessary to include a re-training element so that as changes take place in a country's economy - at the national or local level - people can move from sectors where opportunities are dwindling to those where they are increasing.

201. Adult illiteracy is another major concern and yet it is probable that this will take even longer to eradicate than universal basic education will take to achieve. In the foreseeable future, governments are likely to give priority to school programmes, and there will always be insufficient money and personnel to tackle the problems. Adult literacy programmes must be seen in tandem with basic education programmes and not as an alternative. It must be clearly recognised

that any initial success in literacy programmes will be sustained only if the socio-economic environment is conducive to literacy being an accepted part of economic and social life.

202. In many societies there exists what may be termed technical or scientific illiteracy. In the age of the silicon chip it becomes increasingly difficult for the developing countries of the Commonwealth to keep pace with the developed world; the gap widens exponentially. This is founded on a lack of technological awareness, a problem which non-formal education should seek to tackle.

203. Most existing non-formal programmes exist outside the formal educational structure. Ministries of education provide only one part, however important, of the total educational system. Health ministries, agricultural extension services, family planning units and a variety of voluntary organisations working with particular sections of society or in specialised services, all have an important educational role to play. This diversity is inevitable and strength may be drawn from it. Nevertheless in many Commonwealth countries there is considerable scope for collaboration at all levels with government and non-government organisations. In countries with well established planning machinery, co-ordination may find concrete expression, but in many parts of the world ministries of education plough a furrow which is mainly concerned with schooling. Although they may play a supportive role for NFE they are unlikely to be the main agency. It is also unlikely that the ministry of education can itself play the co-ordinating role. Co-ordination can only come from the highest level - from the national planning forum or Cabinet office.

204. Where co-ordination takes place it is essential that it does so not only at the top level but at every level down to the village level. Tanzania offers a good example. Within the policy limits set by the National Parliament, Tanzania has a system of decentralisation at regional, district and ward (local) levels with basic - including budgetary - decisions being made at the ward level and transmitted upwards for approval.

205. To conclude, there is a need for major Commonwealth initiatives in NFE, and the organisation of institutional arrangements is recommended. Such arrangements could include the establishment of a Commonwealth Resource Centre for NFE, smaller regional centres, and other options such as a unit within the Commonwealth Secretariat. The implications for each of these options should be examined thoroughly in terms of resource requirements prior to initiating any further action. Bangladesh intends to establish a centre for non-formal education funded initially by the Government of Bangladesh. This could provide a base for the development of a Commonwealth Centre if such action is considered appropriate. The Secretariat should consider all offers from member countries which are interested in hosting the institution.

Index to Recommendations

In order to facilitate easy reference to the recommendations adopted by the Conference which appear in full in the paragraphs above, the following index is provided.

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Summing Up

Sir Roy Marshall

Chairman of the Commonwealth Education Liasion Committee

It has become the practice for the Chairman of the Commonwealth Education Liaison Committee to sum up the proceedings of Commonwealth Education Conferences, and this is the second occasion on which I have been charged with the responsibility of discharging that function. It is an honour and a privilege which I greatly appreciate.

Clearly the task of summarising the proceedings of a Conference that has occupied seven full working days out of the last ten presents difficult problems of choice, particularly when the area of choice is as large as it is. For during the first four working days of this Conference we had eight committees of officials and two meetings of Chief Professional Officers which examined in depth the programmes of the Education Division of the Commonwealth Secretariat, appraised their proposals for a further programme of work for the next three years, and made proposals of their own to the same end. And during the last three working days we have had Ministers not only reviewing these proposals but also playing leading roles in examining the general theme of the Conference, "Education and the Development of Human Resources", in all its aspects.

In exercising my choice I am very conscious of the perils of repetition. Let me therefore indicate some of the things that I shall not repeat. I shall not provide any account of past Commonwealth Education Conferences: the Commonwealth Secretary-General in his brilliant opening address referred to the themes and outcomes of some of them and you will find my effort at a summary in the Report of the Seventh Conference which took place in Accra in 1977. I shall not give any account of the role and functions of the Commonwealth Education Liaison Committee: I said something about that in my summing up of the Seventh Conference and you will have heard from the Secretary-General's address that the CELC celebrated its twentieth anniversary last year and the Commonwealth Secretariat marked the occasion by producing a little pamphlet about the origin and work of the Committee. Nor shall I burden you with an attempt to précis the admirably succinct Report of the Officials' Meeting and the discussions to which the lead papers on our general theme gave rise.

Instead I shall restrict myself to some general observations about the impact which the Conference has made upon me over the entire period of its duration. It has been a valuable and important Conference. The

subjects considered were relevant and challenging. The rate of participation in the discussions was high, and the quality of the contributions was good. The location could not have been bettered, and the facilities of the Conference Centre were some of the best that I have experienced. This made it easy for delegates to renew old friendships and to make new ones, and to use the Conference for the full and frank exchange of views which is so important to the success of meetings of this kind.

It seemed to me that during this Conference the Secretariat came of age in a very gratifying way. At one stage delegates rightly took exception to the fact that they were being asked to approve recommendations, the substance of which they had discussed, but the terms they had neither seen or considered. It will stand to the lasting credit of the Secretariat that they got the message and so rearranged the programme that delegates were given time to see, consider, and approve the recommendations which have been incorporated into the Report of the Officials' Meeting and endorsed with some modifications by this plenary session.

Undoubtedly the most important development at this Conference arose from the recognition by its members that areas of national concern can and do give rise to genuine Commonwealth issues which need to be discussed in a sensible and constructive way. I refer, of course, to the whole matter of the level of overseas students' tuition fees. That this was an issue of national domestic concern was not and could not be denied, for two-thirds of the 27 Commonwealth countries which provided information for an ACU survey have exercised their sovereign powers to charge overseas students higher tuition fees than home students. What was needed, therefore, was an effort to show that the situation had gone beyond the point of purely domestic concern and had entered the sphere of general Commonwealth interest. The Commonwealth Secretariat at the instance of High Commissioners of Commonwealth Governments, and the Association of Commonwealth Universities at the instance of its members, made such efforts which resulted in the issue being placed on the agenda for this Conference. Two factors made the matter one of Commonwealth concern: first, the value of the mobility of students (and for that matter of staff) in building up links between the citizens of Commonwealth countries and furthering co-operation between the countries themselves; and second, for developing countries, the importance of access to the higher education institutions of developed countries. This was one of the most valuable forms of aid, and it was feared that its abrupt curtailment would damage the development plans of developing countries, perhaps irretrievably.

It was against this background that officials recommended that the Secretariat should set up as soon as possible a consultative group to examine ways by which student mobility between Commonwealth countries could be fostered and maintained and to liaise with the Association of Commonwealth Universities for this purpose. It will take time for such a group to be established, to consider the matters referred to it, and to make recommendations. Accordingly the officials recommended some actions that governments should consider taking and which could be taken without undue delay. First was the fixing of fees for Commonwealth students at reasonable levels. No attempt was made to quantify what constituted a reasonable level. But I think it is true to say that the underlying assumption was that the level should fall below that of the full economic costs of their tuition for the courses which they are following. Second was the recommendation to treat three categories of

students as home students for tuition fees purposes. The categories in the form now approved are: scholars under the CSFP; students receiving national awards and those receiving awards from recognised international agencies; and an agreed number of other students from Commmonwealth developing countries which do not have adequate educational facilities of their own.

It has to be recognised that there is further action to be taken in this area. What is needed is for discussions to take place as a matter of urgency with a view to finding a common framework (somewhat on the lines of the CSFP) within which Commonwealth governments can make bilateral arrangements to achieve their objectives. And what is important is that when we get back home we should not lose the momentum that has been gained at this Conference.

The other lasting impression that I shall take away from this Conference is that the Commonwealth has taken important steps to meet the challenges not merely of the next three years but of the next decade and beyond it.

The Conference has emphasised the importance of providing, in other ways and through other structures, education for those who have not had the advantage of formal education, and it has recommended the setting up of a variety of programmes to achieve this aim. It has stressed the need for special education for certain groups, particularly women and girls. I regard this as most important; for if in the years ahead job opportunities continue to decrease, special efforts will need to be made to preserve the advances that have occurred in many countries in anti-discrimination legislation.

The Conference paid particular attention to the advancement of mathematics and science education, and it is probably not going too far to say that some of the most innovative thinking arose out of the deliberations of the committee that dealt with this subject.

Not unnaturally the balance of expenditure between the different tiers of education was frequently mentioned in the discussion of our general theme. As a university man, I must confess a bias in their favour, but it did seem to me that we were perhaps overly disposed to reject the existence of any correlation between expenditure in higher education and growth in the modern economic sector. What is often overlooked is that supplies of cheap energy on a long-term basis are an essential precondition of the continuing expansion of the modern economic sector. The oil crises of the last decade provided a set-back; but if one takes the view that the most pressing need for mankind is the development of a cheap, abundant and safe source of energy, then I think at least the research side of universities must rank high in the order of priorities of educational expenditure, for that sort of advance is not going to be made in the primary and secondary schools.

There is much more that I could say, but time presses and I hope that I have said enough to provide an adequate snapshot of some of the highlights of this Conference.

There remain two things that I should like to say. The first is to associate myself and the Commonwealth Education Liaison Committee with the expressions of appreciation with which this Conference will end. And the second is to convey a message of hope that we shall go away from this Conference satisfied that some important things have been achieved but that much remains to be done. I am reminded of the story

of the inexperienced Minister of Agriculture who was addressing an audience of young farmers and having great difficulty in explaining to them why they should not expect his policies to have immediate results. At last in exasperation be said, "Look here, if I put a bull in a field with a lot of young heifers, you wouldn't expect to see a herd of calves next morning, would you?" "No", said a voice from the back of the hall, "but you would see a lot of contented faces". I hope, Mr. Chairman, that we shall go away contented but not complacent.

Lead Papers

1. The Role of First and Second Cycle Institutions: *M. K. Bacchus*

Introduction

The focus of this paper is on the role of primary and secondary education in human resource development. Such a role is obviously influenced by many factors such as the level of economic development of a country, the importance of high-level technology in its economy, and the social and economic problems which it faces. Therefore any suggestions for reform made in this paper cannot apply indiscriminately to all Commonwealth countries irrespective of their economic and social realities. The more affluent countries which already have compulsory primary and secondary education may find that much of what is given here is not quite relevant to their situation. However, it is hoped that these observations will be of some use to them too, even if only to strengthen their efforts to help the educational development of less affluent member states through agencies like the Commonwealth Secretariat.

Factors in Educational Expansion

Human Rights and Human Resources

The rapid expansion of education in most Commonwealth countries since World War II was strongly motivated by both "human rights" and "economic" or "human resource development" considerations. In those countries which already had universal primary education, such as the United Kingdom, Australia and New Zealand, the human rights concern was seen in their efforts to ensure greater equality of access to secondary education. In Canada, which already had a more egalitarian system of entry into secondary schools, the "human rights" concern was observed more in efforts to reduce the influence of cultural barriers like language and ethnicity on students' efforts at advancing up the educational ladder. In the economically under-developed Commonwealth countries (UDCs) the "human rights" concern was seen in their desire to introduce universal primary education - a consideration which emerged quite strikingly in the deliberations and recommendations of the Unesco conferences in Karachi, Addis Ababa and Santiago in the 1960s.

Around the same time that the "human rights" concern began to gather momentum, economists were discovering the important role played by the "quality" of human resources in the process of economic growth. Further, they observed that in the UDCs human capital represented only about 10-15% of physical capital as against 38% in the economically more developed countries - the MDCs - and concluded that differences in their human rather than in their physical capital resources better explained the differences in their economic development. This general point of view was well expressed by one human resource economist who argued that "human resources, not capital or income nor material resources, constitute the ultimate basis for the wealth of nations".[1]

The Two Sector Theory of Development

These two considerations - the "human rights" and the "economic" - which influenced the expansion of educational services, were not necessarily in conflict. But a fly entered the development ointment and led to a parting of their ways - a fact that began to affect adversely the contribution which education was making to the development of the UDCs. The fly in the ointment was the development theory which suggested that it was the modern sector of the economy of Third World countries that would spearhead their development. The essential features of this theory were formulated by Sir Arthur Lewis[2] one of the most influential development economists of the 1960s, who argued that the centre of economic gravity in these countries must "continuously shift towards industry through continuous reallocation of labour from the agricultural to the industrial sector"[3]. Also since, as the argument went, the development possibilities of the UDCs would be akin to those of the MDCs, the former countries would have to use production techniques similar to those used in the latter and this would create a need for manpower with the same type of education and training.

Guided by this development theory, educational planners began estimating future manpower needs of the UDCs, basing their estimates primarily on the projected needs of the modern sector. Further, they used the occupational structures and educational systems of countries at higher stages of economic development as models for projecting the trained manpower needs of particular UDCs.

The Consequences of Educational Expansion

A Shift of Emphasis to Secondary and Tertiary Education

The major educational consequences of this two-sector theory of development was an overall shift in emphasis from primary to secondary and tertiary levels of education. This trend was further stimulated by the need for highly trained administrative staff as many of the former colonies moved towards independence. In consequence, since 1960 secondary and higher education in the UDCs have been expanding much more rapidly than primary education. For example, between 1960 and 1970 primary school enrolment in the UDCs increased on the average at about 10.5% per annum while secondary- and tertiary-level enrolment increased at more than double that rate - at 23.2% and 25.5% per annum respectively. This differential rate of growth in favour of secondary- and tertiary-level education has continued through the 1970s. One consequence of this was that though the percentage of illiteracy was falling, the number of illiterates in the world increased by 70 million between 1960 and 1975 to an estimated 800 million.

Further, when the costs are considered, the shift in emphasis towards higher education is even more marked. For example, while in Great Britain, ten students attending university cost roughly the same annually as 176 pupils attending primary schools, in the UDCs the same number of university students cost the equivalent of about 879 primary school students. Further, if we look at some of the African Commonwealth countries we find that about 2,830 pupils can attend primary schools for the cost of ten attending universities.

An Increase in Educated Unemployed

Another consequence of this rapid expansion of secondary- and tertiary-level education in the UDCs in the 1960s and 70s was that educated manpower was being produced faster than the economies of these countries were able to absorb at rates of pay which graduates have traditionally expected. Unemployment rates were rising even during the period of relatively high economic growth rates in the 1950s and 1960s. By the 1970s the combined unemployment and under-employment rates were estimated at 29% for all developing countries and 38% for the developing countries in Africa alone.

This increase in output from educational institutions has resulted in growing unemployment among the educated. It has further stimulated students to stay on at school beyond the primary and secondary levels because they feel that the additional education will provide them with the only opportunity of obtaining a job in the modern sector. As a result, both the educational levels and average age of the unemployed have been rising. Martin Carnoy indicates how this "educational inflation" occurs:

> As schooling expands unemployment moves up to influence the more highly educated graduates. The rapid expansion of primary schooling greatly increases the supply of primary school graduates, also increasing their unemployment rate... This increases the economic pay-off of attending secondary school. If the government responds to demands for more secondary places, eventually the increased supply of secondary school graduates... creates unemployment among [them]. This increases the demand for university expansion and results in university unemployed.[4]

The problem of the educated unemployed has now become so widespread in the developing countries that relative to the working population, the *unemployed as a group* tend to be better educated, especially where young and inexperienced unemployed are numerous.

The emergence of this situation was seen very clearly in Sri Lanka. In 1968 a labour force survey revealed that over 25% of the unemployed comprised persons who had at least some GCE O-Level passes. Between 1969 and 1973 their numbers rose from 500,000 to 800,000, pushing the unemployment rate from 14% to 17.4% of the labour force with four-fifths of that unemployment being concentrated among those under 25. Also among the 20-24 age group with at least three O-Level passes, the unemployment rate was 55% for men and 74% for women. Further, while the schools were annually producing about 182,000 persons with eight or more years of education (with 100,000 of these holding O-Level certificates) the number of wage and salary jobs becoming available annually was estimated at no more than 70,000. This means that there were likely to be "wage and salary jobs" for less than 40% of those who were entering the labour force looking mainly for them. The ILO report on Kenya noted the same trends there and observed that while that country's volume of unemployment was still some way behind that of Sri Lanka, it was "catching up fast". The same picture is beginning to unfold itself in most other Commonwealth UDCs and it is now obvious that the problem is deeply rooted in the social and economic fabric of these societies. No mere tinkering with the educational system can correct this situation.

The Emerging Need for a New Development Strategy

In these circumstances what is most needed before any important educational reform in these countries can be successful is a new approach to development necessitating more profound social and economic changes. Such a new development strategy will also call for a radical rethinking and reform of the existing educational policies and priorities in order to increase the contribution which qualitative improvement in the human resources of these countries can make towards their development.

Though education has not been directly responsible for the problem of unemployment, public demand for more and higher levels of education increases. In order to meet these demands, additional resources will have to be diverted by governments to the education sector. To the extent that this sector continues to absorb funds which might have been alternatively used to finance more productive job-creating projects, it will inhibit economic development and add to the growing unemployment problem which these countries already face. As one development economist recently noted: "Many of the early claims made on behalf of the unfettered quantitative expansion of educational opportunities - that it would accelerate economic growth; that it would raise levels of living, especially for the poor; that it would generate widespread and equal employment opportunities for all... have been shown to be greatly exaggerated and, in many instances, simply false."[5] Many are of the view that this educational expansion of the 60s has contributed to political unrest in the UDCs.

Current Educational Strategies

Curriculum Reform

Educationists sometimes argue that the major problem facing schools in the UDCs is the unsuitability of the education which they offer for their development needs. For over a century colonial administrators and local educators have observed that the education provided in these countries is not geared towards enhancing the knowledge, skills and values which will help students to live more productive lives in their own societies. It has been pointed out *ad nauseam* that although over 80% of these children are likely to end up earning their living from the land, the schools fail to provide them with the crucial skills they need to survive and improve their standard of living in such an environment.

Instead, the education offered at any one level of the system is geared mainly to preparing students to move up the next rung of the educational ladder. Primary schools remain essentially concerned with getting their students into the secondary schools, and these in turn try to gear their children to pass those examinations which can lead to the universities. Universities exert a distorting influence on the whole educational system despite the fact that often not more than 1% of the students who enter primary schools end up at a university.

Further, while the instructional strategies used in schools have improved somewhat over the years, rote learning and cramming for examinations still remain common practices. A major result is that the acquisition of certificates - the "diploma disease" as Ronald Dore calls it - becomes the major goal of schooling, and neither students nor parents are concerned with the practical usefulness of what is learnt. Usefulness or relevance of curriculum content is seen in terms of its value in

helping students pass those examinations which lead to the next stage up the educational ladder or which give the necessary credential for the "right" jobs in the modern sector.

These are not new criticisms. They have been made time and again. The history of colonial education is replete with them. Nearly every educational commission to the colonies since the 1850s recommended that the subjects of agricultural and vocational education should be given a central role in the curriculum of the schools. Yet the same suggestions continue to be made up today by economists like Balogh, Dumont and others who see the whole future of the UDCs as heavily dependent on an effective agricultural education programme in their schools.

Reasons for Failure

The question which arises is, why did these attempts to make primary and secondary schools more effective instruments of human resource development fail? The main reason has been that educators have been tackling the symptoms of the problem rather than its cause. In other words, we have been concentrating our efforts on bringing about curriculum changes when we should have been first directing our attention to more basic social and economic reforms which are a necessary pre-requisite for success in implementing curriculum change.

An Irrelevant Western-Type Education

There are two major features of the UDCs which together reinforce the persistent demand by the local population for an "irrelevant" academic type of western education. The first is the continued economic and cultural domination of these countries by the more affluent nations of the world - a factor which reinforces the traditional prestige enjoyed by this western-type academic education in the eyes of the local population. I shall not go into this issue here except to note that many developed and developing countries now accept this criticism and urge that this situation should be redressed by means of a "new international economic order".

Income Gap between the Two Sectors

The second feature is the marked difference in the economic rewards provided by the two major sectors of the economy of these countries - the modern and the traditional sectors. The traditional or low wage sector in which some 80% of the population live comprises mainly the peasant farmers and farm labourers who often work very hard to eke out a marginal or sub-marginal existence. Their incomes are uncertain and usually depend on factors such as market price fluctuations or droughts over which they have no control. The poorest 20% of the population earn only a very small percentage of the total incomes of these countries ranging, according to available figures, from 9.75% in Tanzania, 7% in Kenya and Nigeria, 3.8% in Sri Lanka and 2.2% in Jamaica. They bear the crushing burden of poverty in these countries as can be seen from the fact that about 40% of them had an income of less than $50 in 1965.

The modern, or high wage sector, contains the industrial and commercial enterprises owned by foreign firms, the more élite local families, and the government services. The fortunate few living in the modern sector enjoy a relatively comfortable existence. For example in the late 1960s a Ugandan graduate first entering the civil service could expect his income to be about fifty times the average income per head in Uganda. Even in India where salary differentials tend to be less, the ratio was

still 12:1 as compared with Canada, for example, where the ratio is more like 2 or 2½ to 1. And despite the economic growth which these countries experienced over the previous decade, the wage differentials between the high wage and the low wage sectors have on the average been widening rather than narrowing.

Since there is this very substantial gap, both in income and life chances in these two sectors, it becomes a most desirable goal in life for many parents to see their children secure a job in the modern sector. The only way in which they can help is to ensure that the children get a western-type academic education and acquire the necessary certificates to prove that they have successfully done so. The credentials are important, not so much as an indication of what they have learnt, but as an entry permit without which they are increasingly debarred from the modern sector job market. Dore,[6] in fact, describes the entire educational system in these countries as an immigration service for the modern sector bridgehead - the main task being facilitating the migration of people out of the traditional sector.

The size of this income gap can hardly be justified by the classic rationale that it provides a necessary incentive for individuals to get an education. In fact my argument is that it has been a major factor in fuelling the demand for more of this "irrelevant" education and preventing the successful introduction of meaningful changes in the educational institutions of the UDCs. Stemming from this is my assertion that converting the primary and secondary schools of these countries from diploma mills to institutions which can effectively help to develop human resources cannot be successful unless the income gap is substantially reduced through efforts aimed directly at raising the living standards of the poor. On the other hand the MDCs in the Commonwealth, where jobs requiring a lower level of formal education offer incomes on which one cannot only live satisfactorily but which are not far below the incomes of university degree holders in the UDCs, it becomes much easier to motivate a substantial number of students to take up training for a range of skilled jobs rather than encourage them to aspire to enter universities.

One could go on in greater detail to show how most of the existing educational problems which face the UDCs have their roots in this marked gap in incomes between those working in the two sectors of these societies. But one need only reiterate the point that attempting radical changes in the educational system and curriculum content of schools in these countries without effecting corresponding changes in their social and economic structures would be completely self defeating.

This was partly recognised by the Uganda Educational Commission when it discussed the difficulties faced in implementing an agricultural educational programme in schools. It noted that: "The problems of agricultural education are not primarily educational; they are intimately bound up with the solution of economic technical and social problems over which the Ministry of Education has no control... All we can say about agricultural education must be considered in the context of radical social and technical change in other sectors of the economy".[7]

A Pre-requisite for Educational Reform

The development ideology of the 1950s and 60s not only envisaged that the modern sector would play a leading role in economic development but also

assumed that the benefits accruing from any such development would trickle down to the poorer sectors of the society - mainly those in the traditional sector. It is now obvious that both these assumptions were false. Therefore, if in the 1980s we are going to make renewed efforts to ensure that education at the primary and secondary levels contributes more effectively to human resource development in the UDCs, we need to begin with a new development ideology and a new development strategy. In contrast to what I shall refer to as the élitist model of development which was followed during the 1950s and 60s and even into the 70s, we need a more populist model of development for the 1980s supported by development strategies which focus on mass development directly aimed at improving the general living conditions of those at the bottom of the economic and social hierarchy. Experience has shown that if the élites first receive the benefits of development, they are unwilling to let it "trickle down" to the masses. Therefore, any effort at improving the condition of the poor must be focused directly on them.

It is not my purpose to discuss the details of such a development strategy except to note that it will call for a massive concentration of available development resources on improving the living conditions of those in the traditional sector. One of the major goals must be for these societies to develop greater self-sufficiency through self help. This can partly come about through the encouragement of those types of economic activity in the informal sector which tend to utilise available local resources and are geared more directly towards meeting the needs of the less affluent groups in these societies.

Another aspect of this new development strategy must be its concern not only with human resource *development* but also human resource *utilisation*. Education planners in the past have tended to focus on the former activity whereas equal attention needs to be given to both aspects of the problem. New economic policies will therefore need to favour labour intensive rather than capital intensive methods of production thus facilitating the more efficient use of available manpower in the UDCs.

An Educational Strategy for the Future

The mass development strategy indicated above will have important implications for educational reforms at the primary and secondary levels and some of these will now be discussed.

A Basic Level Education for All

The first change that will be called for is a shift in the educational policies of most UDCs directed towards providing a basic level of education for the total population. The further expansion in the 1980s of formal secondary and higher education can no longer be justified both because the assumptions on which this policy rested are no longer tenable and because increasing numbers of those graduating from these institutions are unemployed.

A new policy aimed at providing a basic level of education for all will have a number of implications. First, it will mean that universal primary education (UPE) will have to become a major goal for all those countries which have not yet decided to move in this direction. Looking at the economic disparities between two Commonwealth countries which are rapidly moving towards this goal - Nigeria and Tanzania - it is obvious that a commitment to universal primary education is much more a matter of political will and establishing educational priorities than of economics

alone. This point becomes quite apparent when we consider that in many African Commonwealth countries the annual cost of educating one university student is equal to the cost of educating about 283 primary school students for one year.

The goal of universal primary education is both a "human rights" concern and an important part of the strategy for human resource development using a mass-oriented development strategy. The economic advantages of literacy have long been recognised. Further, economists who in the 1960s were urging further expansion of higher education in the UDCs now point to the fact that their researches have consistently shown that the social rate of return on educational investment has been consistently highest at the primary level. In addition, long-term projections of employment prospects in the UDCs indicate that an increasing surplus of highly qualified manpower is likely to develop in the 1980s.

Also, if our concept of development is broader than that of mere economic growth, the case for universalising primary education becomes even more convincing. People with education seem to display a greater willingness and ability to participate more actively in the political decision-making process and in community development efforts. Education also increases their predisposition to try out new ideas and methods such as improved health practices, family planning and the introduction of new crops and cultivation techniques.

While UPE will ensure that the educational level of the young will gradually improve, any mass-oriented development strategy must also provide basic educational facilities for the adult population. This is where adult education programmes geared at developing functional literacy are important. Non-formal education, as Dr. Ahmed's paper argues, can play a crucial role in assisting adults to attain not only functional literacy but also those relevant life skills which can help them to improve their general standard of living. Further, it is known that literacy skills acquired during a relatively short period of schooling are likely to atrophy unless opportunities are provided for their continued use. More important, the knowledge that youngsters acquire in the basic primary school course will need opportunities for renewal and regeneration if it is going to be of continuing use to them throughout their lives. In these areas non-formal education can play an important complementary role to that of formal education indicating the advantage of seeing both approaches as part of an overall programme of continuing or life-long education.

Educational Programmes and Relevance to Development

In addition to these efforts at providing a basic level of education for the total population, we need to re-direct our attention to increasing the relevance of educational programmes to the developmental needs of these societies. Once it is recognised that the root of this problem lies in the present marked income disparities between those with more education and those with little or none, and attempts are made to correct them, then curriculum reforms at the primary and secondary levels of schooling are more likely to be successful.

The problem that faces the educator is to develop a closer link between the type of education which students receive and the knowledge, skills and orientation required for the overall development of the country. This means trying to ensure that primary education becomes more useful in and for itself rather than being considered merely as a preparation for

secondary school. It is true that such an approach is not likely to be easily accepted by parents. President Nyerere espoused this view some time ago, and it is one which is increasingly shared by UDCs which cannot afford to provide universal secondary education. But even in Tanzania the implementation of this policy presented problems. In an evaluation of the Kwamsisi project by a Tanzanian graduate student, it was found that while the villagers gave general support to the idea of greater community involvement in the work of the school and in helping to plan its curriculum, one of their major concerns was whether the types of programme they had helped to plan might not adversely affect their children's chance of entering a secondary school or their academic performance there if they happened to be selected. However, as the attempts at reducing income gaps between those in the modern and traditional sectors of the society make progress, community education projects aimed at getting the school more involved in helping to meet community needs are likely to become more acceptable to the population. We have seen evidence of this in Cuba, China and to some extent in Tanzania - judging by the substantial expansion of such educational efforts in these countries.

Eight Years of Schooling in Two Stages

Another educational objective in this mass-oriented development strategy should be the eventual extension of the primary school course to provide a basic eight years of schooling for all. Children could start attending school at six or seven years of age so that after eight years of schooling they can enter directly into the work force.

During the first four years of this proposed basic eight-year educational programme, attention will need to be directed both at increasing learning outcomes through the use of more effective instructional strategies and increasing the relevance of the curriculum for the students. Since literacy and numeracy will form the foundation for all subsequent educational efforts, much attention must be focused on building up strengths in these areas so that an acceptable level of competence is reached even after only four years of schooling. One major problem which teachers in the UDCs face in trying to achieve this goal is the size of their classes which sometimes reach up to 70 or 80 pupils or more. This makes it virtually impossible for teachers to give individual attention to the weaker students who may have difficulty in acquiring the basic skills. The big hurdle to overcome is that of providing students with more individualised attention without over-straining the educational budget which in many UDCs already takes up a very high percentage both of government recurrent expenditure and of the Gross National Product. A suggestion for overcoming this problem will be put forward later when a proposal for a new type of "secondary" or second-level education programme will be discussed.

The question of improving teaching strategies - such as those that give students a more active role in the learning process and abandoning the traditional methods of rote learning so often found in schools in the UDCs - is also crucial. Research done by the International Association for the Evaluation of Educational Achievement has revealed a disturbingly low academic performance of students in some UDCs. This was true of all ages irrespective of subject matter tested or mode of testing. Even the students' performance in dealing with their own indigenous language was so low among the 14 year olds that one of the main researchers was led to question "whether any more than a minimal level of literacy had been achieved" [at 14] in [those] school systems studied.[8]

Educators in the UDCs know from experience that there is considerable room for improvement in the teaching methods now used in their primary and secondary schools - and what the IEA studies did was to confirm this fact. The results clearly indicate the need for research on how to improve learning using inexpensive teaching strategies. This is an important area of research on which the co-operative efforts of Commonwealth countries can be brought to bear. The challenge is to come up with those combinations of inputs which are most productive of learning outcomes but which, at the same time, involve costs that are within the budgetary constraints of these countries.

The second issue - that of attempting to increase the relevance of the curriculum content to the needs of pupils - will call for the development of new curriculum materials based as much as possible on the life experiences, cultural realities and environmental cues to which the children are exposed. This kind of work in curriculum reform has already been going on in many Commonwealth UDCs. But to be even more effective, especially in the larger countries, it will call for greater decentralisation in the preparation of curriculum materials so that local background factors can be taken into consideration. With this approach children attending school will have a better opportunity of knowing and understanding their environment. Since most of them will be living in agricultural communities, this will involve developing in them a greater awareness and knowledge of the plant and animal life around them without necessarily expecting them to do the usual hard work associated with keeping a school farm.

At the second four year stage of primary schooling, curriculum programmes, while continuing to emphasise the further development of basic skills and an increased understanding of culture and environment, will develop more deeply the knowledge and skills which would help students improve the quality of life in the community in areas such as health, nutrition, agriculture and various forms of practical work.

While the teaching of life skills is important, it should not be done at the expense of increasing knowledge, understanding and awareness which are pre-requisites for the successful introduction of future changes. For example an agricultural education programme should not be primarily concerned with getting students to achieve certain production targets, nor should its success be judged either by the size of the school garden or the numbers of hours students spend in those laborious chores associated with farming. The school farm should be a crucial teaching aid, a laboratory where students can try out new ideas and practices, experiment with new crops or with new methods of cultivation. It should not be geared primarily to the production by traditional methods of a large output of crops already being grown in the community. It must always be remembered that most of the children in rural schools will later spend much of their lives engaged in these routine chores, and that many of them, even while at school, are already performing them on the family farm. Agricultural education in school must do more than merely replicate these tasks if the pupils are to enjoy the subject and benefit from it.

Second-Level Education

The weaknesses of the existing system with its emphasis on helping students to obtain credentials rather than a useful education have already been noted. One solution for this is the elimination of the type of full-time secondary schooling which is now undertaken in most UDCs. Instead, after eight years of primary schooling, or after receiving the

basic education provided at the primary level, students would be expected to go out to work. But an important difference is proposed, namely that the work experience to which they would be exposed would be part of an overall training programme and be supplemented by various other types of educational activities. Those wanting to become skilled workers would work on projects with master-craftsmen in their chosen field, at first being assigned to jobs requiring little or no skill and gradually progressing to more complicated tasks as they learned the skills necessary to perform them. Some programmes might consist entirely of on-the-job training. In others such training might have to be supplemented by self-study, evening, day release or sandwich courses offered through an educational institution or even by qualified master craftsmen. In some cases these master craftsmen themselves might have to be helped to become competent enough to take on the job of training apprentices. The key point here is not to assume that in every field of training there must be a course of formal instruction in an established educational institution. The overall purpose is to ensure that people obtain the necessary skills to function competently in their fields. Only after they have demonstrated that they have acquired these skills would they be given whatever certificate of competence is deemed desirable.

Similarly, those wanting to be teachers would, after their eight years of basic educational preparation, begin as teacher-aides. They would then go through a programme of training which would include some months of practical experience working under the supervision of a competent teacher followed by some months of formal education and training aimed at blending theory and practice. They would continue this cycle until their education and training programme is completed. While working as teacher-aides they would also provide partial relief for the regular teachers to enable them to devote some time to give individual help to those pupils who need assistance to overcome their learning difficulties, especially in the basic fields of the 3 Rs. The work and study programme could be so structured that there will always be one group receiving on-the-job experience and providing help as teacher-aides while another group is doing its formal course of education and training, possibly at some centre for teacher education.

The length of the training period and the balance between on-the-job and formal instruction will be determined by the nature of the occupation for which the person is being prepared. But the major objective will be to ensure that the education and training being provided is directed mainly at improving the trainee's knowledge, skills and understanding of the job which he or she is being trained and educated to do. In this way it will seek to move dramatically away from the present type of education which most secondary school students in the Commonwealth countries now receive with its emphasis on studying subjects of little relevance to the development needs of the country. Also, the cramming of information in order to pass examinations and secure certificates to indicate that they have completed the steeplechase for entry into the next higher educational level or into a relatively high-paying job in the modern sector will become a thing of the past.

The education and training programme envisaged at this stage will not be oriented only towards teaching specific job-skills. But the education/training mix will depend very much on the nature of the occupation to which the programme will lead. Obviously for teachers, the education component might be larger than the specific job training component. But an effort must be made to balance the two, especially

when we know from available research evidence that training without an adequate educational background is not the best long-term investment. What must be provided is an education that extends beyond the teaching of specific skills - one that will help those in training to increase their knowledge, understanding and awareness of their role as workers and citizens in the society in addition to the skills which they will require to do a technically competent job.

This approach will establish stronger links between education and productive work, making the education more relevant to the developmental needs of society. It will also reduce the long gestation period which now exists between education and productive effort. In short, if such a programme is well carried out it will improve the productivity of the educational system.

Beyond Second Level Education

Beyond this basic second level of education and training, other opportunities will need to be provided for individuals to improve or refurbish their knowledge, up-date and upgrade their skills and deepen their grasp of the society in which they live. Opportunities will also be required for those needing further education before entering skilled professional jobs - medicine, engineering, etc. Their previous academic and on-the-job performance might become the first criteria used in determining their eligibility for such further education and training. By this time they would have had the necessary practical experience on which to judge whether they want to proceed to further studies in the same field or whether they should switch to another. Some of those who want to pursue more advanced training would be able to do so on the basis of their previous primary and secondary education. Others might have to undertake additional studies and this can again be done on a part-time, evening or block release basis. After this they can enter into their tertiary level of education and training which, it is to be hoped, will utilise the same combination of practical work and theoretical studies which characterised their second level of education.

In short, a key aspect of the second cycle of education would be a combination of theoretical and practical studies with each part of the programme used to reinforce the other. A combination of various educational approaches would be used as part of the overall educational strategy of increasing the quality of the human resources of a society and thus contributing to the overall development of a nation.

Conclusion

This is only one set of proposals and I am sure that other educators can come up with others. But I want to emphasise that in any proposal for educational reform in the UDCs aimed at increasing the effectiveness of the schools in their human resource development efforts, there are two features which cannot be ignored if success is to be achieved. The first and most important is that one must start with radical changes in the existing social and economic system aimed at reducing the massive income gap which exists in these countries, especially between those in the modern and those in the traditional sectors of the society. For any proposed curriculum reform to be accepted by the people, it has to be seen as leading to a life that is not entirely unattractive, especially as compared with the alternative opportunities which the existing so-called irrelevant curriculum offers.

The second is that any major economic, social and educational reform in the UDCs needs to be guided by a new development ideology which stresses mass development (i.e. is focused directly on improving the conditions of the masses.) The earlier development strategy which is still being used by many UDCs was based on the assumption that if the immediate benefits of development flow to the élites or the "better off" groups in the modern sector of the society, it will eventually filter down to the masses and thereby benefit the country as a whole. It is now recognised that development does not take place through proxies. The élites and others who are relatively affluent are not, and are never likely to be, sieves through which the benefits of development will trickle down to the lowest levels of the society. Historically they have been and are likely to remain sponges which absorb and retain for themselves the benefits of any development from the top.

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2. The Role of Tertiary Institutions: *Keith Legg*

Introduction

There is a wide range of institutions in Commonwealth countries covering levels that overlap considerably with secondary education at one end to higher degree levels at the other. Some concentrate almost entirely on full-time study. Some work in close co-operation with the community,others (notably universities) tend towards isolationism. Resource provision, educational standards and student opportunity vary enormously. In addition, developing countries have tended to follow the developed ones (notably Britain) to varying degrees of detriment to their national and local needs.

This, together with increasingly severe economic constraints, emphasises the paramount need for "appropriate" planning to achieve the optimum balance between educational and cost effectiveness. This is particularly true for tertiary education as it is the most complex and by far the most expensive. It therefore demands a clear definition of functions, organisation and management. These must relate to the total socio-economic needs of specific communities and hence to a corresponding development of human resources.

The average person has a span of 40-45 years of working life and some 10-15 years of retirement. Looking back over this span we see considerable socio-economic change, largely due to the application of rapidly advancing technology. It is certain that this will continue over the next 40-year span facing the young people currently studying in tertiary education. Unfortunately social advance has not kept pace with technological development and hence future human resources must be developed with more emphasis on the former. In many developing countries current emphasis is placed on agricultural advance in contrast with the sophisticated industrialisation of developed countries. Both depend on advancing technology and it is certain that success in agricultural development will lead to increasing industrialisation.

Ideally everything points to a comprehensive system of continuing education and training, i.e. education during a life-span. However there are many constraints to achieving this particularly those arising from the need to change attitudes from the present traditional entrenched and largely unco-ordinated systems of education.

This paper discusses the development of human resources in the above context in relation to the role of tertiary institutions and their overlap with school and non-formal education. It is presented in a generalised form and is essentially synthesised from many examples in the Commonwealth countries.

The General Commonwealth Scenario

Technology, Industry and Agriculture

In the minds of many, technology has become synonymous with developed, highly industrialised countries and the possession of wealth and hence

a high standard of living. Agriculture on the other hand has become associated with non-industrialised countries and the lack of wealth and hence a low standard of living. However, advancing agriculture itself is substantially dependent upon technological advance. Thus the concept that technology necessarily relates to the rich and agriculture to the poor is false. Many of the technological factors relating to industrial development are identical with those relating to rural development. In fact today almost all things are technologically possible. The fundamental question is whether they are economic and socially desirable. Unfortunately the arts and science of economic assessment and of human behaviour have not advanced at the same pace as technology. This is a major problem for both developed and developing countries. Both must introduce technological change, albeit at different levels, but it is now generally recognised that developing countries must emphasise agricultural - and therefore rural - development in contrast to the emphasis on the greater industrial sophistication of the developed countries.

Unfortunately, the education systems in developing countries, based largely on the British system at a time of industrial revolution, have devalued agricultural education and are a root cause of high illiteracy rates in rural areas and the exodus to urban areas, especially of those lucky enough to gain some education. Thus, if the emphasis is to be placed on the socio-economic modernisation of agriculture, education must go out to the rural areas and link up with extension work and research in the field. It must provide an attractive vocation in agriculture and prepare well-rounded citizens as rural members of an integrated community. Obviously such steps must be accompanied by careful rural planning providing an all-inclusive rural community including nutrition, sanitation, social relations, culture etc. at least equal to the bright lights of the city.

However, industrialisation must not be neglected. Indeed manufacture, commerce and trade will automatically arise from advancing agricultural development. Prior to independence India was almost entirely agricultural, and industry and business contributed only 5 per cent to national income. The figure in 1980 is 33 per cent. Thus agricultural development is an integral part of the normal process of economic advance. Some countries, such as Singapore and Hong Kong, have no option but to industrialise due to lack of land and natural resources. Thus the balance between industry and agriculture must depend upon the realised and realisable resources of a specific country. Its education must be planned as a flexible system in strategic locations in conjunction with other government ministries to meet specific national and regional socio-economic needs.

The Consequences of Advancing Technology

In developing societies it is extremely important, although very difficult, to strike the correct balance between capital intensive and labour intensive activity. This is greatly influenced by the relation between internal consumption and exports. The general trend is to move from labour to capital intensiveness. Cheap labour, if employed successfully, leads to economic gain which in turn provides greater affluence and a higher standard of living. The consequence is greater demands in manufacturing standards, sophistication and agricultural yields and quality if market competitiveness is to be retained or improved. In general this process needs to be accompanied by some outside aid, e.g. finance, resources and manpower expertise. There is a limit to this however, and outside aid must be accompanied by a high degree of

self-help, e.g. for self-generated technology. This requires the ability to optimise available resources and manpower. These factors are the key to the development of "appropriate" or "relevant" technology. In addition there is a need for the transfer of technology. By this is meant the dissemination of existing technological "know-how" and information from developed to developing countries and from established large enterprises to small ones (whether these be industrial, commercial, farm, plantation, etc.)

However, increasing industrial sophistication demands better standards in design, manufacture, handling, materials control, testing, inspection and safety. This in turn demands better management and marketing, more exacting fiscal controls and the development of tertiary services such as banking, insurance, transport etc. Similar factors arise with advancing agriculture through more economic growth and land augmentation. Both industrial and agricultural development present a host of environmental problems such as excessive noise, air and water pollution, waste of all kinds (especially water and materials), odious smells and deteriorating urban and rural environments.

All of these factors must be reflected in the education and training of human resources. However, many of the topics are often neglected or not very well taught in current educational programmes, and this emphasises the need for closer co-operation and co-ordination between education and the developing community.

Forecasting Human Resource Needs and Meeting Demand

An essential element of the educational needs of the community and of the individual is the ability to make reliable manpower forecasts. These are notoriously difficult to achieve. The basic education demand pressures are economic and social. In a developed economic situation the two can be virtually equal. In a developing situation they can be far apart. However it is essential to meet economic demand in order to provide resources to meet more social demand. Economic demand generally derives from manpower surveys of industrial/business/agricultural need. It can be usefully supported by making reference to comparative statistics in several countries, although these statistics are difficult to obtain. It is essential that they be related to both educational and training requirements and their distribution in terms of levels of study and subject areas. Social demand derives from student and parent aspiration. The limit of social demand will be the relevant age groups in the population. However not everyone has the ability nor the desire to reach the highest levels.

Obviously the extent to which economic and social education demands can be met depends upon the number and size of educational institutions that the economy can afford; thus provision is not necessarily synonymous with fully meeting the economic demand for education. In fact the assessment of availability of places in tertiary education to meet demands is an extremely complex issue.

There are two distinct requirements here. The first is to maintain the correct flow through the educational system to meet the balanced manpower needs of the community at the right time. The second is the provision of places to meet education backlog, up-dating, and re-education of those already employed. The first generally relates to full-time study whilst the second generally relates to part-time study. Furthermore, whilst the number of places available is clearly associated with educational opportunity, the community generally is more interested in graduated

output. The two can differ markedly due to attrition and this is particularly so for part-time study, especially evening only.

In most developing countries there is a wide gap between social and economic education demand. Where this is so, and all has been done that can be done in the provision of places within limited resources, then there is advantage in considering a multi-study-level open or distance learning system, which, if properly developed, could provide a good standard cost-effective education. Where the gap is small, or economic demand is greater than social demand, then further socio-economic advance is largely dependent upon greater productivity which, in general, requires education to go up-market in terms of level of study. However, care must be exercised in the way that productivity is increased. Over-zealous and random use of automation, for example, can produce an unemployable fringe with consequent undesirable social trends even with generous social welfare benefits. Productivity must be tempered with respect for human dignity.

Thus, the assessment of human resources presents an extremely complex problem for all countries and a planned approach is essential. Of great importance in this context is the need to develop a flexible and integrated system of education across all sectors, from school to university, which optimises educational effectiveness and cost efficiency. This demands education being looked at as a continuous process without barriers between the sectors.

Human Resource Requirement Trends

It is essential that the objectives of tertiary education within the environments described in the previous section should meet the needs of the community and of the individual. The aim is to produce people who can think for themselves, are equipped to be good citizens, and are capable of enjoying the cultural aspects of life. These aims are not inconsistent with a vocational approach but some are given insufficient attention. Specialisation in itself is certainly necessary - especially in an environment of increasing sophistication. However many tertiary educational establishments tend to over-specialise and this is also true in the secondary educational sector. In this context the example of management studies is relevant. In developing countries specialists often find themselves in management situations soon after graduation. In developed countries specialists continue to specialise, and, when successful, find themselves projected into management situations. In both cases, their education often ill-prepares them for what follows in their working lives.

There are good reasons, therefore, to approach most educational programmes from the standpoint of *breadth of study*. This automatically implies thinking across disciplines, a flexible programme structure and an institutional organisation that encourages breadth.

Breadth and Inter-Disciplinarity

The subject matter of study programmes can be broken down in such a way that study cores represent broad studies crossing the disciplines rather than specialist studies. Such cores, or parts of them, will be common to a number of different programmes and therefore economic whilst meeting the needs of the general community and the student. Of particular developmental importance is an emphasis on synthesising a number of relevant disciplines, e.g. the synthesis of technology, rural planning,

economics and social science into the broad subject area of agricultural studies.

The key to the provision of breadth and of inter-disciplinary study lies in the institutional structure. The conventional faculty/departmental structure tends to produce isolation, whilst a matrix type structure centred on basic disciplines tends to produce a sense of "not belonging" amongst both students and staff. The two structures can be likened to the function and project systems encountered in industry.

A good solution is to adopt an inter-linking system by superimposing a secondary-type structure of inter-disciplinary institutes, schools and centres upon the more conventional faculty/departmental structure.

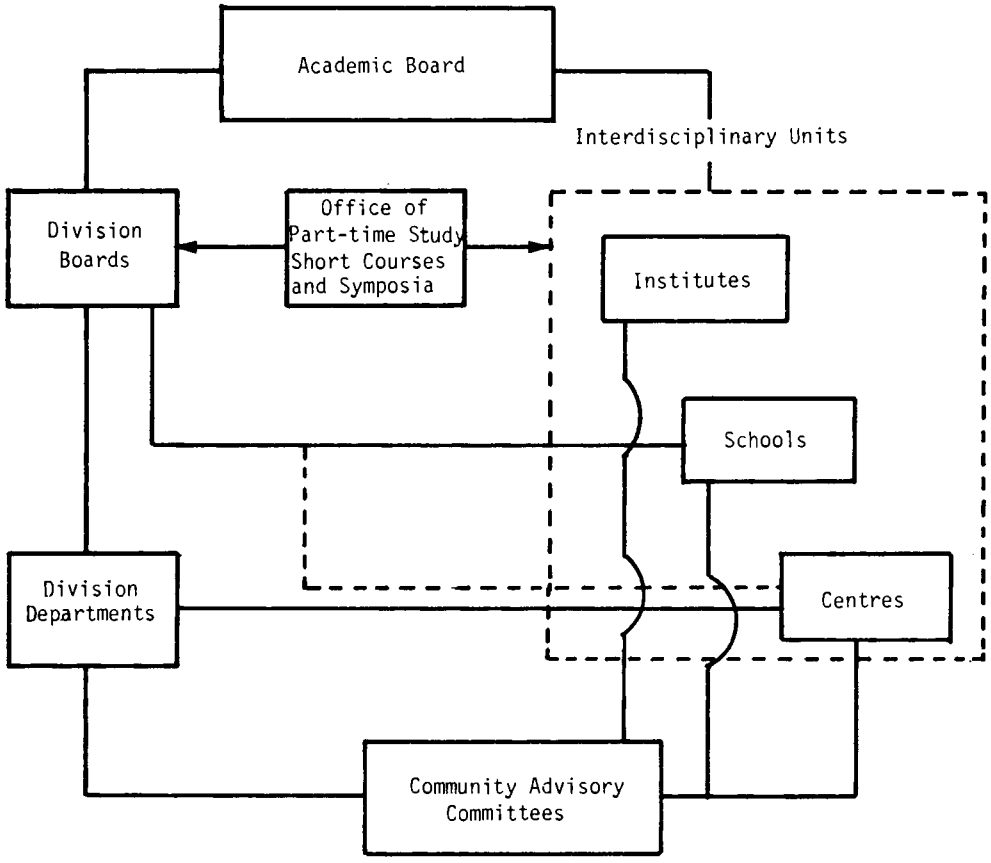

Figure 1: The Organisation of Interdisciplinary Units

Such a dual structure is outlined in Figure 1. Institutes, schools and centres are relatively autonomous activity groups which bring the more basic disciplines together through inter-disciplinary study activity. The activity groups must function in close co-operation with industry or agriculture, government agencies and community bodies and depend to a large extent on policies generated through strong advisory committees with considerable relevant membership from outside the educational institution.

Programmes of Study

Tailor-made study programmes are, in general, becoming much less efficient in meeting modern educational needs. They tend to be inflexible and often expensive unless group sizes are very large. Furthermore they lead to student and staff introspection.

A complete programme would normally comprise some or all of the following with a high degree of interaction: basic disciplines; application; general studies; project work; and practical, field and professional work. Basic disciplines and some application/vocational elements lend themselves most to common multi-programme use. These will usually be of large economic student-group size and demand very good instruction. Applicational elements involve the general application and synthesis of basic disciplines to particular subject themes.

The main objective of general studies must be to complement and contrast the principal subject areas of a complete programme. These should include communications studies emphasising the ability to communicate with different societal groups using all available media. All such studies should balance the needs of the community with those of the individual. Hence, close consultation with all relevant groups is necessary.

Project work is highly motivating and links theory with practice. It is important for the student to experience both individual and team projects; the latter particularly because in real life hardly anyone is not subject to the thoughts and actions of others. The depth of project work depends upon the study level of the programme. Obviously a technician would not be expected to produce the same kind of project thesis as that of a technologist. However, all should do projects and all can benefit especially if projects are related to useful research and development.

Practical work involves laboratory work, where applicable, and experience gained "on the job" or "off the job" or both. This can be provided either in a real or simulated environment. The development of such elements has led to many successful types of integrated sandwich programmes. However in the developing situation they are often poorly supported by the employer in the provision of good and relevant practical or professional training places. The process can be assisted by providing some of this training in a pseudo environment within the institution, for example, in an industrial centre or a practical accountancy unit. This integrated practical phase is one of the most important in any programme. It brings the student in touch with real life and has a marked maturing effect. Its organisation also brings staff into close contact with the community with a consequent benefit in teaching, research and consultancy and in institutional-community relations in general.

Finally it should be emphasised that the objectives of all elements and of the complete programme should be clearly defined and that curricula are best determined in objective form.

Access and Opportunity

The problem of educational opportunity is particularly acute where social demand is considerably greater than economic demand. The tendency is to admit the most academically qualified candidates irrespective of the terminal level of study. This produces frustration and dissatisfaction on two counts. First, the more academically able often find themselves in jobs less demanding than their ability level. Secondly, the less academically able are denied an equal opportunity to secure jobs in which they would be satisfied. Naturally employers dislike this state of affairs as much as the students. The painful but more equitable solution is a quota system of input and output in which ability is matched to the level of terminal qualification. It demands careful selection using good

interview techniques. It can be assisted by constraints on entry requirements. However, the system should make limited provision at all levels for alternative, but acceptable, entry qualifications. This includes mature students and pre-entry study programmes.

A highly competitive situation for full-time places emphasises the importance of part-time study. This provides a second chance for those failing to gain admission on full-time programmes and an opportunity for those who, through family circumstances, had to leave school early to take up employment. However, the organisation, standards and general

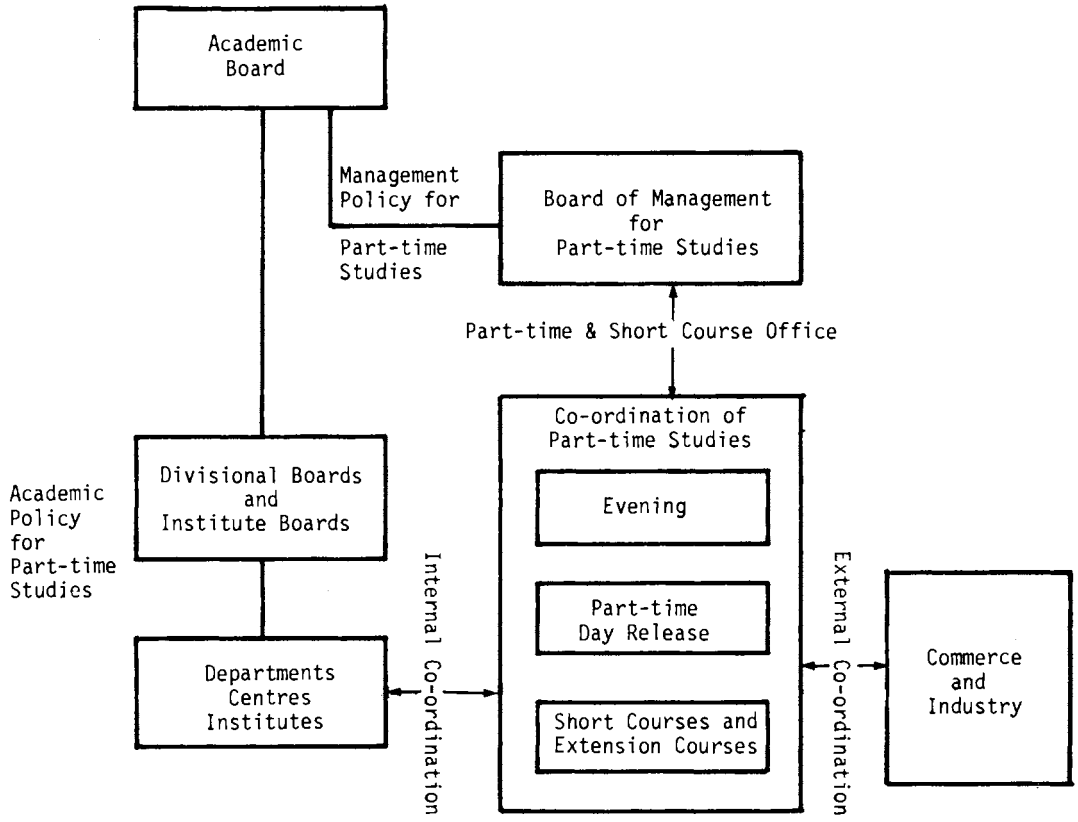

Figure 2: Hong Kong Polytechnic: Office of the Associate Director for Part-time and Short Course Work

level of teaching in evening work often leaves much to be desired. This can be overcome by setting up a high-level part-time co-ordinating unit to ensure that a substantial proportion of full-time teachers are employed on part-time work and that suitable administrative and supervisory support and in-service training for part-time teachers are provided. One example of this is the Hong Kong Polytechnic's Office of Part-time and Short Course structure (Figure 2). Its aim is to provide equal opportunity to part-time students at all levels of study and at the same standard as that provided to full-time students. It also co-ordinates short courses and conferences and is proving to be both educationally and cost effective. The success of such work is largely dependent on substantial participation by full-time teachers. Their time should be carefully planned and remuneration for extra work must be adequate. The latter is notoriously poor yet such work is a source of significant financial contribution from the employer and/or the working student rather than from the public purse.

As the gap between social and economic demand closes, changes occur. There is a swing from evening to part-time day or full-time study.

Employers become more generous in granting time off for day-time study. Entry requirements and ability are more evenly matched to the programmes offered and the content of these programmes alters. There is change in the pattern of levels required towards more higher-level work. There is a need for flexibility, transferability across levels of study, and rapid response to changing manpower requirements. The net result is perhaps demonstrated in many developed countries in the Commonwealth (and elsewhere). The resources available are just not adequate to meet demand within the traditional educational systems that have developed in a somewhat disorganised way. What is needed is a planned systems approach to the tertiary educational process. However, the tertiary sector is inter-related with the secondary sector and with non-formal education. The question arises as to whether it is wise to provide more and more places in secondary schools with the promise of university degrees for which suitable employment does not exist. A more appropriate solution would be to limit the secondary school places and provide alternative tertiary and non-formal education with a flexible mixed study mode progression according to student ability.

Research and Consultancy

The number of people capable of a real breakthrough in knowledge is small and even then history suggests that chance plays a significant part. Leaps forward, although dramatic in result, are rare, and advances are generally made in relatively small steps. The main requirement from human resources is therefore the ability to conduct useful project-oriented research and development on a team basis and the use of institutional staff expertise on consultancy. Such activity necessitates close co-operation with the eventual user, and the tertiary educational approach must be oriented accordingly although highly academic research must not be neglected in the process.

Unfortunately, higher degree programmes, whether by course or research often reflect the interests of the academics rather than the needs of the community. The result is often relatively small and uneconomic group sizes engaged in non-relevant higher degree studies. If, however, the predominant source of research and postgraduate study is the eventual user, then an economic and productive institutional approach is to concentrate on team research of practical application and to use the knowledge thus gained in the form of short courses. If the research is in fact useful then the short courses, based on a reasonable return of cost, will be well supported. In turn such courses will provide modules of study which, if combined in several disciplines, can lead to equally useful and cost-effective higher degree programmes. This approach can be enhanced if joint higher degrees are conducted integrally with industry as in the industrial PhDs developing in the United Kingdom.

There are considerable expertise and resources in tertiary institutions and they should not be confined solely to the teaching function. A good way of using this expertise to maximum advantage is to co-ordinate consultancy through a private self-financing non-profit-making organisation as instanced by the University of New South Wales in Australia and Loughborough University in the UK. Of course care must be taken to limit the time spent by staff on this activity and to avoid excessive competition with professional consultants.

The organisation of research and consultancy as described above provides an outlet for student participation at all study levels and for close contact with the user, i.e. the eventual employer. It also provides practical feedback to the academic staff with consequent benefit to the

teaching function and the orientation of human resources to the real needs of the community.

It is surprising that good research and consultancy co-operation between university and industry is still rare in highly developed industrial countries. This was brought out in a recent Workshop on University Consulting Services organised by the Organisation for Economic Co-operation and Development where the failure was attributed to a mental barrier and lack of confidence between educators and industrialists; lack of understanding of the economy and of industry at the school level; the choice of unsuitable joint research topics; lack of courses integrating theory and practice; university staff regarding applied research and development as inferior to pure research; and an information gap on what has already been achieved.

Reflecting these findings in the developing countries where their education systems have been modelled on the developed ones, the situation can only be regarded as ominous. This is especially true in agriculture where most experts are agreed that close co-operation between agricultural education, research and advisory or extension work is essential.

The way forward surely must be for the tertiary institutions and the private sector to make every effort to come together in a spirit of mutual understanding with the maximum support that government can give. In this respect it is significant that institutions offering multi-mode and integrated programmes appear to enjoy the greatest degree of co-operation with the community.

The Learning Process and Some Consequences

A Systems Approach to Learning

To cater for the real needs of the community through a systems approach it is necessary to define a set of institutional objectives. These objectives must aim at meeting the needs of a developing situation. A primary purpose must be to prepare students to adopt innovative and open-minded attitudes conducive to the socio-economic environment in which they work and play.

The next step is to define the system best suited to satisfying the objectives. At the heart of this is the learning process. The need for flexibility, transferability and amenity to change, make a self-learning systems approach an attractive proposition. Furthermore, there is often a student language problem. The approach can be achieved by the use of credit units of study which can be combined in different ways to form complete programmes of study. It needs to be supported by considerable use of educational technology (programmed texts, audio-visual aids, closed circuit television, and the computer) so that much of the lecturer's time can be devoted to small-group or even individual tutorials. In this way self-learning is complemented by a strong tutorial mode.

This system is particularly relevant and beneficial to part-time and evening work. It ensures that standards of part-time study are equal to those of full-time study (which is not always true with more conventional teaching methods). The system is particularly advantageous if it can be widened to a number of participating institutions and, in part at least, to schools. It also facilitates rapid educational response to changing community needs through the addition of suitable optional units of study.

There are many, often expensive, tools for the trade of educational technology. However, at least initially, accent should be placed on relatively simple and widely used software rather than highly sophisticated hardware. Many institutions have set up large centralised media centres which rapidly become isolated and very expensive emporia of low productivity.

Most teaching staff have to learn the techniques, and many have to be encouraged or coerced into trying them for themselves. Decentralisation is the key word. Obviously a central processing unit is required, but it should be relatively simple and contain only a few central staff and advisers. It is important to set up a number of small sub-centres near the academic units where staff can go to receive advice and produce programmes themselves. The result is a series of learning packages providing part or whole units of study. The greatest deterrent to progress is the staff time needed to prepare the packages. With a static staff establishment it is only possible to make significant progress by bringing in a temporary addition of staff. With an expanding staff establishment it is possible to bring in anticipated future staff, say a year early. The most economic way, however, is through a carefully planned and co-ordinated programme on an inter-institutional basis with each institution taking a share of the work. In general, student reaction to educational technology is good and understanding is usually higher than by more traditional learning methods.

The small group or individual student tutorial can be very time consuming on staff and hence expensive, and for this reason is often avoided with conventional teaching methods. However, when linked with self-learning the actual time required per small group can be relatively little. For example, a tutorial system of half an hour per fortnight in, say, four main subjects of a programme can be quite sufficient to provide adequate student-staff contact.

Indications are that the self-learning approach can be both educationally effective and economic. However, few institutions have fully succeeded as yet. This is probably because those who have tried have started from an entrenched and very traditional base and without a comprehensively planned systems approach.

Finally, the combination of a self-learning system with a part-time and short course unit (as suggested in this section on Access and Opportunity) provides the potential for the development of a multi-level open education, distance learning, approach.

Validation, Assessment and Awards

Having suitably designed the programmes and the method of learning it is necessary to ensure appropriate validation and assessment of the students' work and a suitable award to those students who are successful.

Validation can be entirely internal or external to an institution although it is usual to have a combination of the two. It is essential to have some degree of external validation since this ensures comparability of standards with other institutions (and countries). However, the best guarantee of standards is to place the responsibility firmly in the hands of the institution and its staff. A system of programmes, assessment and awards entirely external to the institution provides little scope for initiative, creative development and staff-student satisfaction. It divorces the teachers from essential participation in, and an objective approach to, the learning process. It also discourages the inclusion of

subject matter specific to the needs of the community local to the institution. Such local needs can vary considerably in a large country. Nevertheless some degree of external peer evaluation is essential. This could take the form of a validatory review every five years or so by a joint internal-external review body. Part of the external membership could, with advantage, come from different countries of the Commonwealth.

There is, of course, no reason why there should be no significant areas of common work (units and modules) across institutions. This would demand institutional, governmental, industrial, commercial and community participation and the outcome would provide common national contributions to the institution's own programme. These common national contributions, however, would not necessarily violate the principle of institutional responsibility for validation. It would nevertheless introduce a measure of constraint since some, if not all, institutional programmes would contain common national components. A possible structure to achieve these principles is indicated in Figure 3.

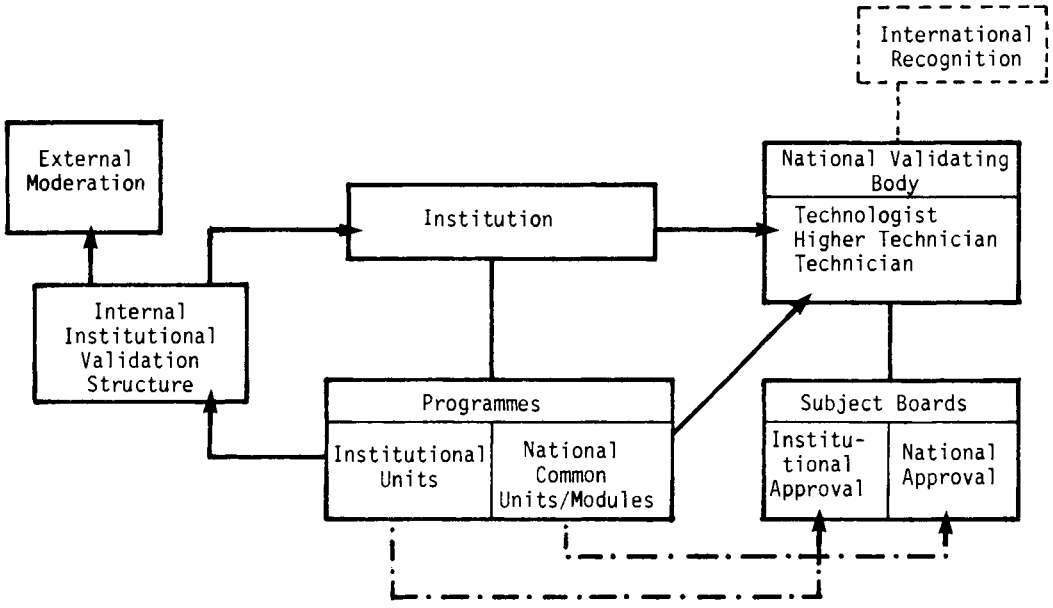

Figure 3: Combined Internal/External/National Validation Model

Assessment of units, modules and education technology packages may be by continuous assessment, combined continuous assessment and examination, examination only, and student self-evaluation. Assessment by examination only should be avoided as it tends to induce an uneven student work rate and emphasises memory retention rather than general ability. Furthermore, account should be taken of performance in laboratory work, essays, creative ability, etc. Continuous assessment demands a more even student workload but often creates unfavourable student reaction due to attitudes engendered from conventional primary and secondary education. Thus assessment is best based on a combination of continuous assessment and examination with some credit allowed for the results from student self-assessment. However in no circumstances should the number of examinations be excessive. Some students find examinations stressful, and in most employment situations few people are subject to the artificial examination environment created by conventional academic study methods.

The subject of terminal awards has caused problems in many Commonwealth countries. It is very important to use a nomenclature which reflects the level of study and the custom of a country. The overriding consideration is to ensure a nationwide uniformity and this can be achieved by giving terminal award powers to a statutory National Validating Body. By doing so there is the added advantage of avoiding different requirements for employment in government and non-government establishments, since government would have to use the statutory national awards.

The grading of programme performance is currently the subject of world-wide debate. Many students believe that grading on academic performance is a stigma which can remain with them for life. The employers believe that it is required in order to judge ability and the amount of remuneration to be offered. In addition, some form of grading is often required by professional bodies. However, it is questionable whether finely graded systems have much impact other than on the first few employment appointments. Thus a pass/fail system, with perhaps a "distinction" classification for outstanding overall performance, together with a subject record, should form a reasonable compromise. The emotive issue of grading often assumes far greater importance than it merits. What a student learns, how it is learned, and how the learning is applied, are far more important.

Tradition and the Professional Bodies

Certain educational and professional institutions in the United Kingdom have had, and to some extent continue to have, a profound effect on other Commonwealth countries. The reason lies in history. However human resource requirements differ considerably from country to country and what is appropriate in the UK is not necessarily appropriate elsewhere. The more developed countries of the Commonwealth clearly have much to offer to the less developed ones, and the best way this can be done is for the less developed ones to formulate and put into practice their own educational needs with the critical help and assessment of the more developed countries. Of particular significance is the reluctance of some professional institutions in developed countries to be flexible in the recognition of study programmes in the developing countries. Of course standards must be maintained but this does not necessarily mean that syllabuses and examinations must of necessity be imposed from outside. The case for complete exemption of an educational institution's own programmes and student assessments is much more logical. This should be based on an appraisal of the staff, resources, relevance of the programmes to the needs of human resources, and the overall academic standards and achievements of the institution. However this issue should not be confused with licence to practise professionally which should be a matter of an individual country's legislation.

It must be accepted that as countries develop they will become more competitive with their more developed counterparts. However this also provides the opportunity for the developed ones to export more know-how and goods to the developing ones. If, for example, a university or a polytechnic has a workshop full of UK machine tools it is certain that graduated students in their subsequent employment will look first to the UK to purchase that industry's requirements. Thus aid of all kinds is not a one-way process; it can have reciprocal benefits for the donors.

Teacher Training

Many teachers enter tertiary institutions immediately or soon after graduation and hence have no formal teacher training and very little

professional experience in the subjects they subsequently teach. Furthermore, many who do qualify in teacher training enter tertiary institutions immediately thereafter and therefore lack subject professional experience. This is not helped by the fact that many teacher training institutions are themselves somewhat introspective and do not have the advantage of a wide range of disciplines involving advanced levels of study, research and consultancy. One result of this unsatisfactory state of affairs in an environment of advancing technology has been the emergence of technical teacher training institutions. This has resulted in a marked improvement in the quality of technical teachers in tertiary education. However there are several ways in which teacher training can be improved. The most important is the need to incorporate substantially more "industrial" training into the programmes. To complement this, curricula should reflect more project-oriented work rather than traditional theory. There is also the need for some practice in the more innovative methods of learning and curriculum development. Most of the above is concerned with the quality of the teacher but the question of demand and supply is equally important. Most countries cannot get the equation right and hence go through cycles of under- and over-supply. Teachers tend to remain teachers because of the way in which they have been trained. There is a need for greater mobility through joint programmes in education and professional subjects, e.g. agriculture, engineering or business studies. Such teachers would then possess the ability to teach or to practise in industry or commerce according to demand, opportunity and inclination. The mobility benefit both to the teacher and to the community would be substantial. There are a few schemes but they are generally confined to joint degree programmes or to postgraduate topping up. There is no reason why such an approach could not apply to technician and craft levels. However, it would demand much greater co-operation and integration with tertiary institutions, teacher training establishments and industry than currently exists in most countries.

Staff Development

Staff development is the continuation of training of teachers in service. It is much neglected and generally substantially under-financed. It is concerned with up-dating and the extension of knowledge both academically and practically through work experience in industry, etc. It is also concerned with career involvement and therefore involves training in administration and management. Much can be done through properly organised in-service training by the educational institution itself. However the key to effective staff development is a systematic institutional process leading to the required competencies in the teacher derived from the objectives of the tertiary institution. This demands the development of procedures such as job analysis and staff appraisal on a continuous basis and the resources to achieve the required competencies.

Staff development should derive from national policy and be funded appropriately. However, a sound scholarship scheme can help in this respect. Unfortunately, these are often ill-planned and often not relevant to community needs. They tend to concentrate on academic rather than practical or professional experience and yet the latter is generally more useful to the teacher especially in promoting partnership between education and "industry".

Tertiary Institutional Organisation and Structure

There is a plethora of tertiary institutions in the Commonwealth countries Nomenclature differs widely and hence many institutions called by the

same name have entirely different functions. For example, a polytechnic in the UK covers higher technician work to higher degrees whereas in Malaysia a polytechnic is effectively a secondary school alternative. In fact there is no clear understanding of what really constitutes tertiary education. One way of looking at this problem is to consider the flow of students through the educational spectrum. For this it is necessary to use some notion of age and the number of years in each educational sector. Figure 4 postulates three types of institution: universities dealing with first and higher degrees; advanced colleges dealing with higher technician work (or equivalent) and first and higher degrees with emphasis on vocational study; and further education colleges dealing with craft and ordinary technician (or equivalent) work. In fact the latter two could cover the entire tertiary spectrum if universities in the Commonwealth had not followed the rigid "no sub-degree work" attitude set by the pattern of the UK universities. It is, therefore, unlikely that a two-tier pattern can emerge. However the main differences between the

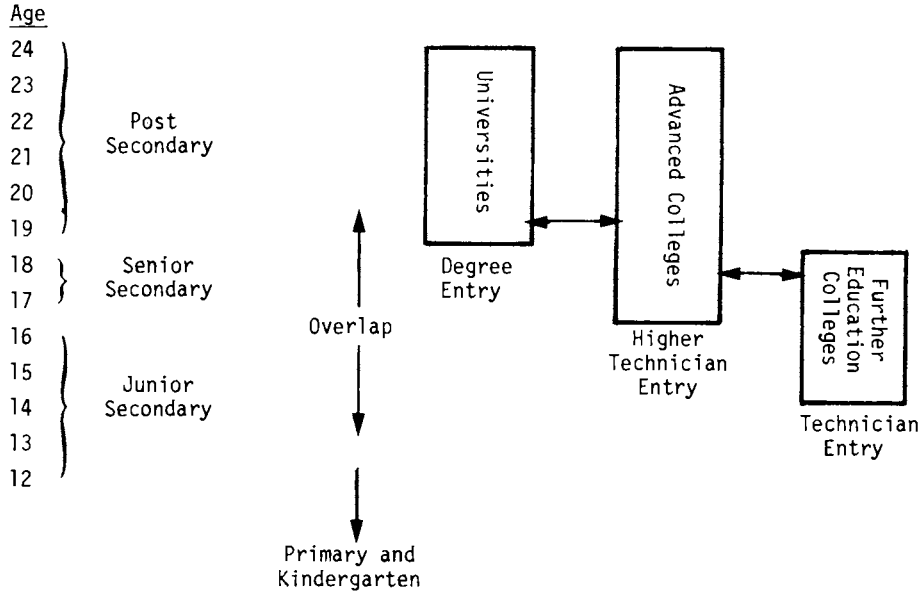

Figure 4: A Consistent Set of Tertiary Education Institutions

universities and the advanced colleges are the concentration of post-graduate and more fundamental research in the universities and the more vocational multi-study mode approach of the advanced colleges. This suggests that universities might assume an élitist role with the bulk of socio-economic human resource needs met by the advanced and further education colleges. A high degree of integration could be achieved by designating the further education colleges as associated units of the advanced colleges.

Few, if any, Commonwealth countries have developed the right degree of balance and co-ordination to achieve this essential, and potentially cost-effective, goal. To do so requires a high degree of national planning of secondary and tertiary educational institutional provision in close co-operation with regional requirements. This does not mean national or regional control of the institutions but rather a clear definition for each institution of the numbers, types, modes and levels of output based on socio-economic need and provision of the resources to meet them. Figure 5 indicates a possible scheme which also incorporates the validating function discussed above. It postulates a system of statutory national

and regional planning authorities. This would obviate the need for several specific bodies such as university grants committees although the experience of these committees would be invaluable in the setting up of a more widely based scheme.

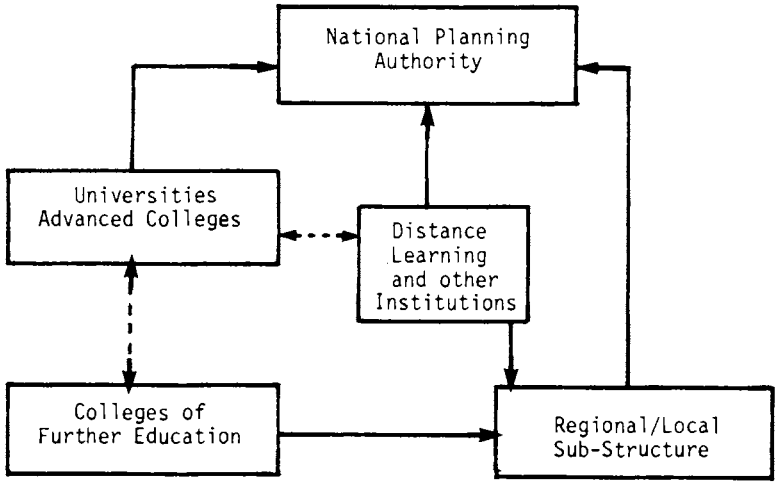

Figure 5: Outline National/Regional/Institutional Planning Authority

Whilst all institutions must take account of both national and regional requirements, it would appear logical that the output from the further education colleges would derive largely from regional needs. Additionally part-time work at all levels and in all types of institution have a strong regional connection because of travel distances between home or work-place and the institution (the exception being distance learning institutions).

For the developed countries the above approach is largely a matter of rationalisation and the reorganisation within severe traditional constraints, and most are engaged in this very difficult task. For the developing countries there is the opportunity to change direction through systematised planning. However, the constraints are different and, of course, resource provision is the dominant factor.

The Degree of Institutional Control

The primary consideration in the structure of relatively autonomous institutions is public and academic accountability. Unfortunately the roles of these two functions have become confused. Public accountability is normally effected through councils of governing bodies consisting of knowledgeable members of the public, some institutional representation and some government members (either national or local). Such councils generally set overall institutional policy and, through the control of finance, ensure that both students and public receive educational value for money. Academic accountability is normally effected through senates or academic boards and is essentially concerned with the devising, conduct, and standard of educational programmes and with research. It is the basis of "academic freedom" whatever that may mean.

In practice, within Commonwealth institutions the two roles can be dominated almost entirely by a governing body at one extreme or by a senate at the other. The former is the trend for locally controlled institutions and the latter for national institutions, especially universities. It is clearly wrong for the permanent institutional staff

to be "judge and jury" on all matters. Equally it is wrong for outside members of the institution to dictate. The situation requires a re-evaluation of the public and academic accountability roles and of the membership of the essential bodies responsible for carrying out these roles. Grey areas will exist, as in any organisation and structure, but these can usually be resolved through joint consultation.

The above most obviously relate to the appropriate institutional output to the community and hence of close co-operation and co-ordination with the latter. This is best achieved through strong and effective community-oriented external advisory committees to each academic unit. Indeed the existence and function of such committees might well be incorporated into institutional charters.

Other Factors of Organisation and Structure

With regard to teacher training and other specialised institutions it is suggested that the need for education breadth, self-learning, flexibility, manpower mobility, inter-disciplinary and cost effectiveness calls for the integration of such specialised institutions within the three-tier structure proposed in Figure 4. Most existing specialised institutions are small, costly and tend to become introspect and somewhat isolated from the community. Teacher training would seem to be ideally suited to be integrated with the advanced colleges since this would best meet the requirements stated in the section on teacher training. Other specialised subject areas might well be integrated with an appropriate institution from the three-tier system. However there will always be a limited need for a few specialised institutions linking education, research and practical application. They should however be kept to a minimum number and their benefits should justify their existence.

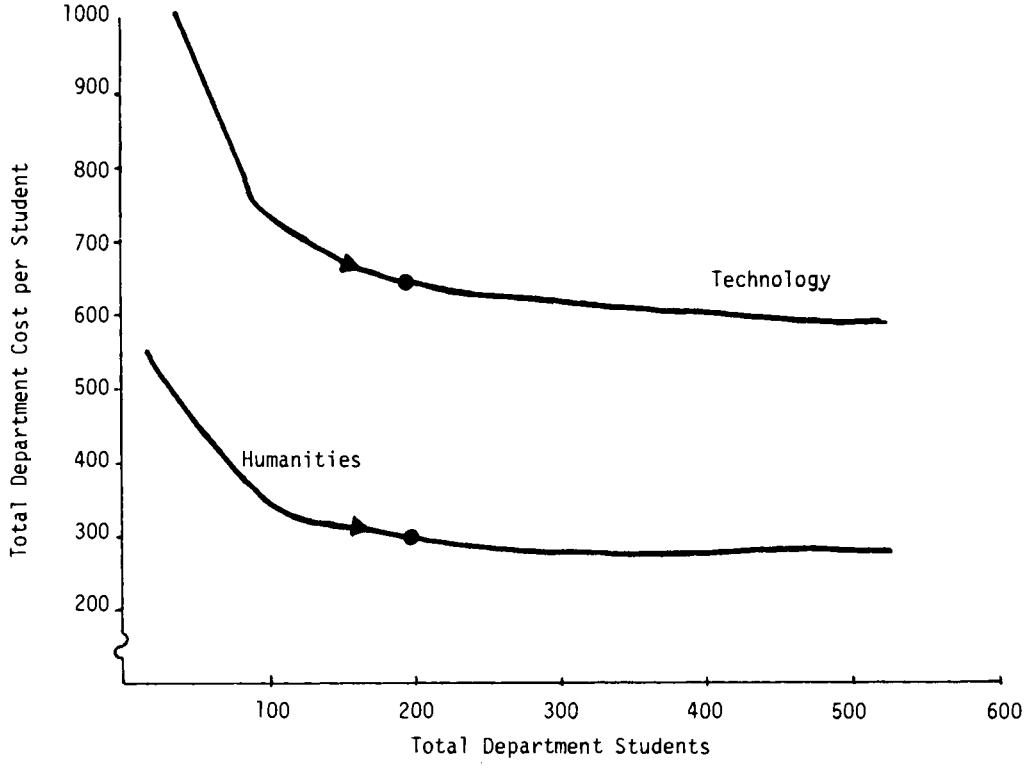

Figure 6: Variation of Departmental Cost Per Student With Group Size (1968/69 Cost Level)

This matter raises the question of size of an institution. The economic influence of group size is demonstrated in Figure 6 which shows total department cost per students against total departmental group size for

technology and the humanities. It indicates the considerable cost of small group size. Using this kind of data over a balanced institution suggests total student populations of about eight to ten thousand if full economic advantage is to be achieved. Beyond this the problem is one of achieving a suitable social structure and its breakdown into acceptable sub-structure.

Nevertheless geographical and regional considerations may dictate smaller units and this raises the question of multi-site institutions. Most experience to date suggests that such structures do not work. However, this has been largely due to the creation of a large institution by merging smaller ones. In such cases, it is necessary to break down many social, technical and administrative barriers. This is not to say that in the ultimate such mergers are not necessary, but it must be recognised that they need to be very carefully planned and take at least five to ten years to stabilise. On the other hand, there is no reason why large central institutions with a number of strategically located satellites could not be planned *ab initio* so as to provide social and economic advantages over a set of smaller, completely independent institutions. Such an approach is particularly important for developing countries where rural education is emphasised.

The Importance of Planning

Throughout this paper constant reference has been made to the importance of educational planning across the various educational sectors and in partnership with the relevant government departments and the community. Planning can be defined as the development of a concept concerned with the active implementation of the process of change within a defined framework. It is essentially inter-disciplinary, involves organisation, and is necessary from the small detail to the large overall problem. When properly applied, planning methodology can do much to eliminate waste but it must lead to timely short-term decisions made with reference to a longer-term plan. Unfortunately inter- and intra-education institutional planning has been neglected. Indeed education itself has tended to neglect it as a subject area in its own right. This situation must be corrected if real progress is to be made towards meeting changing human resource needs. In particular, it is essential that the planning function balances the human factors with numerical evaluation factors if the optimum is to be achieved within limited resources. Finally it must be remembered that the educational output from planned new developments is some five years in the future.

Finance and Resource Provision

Since tertiary education is responsible for providing the dominant and most expensive proportion of a country's human resource needs, it is ideally necessary to assess economic and social benefit and cost. Such analysis should include benefit and cost to the individual student as well as to the community. Attempts to resolve this problem have so far yielded little that is meaningful and useful. There is a need for much more concentrated research effort in this area. Thus the method of provision and distribution of educational finance tends to be *ad hoc* and varies from crude simplicity to the application of quite sophisticated resource models. It is a process that leaves much to be desired even in the absence of reliable cost-benefit analysis.

The Overall Assessment and Distribution of Resources

The essential elements in the assessment and distribution of financial

resources for education are shown in Figure 7 together with a suggested preferred method of analysis. The assessment of human resource requirements *(Item A)* has already been discussed and clearly depends on manpower forecasts. This provides the basis for total educational cost, and, given a reliable cost-benefit analysis, it would be possible to assess the proportion of the Gross Domestic Product available for education and its distribution across the educational sectors *(Item B)*. This method would automatically take account of education's contribution to the growth in Gross Domestic Product. However the usual procedure is either to use overall normative models (e.g. cost per student) or to sum up vetted estimates from the institutions themselves through an appropriate authority chain. The former method is preferable as it provides a more equitable distribution, and account can always be taken of justified special cases. In any event the final total is generally greater than the government considers it can afford - although the government cannot really know this. Thus the usual outcome is a relatively arbitrarily determined proportion of the Gross Domestic Product which is then distributed in proportion to the normative assessments or institutional bids *(Item C)*.

It is clear from the above that there is a financial interface problem between the educational sectors (pre-primary, primary, secondary, and tertiary). The estimation of the proportions is very complex and depends upon the particular circumstances of a country and its state of development. Many developing countries are lucky if they can afford compulsory primary education whereas most developed countries already

Item	Element	Suggested Method
A	Assessment of the human resource requirements to meet the planned national socio-economic needs	Sound and reliable manpower forecasts
B	Assessment of the proportion of GDP available for educational financing and the distribution of this across the educational sectors	Socio-economic cost benefit analysis OR Normative models
C	Assessment of the equitable distribution of the tertiary sector funding across the tertiary institutions	Socio-economic cost benefit analysis OR Normative models
D	Assessment of the equitable distribution of the institutional funding across the institutional units	Normative models

Figure 7: The Progessive Assessment and Distribution of Educational Resources

provide free and compulsory education up to the age of 15 or 16. However, all countries have private or semi-private institutions in all sectors of education although their greatest impact is in the non-tertiary sector. Indeed in developing countries they often provide more educational places than the public sector. Thus the policy here must surely be that such institutions should satisfy at least a minimal educational standard and that wherever possible they should provide as many government subsidised places for those who cannot afford to pay as the economy will allow.

Bearing these factors in mind, it is apparent that the relative proportion of available resources spent on tertiary education is already generally excessive and yet is tending to increase. This situation is particularly severe in developing countries although applicable in some measure to all. Thus the onus is on tertiary education to become less costly, and hence on the economic use of resources in tertiary institutions themselves *(Item D* in Figure 7).

Institutional Resources

In general the total income of a tertiary institution arises from public funds (central and local government), benefactions, research and consultancy, and student tuition fees. Of these, the first and the last are usually the most significant. Benefactions are small and becoming more difficult to secure. Research and consultancy income is limited to profit margins on the institutional capacity to do such work and is not normally more than two to five per cent of total income. However, there is considerable scope for improvement here as suggested in the section on *Research and Consultancy*. Thus the major variable influencing the public fund contribution is the tuition fee income. This latter can vary from five to 85 per cent depending respectively on whether the institution is public or private. Tuition fee income usually derives from a personal contribution by the student (or the parents) and/or a subsidised contribution from public funds. The latter is normally part of a student grant and/or loan scheme and may be based on a means test of family income and cover both tuition and subsistence. It must be allowed for in assessing the total national education bill. Evidence from the Hong Kong Polytechnic suggests that salary on graduation has well exceeded inflation over the years quite apart from a considerable benefit in later career, and this may well be true of developing countries in general. If so, this suggests that a full or partial loan scheme for living subsistence is a fair proposition to the needy student. However, if it is accepted that those who can afford to pay should do so, then the tuition fee should be much nearer the economic cost per student. Obviously, the tuition grant to the financially disadvantaged student would have to be adjusted accordingly, but the net result of a high tuition fee and a living subsistence loan would be reduced demand from public funds.

By far the greatest recurrent expenditure is the provision of staff. This varies between 65-80 per cent for most institutions. Many models exist for the estimation of academic, supporting and central administrative staff. Academic staff is the most expensive, and adequate support and administrative staff should be provided so that teachers teach and research efficiently and effectively. Comparative data from different institutions and different regions of the world can be very effective in determining the staff complement for a particular subject area. However, changing needs can provide uneven staffing across the disciplines, and the use of some fixed-term contracts and part-time staff is wise and thrifty housekeeping. The employment of senior students to assist in the tutoring of junior students is a further possibility. Other substantial expenditures relate to equipment, institutional research, maintenance and minor works, general expenses, staff development and institutional services (library, computer centre, educational technology centre, etc.). All of these are amenable to some normative modelling although large items of equipment and unexpectedly large maintenance problems present difficulties.

Capital costs relate almost entirely to buildings and are equally amenable to normative modelling in terms of accommodation areas for different functions. It is essential to link space accommodation modelling with the recurrent resource models so that a matching balance of recurrent and capital is achieved. To be effective this requires funding provision on at least a three-year cycle with reference to an overall forward plan of five to ten years, annually up-dated.

Management Information Units

It is evident that considerable systems analysis and data handling are involved in the process of assessing and distributing resources within

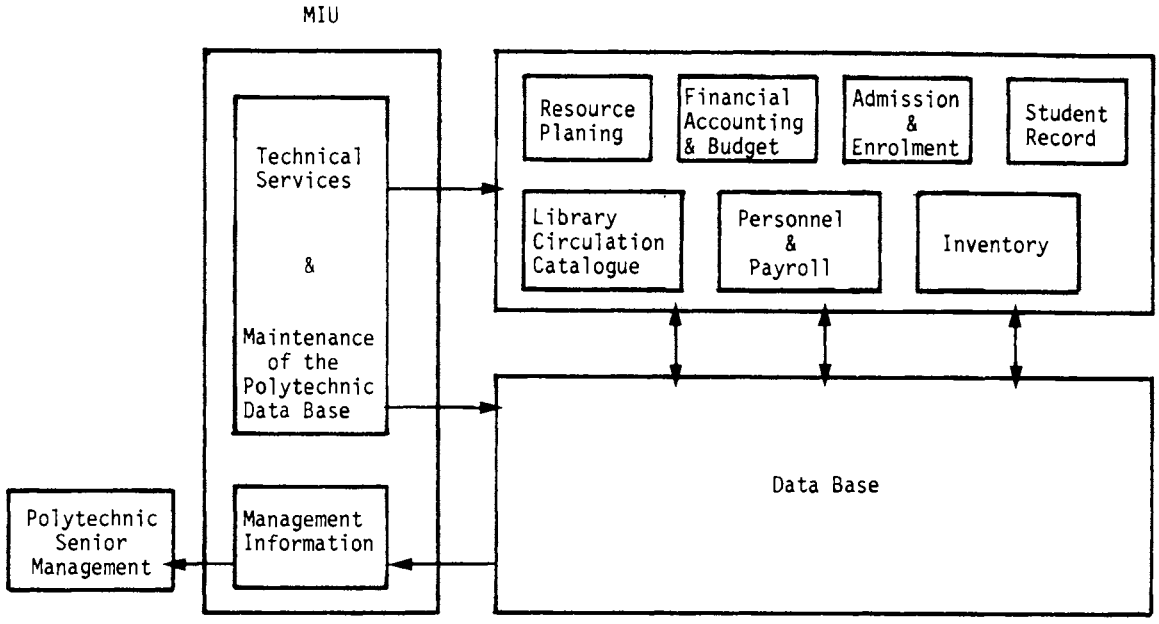

Figure 8: The Role of the Hong Kong Polytechnic Management Information Unit (MIU)

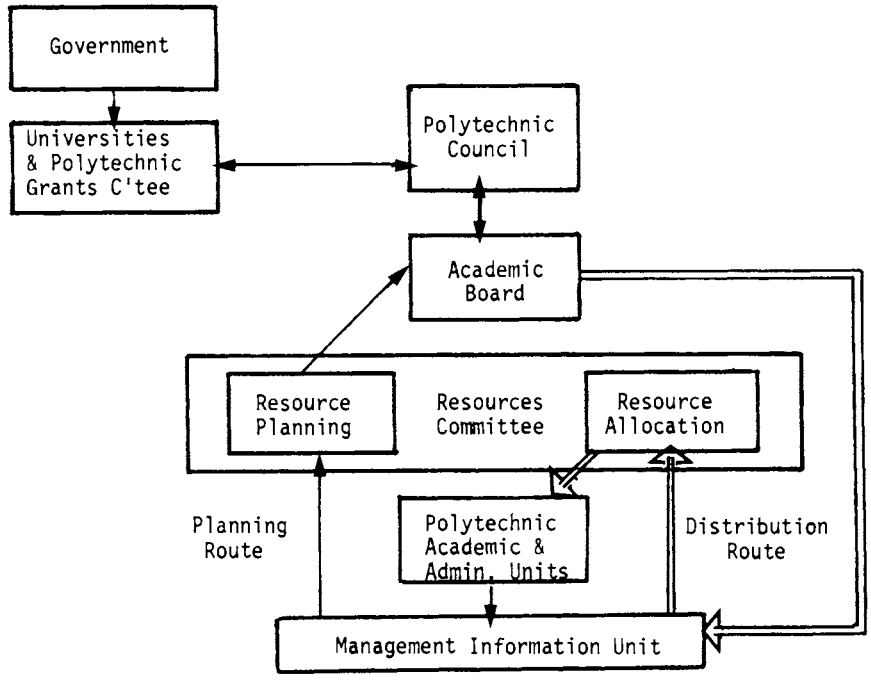

Figure 9: MIU's Function in Resource Planning & Distribution

institutions. However there are several other functions requiring a systems approach, e.g. academic student admissions, budgetary control, student employment and training. It is cost effective to accommodate all of these functions in a Management Information Unit.

A Management Information Unit is essentially computer based. It must be relatively small, contain systems analysts of a high calibre, and work in co-operation with academic and administrative groups. It develops and up-dates appropriate systems for these groups but the systems, once proven, are operated by the groups themselves. This in fact is the key to a successful Management Information Unit and its general acceptance by staff. Through this functional approach a relevant and continuously up-dated information data bank is built up within the Management

Information Unit from which good management decisions can be made. An example of the functions of one such unit is presented in Figure 8, and a more detailed picture of the resource estimation and distribution cycle in Figure 9. A study of these two figures demonstrates the principles stated above. The development has been extremely well accepted by staff and has made a substantial contribution to the planning, cost effectiveness and educational functioning of the institution.

It should be observed that whilst a Management Information Unit of this type usually derives from resource planning, distribution and monitoring, it is essential to pay particular attention to the other functional uses to which it can be put. This needs careful consideration of the total longer-term data of all kinds to be stored. Over the years sets of time history data will become available and these can be used for more refined modelling and, most importantly, for longitudinal studies of behavioural problems. If Management Information Units were effectively organised on a national, regional and institutional basis, they could be the means of providing the meaningful socio-economic cost-benefit analyses so essential to the assessment of educational provision.

The Need for Radical Change

The 'grass roots' view in the whole range of higher education seems to be the need for radical change. As an example of this I can do no better than to present the broad conclusions arrived at by the 1979 Conference of the Association of South Asian Institutes of Higher Learning (ASAIHL) which included a significant proportion of delegates from Commonwealth countries.

They perceived higher education as a broad spectrum of post-secondary institutions which included technical, vocational and non-formal education and which embraced sub-degree work and part-time study as well. They further advocated a reduction of the gap in salary between graduates and non-graduates. Higher education had to be planned according to manpower needs and related to available employment, and they warned against the unplanned diversification and proliferation of academic degrees. In a situation where countries are dominated by traditionally educated élites, the greatest need was to up-grade opportunities for the socially disadvantaged. The demand for social mobility particularly in rural areas was highlighted. This could be achieved by changes in geographical location and the academic content of tertiary institutions. However they favoured controlled selective admission to higher education since free access could result in the lowering of standards and the escalation of costs.

Thus the climate seems favourable for change. Because institutions are reluctant to initiate change, it requires wise and firm direction from governments based on clearly defined socio-economic needs and demands. Such direction should not however impose excessive control on the institutions - rather the reverse. There should in addition be real and close co-operation between tertiary educational establishments and the appropriate sectors of the community.

Much can be achieved through institutional self-help and the exchange of ideas and experience across Commonwealth countries including aid from the developed to the developing countries. This would seem to call for greater central co-ordination than currently exists involving links with existing organisations such as the Association of Commonwealth Universities. The Commonwealth Secretariat has an important role to play in this sphere and should be asked to prepare a suitable structure that would accommodate the changing needs of member countries.

3. The Role of Universities: *Asavia Wandira*

Although higher education is generally taken to mean all post-secondary education including universities, teacher training institutions and institutes of applied sciences and research, the special role of universities in the development of human resources merits separate mention. Universities occupy a pivotal status in the hierarchy of educational institutions and they exercise considerable influence on the work of other institutions. Furthermore, modern universities claim a significant proportion of the education budgets of their countries and are likely to continue to do so as the pressure for their expansion increases. It is obviously necessary that some concern should be shown for returns to investment in universities, especially as the general impression that universities tend towards isolationism and élitism has led to much criticism of their role in society. In answer to such criticism, it is not enough to explain the role of universities in terms of their history and origin: their present character, operation and relevance to contemporary society must also be examined.

The Multiple Roles of Universities in Human Resource Development

Although the intensification of the drive towards innovation in universities is of recent origin, universities have over the ages demonstrated a capacity to adapt themselves to the dominant notions of their responsibilities to society. One of the oldest of such notions is that which regards universities as instruments of civilisation created to produce civilised, educated, or cultured man. At the heart of the traditional university is the commitment to transmit a culture which makes man not only civilised but universal. At national level, the extension of university coverage therefore means the extension of culture itself and the increase of educated and civilised men in society. At international level, the extension means the greater universalisation of man across geographical and other barriers. For ultimately the imparting of university education consists in the spread of time-tested ideals no longer subject to national boundaries. Accepting that truth is universal and the fearless teaching of the same is the business of those who discover it, university men join others in equally respectable institutions in defending universalism.

Ashby and others have described how university models born in one region have been transplanted to other regions and, with only minor adaptations, have been made to operate successfully in recipient countries. In such circumstances, it is no surprise that universalism remained at the heart of Commonwealth universities and its proclamation engaged many academics. Nor is it a surprise that Comparative Studies leading to the formulation of general scientific observations have taxed many academic minds.

Significantly, however, in more recent decades, there would appear to have been a gradual retreat by universities into the concerns of their immediate environment and time. The particularism of their contemporary circumstances has come to occupy increasing proportions of their teaching

and research. It may therefore be asked whether the ancient attachment to universalism is any longer relevant and, in particular, whether universalism has anything to do with human resource development as conceived in modern times.

Here, it is pertinent to recall the remarks of the Commonwealth Secretary-General, Shridath Ramphal, in a keynote address to the Conference of Vice-Chancellors associated with the London-based Inter-University Council in March 1979 in Jamaica. Mr Ramphal urged the need for international co-operation in an inter-dependent world:

> Perhaps it is this insight of the world as a community of people needing each other for survival and having a common interest in the quality of the human condition world-wide that will, more than any other single factor, determine the fate of the dialogue between North and South... in the remaining years of this century. But it will determine much more than that; for international co-operation for development is not a thing apart; it could be human destiny entire.

Mr Ramphal argued that the world had become a "global village", "a single habitation" and then asked: "Is this not perhaps the essential role of the universities; to be in the vanguard of changing the world through changing man's perception of himself in relation to it?"

Clearly aspects of the universalism of the traditional university remain as relevant today as they were in ancient times. It remains the business of the modern universities to assist man in transcending the boundaries of his nation, culture and knowledge itself. In thus assisting village man to look beyond the village, universities can contribute to the creation of a global village.

In regard to the development of the cadre of students upon whom universities spend most of their time and resources, universities strive to achieve "international" standards and labels for graduates which command universal recognition. They thus seek to universalise their graduates. It is through this means that universities in the Commonwealth have created cadres of graduates that can easily be mobilised and transferred from country to country with the minimum of re-training and induction.

Here we may pause to ask one important question. Does the Commonwealth itself regard the existence of such universalised cadres with pride, and are there plans sufficiently developed for the more general utilisation of universalised man in the interests of Commonwealth development as a whole? The phenomenon of the continuing transfer of these cadres of graduates from the poor nations of the Commonwealth, where they are produced at great cost, to the richer and more industrialised nations ought to occupy the minds of government leaders. Equally, the more creative use of these cadres in the interests of Commonwealth-wide human resource development deserves examination.

The question is all the more important because, as has already been emphasised, universities have tended in recent years to retreat into the particularism of their nations. Specifically, development has become an all-consuming task. New elements of development strategy in the 1970s have become the centre of national and international dialogue, and universities are being called on to assist their nations in a multiplicity of new ways. These include the need to provide equality of

opportunity to sections of the community that have remained on the periphery of development such as women and the rural poor; the need to identify alternative sources of energy and to remove bottlenecks to general development; the need for qualitative and quantitative improvements in education and the supply of other basic needs such as health, water, food and housing; the need to ease demographic pressure; and the need to increase the awareness and capacities of nations to tackle environmental problems arising from inadequate development or from the side-effects of the development process itself in such matters as the biological, chemical, social and physical deterioration of the environment.

Clearly, the modern agenda for development is both urgent and compelling. Man is assumed to be at the centre of development, and the development of man himself is seen as the pre-requisite of more general development. Consequently, educational institutions including the university are expected to make the development of man their central concern.

Additionally, universities must determine what, how much, and in what way, they can directly contribute to the elements of development described by new strategies. Given that such strategies are likely to differ from country to country, from region to region, the responses of universities will tend to be governed more by particularism than universalism. Is this a matter for regret and is it a desirable development in the evolution of universities in the Commonwealth?

Constraints to University Innovation and Involvement in Human Resource Development

The implications of involving universities in the nature of contemporary development described above are far reaching and, without proper planning, can become overwhelming. For instance, bringing marginal or peripheral populations within the reach of the university involves dramatic decisions on access, content and methodology. Similarly, the enhancement of the economic utility of university education, and of the university as an institution, demands new decisions on the relationship between university education and work, on the type of research undertaken to support that relationship, on programmes and their content, and on the technology of university education. Additionally, the involvement of the university in basic education, non-formal education and continuing education, leads inevitably to the consideration of new delivery systems in hitherto uncharted areas. Indeed, the very fact of changing the focus of the university from the age-group 18-25 to the adult and working population, and to the mass of unschooled youth of developing countries, presents novel tasks unknown in the history of the university.

In the main, the problems lie less in conceptual changes than in the logistics of change. There are obvious ways in which universities can contribute to development without any drastic change in their structure and approaches. They can, as the Commonwealth Secretary-General has asked them to, champion new perceptions of development. They can also provide consultancy services to agencies involved in human resource development in such matters as design, execution, development and evaluation of programmes. Similarly, universities can reserve for themselves the training of certain cadres of high-level manpower required by development programmes including those for manning other institutions. University research on development needs can be executed in the form of special projects organised outside the normal departmental structures. Other areas of university involvement without serious changes in concept or operation can be explored.

Beyond these possibilities, however, lie decisions as to the appropriateness of existing university structures and provisions for extensive and direct involvement in development work. In particular, the structure of university departments, their programming and crediting systems, the financing and management of universities and, above all, the recruitment, development and use of academic staff in roles hitherto unknown to the university pose new logistical problems.

It would appear that there is much to be gained from Commonwealth joint ventures aimed at encouraging innovation in universities, in exchanging experiences and in describing successful involvement in development tasks. The creation of a common pool of experience in these areas and the spread of knowledge of innovative precedents should themselves contribute towards the generation of momentum for change and the removal of existing constraints. Above all, as the common heritage and assumptions of Commonwealth universities that have served the Commonwealth so well in the past come under pressure of change, the evolution of new structures and modes of operating institutions should command wider interest at international level than at present.

Approaches to Change

At national level, the search for new paths for the ordering of universities is not new. Three time-tested approaches may be briefly examined. They are relying on the forces of the market, using the influence of the political order, and relying on the persuasive influence of the moral order.

Relying upon the market system presumes the readiness of universities to respond to the forces of supply and demand. For instance, if more doctors engineers, teachers or artists are required, this will be reflected in the salaries they fetch on the open market and in the demand for student places in university professional schools. Correspondingly, the demand of those who cannot come into university residence will be met by part-time and non-formal programmes involving distance and personalised learning. Such a free university market will require the minimum of governmental intervention in the allocation and use of university resources. Further, international aid could be attracted to the creation of centres of excellence for meeting international or regional demands.

As is well known, however, free market systems in academic as well as in other fields are difficult to create and they are remarkably unreliable in catering for demands which cannot effectively be expressed, say from the poorer sections of society, or in ensuring response to the demands of social justice. Obviously, moving universities towards wholesale involvement with mass human resource development calls for new relationships between university and society which cannot be guaranteeed under a free market system.

One alternative to the market system lies in legitimising the use of the constitutional and persuasive apparatus of the political order. Modern governments already have considerable financial and legislative powers over universities. Through mechanisms for national development planning and resource allocation, they can enforce the greater accountability of the university. If to all this is added the persuasive apparatus of the state, the odds are already heavily weighted in favour of the political order.

The issue then is not one of universities which cannot be brought to book and persuaded to serve society but whether society will provide the necessary resources for the changes and involvement that it demands from university institutions. Universities may be willing to cut their coat according to their cloth, but society on its part must provide enough cloth to cover the expanding body of universities as they respond to the society's demands for development. More often than not the political order demands evidence of results before payment is made. The financing of creative and innovative programmes of universities is often judged by governments and donor agencies in accordance with the traditional criteria of staff/student ratios and cost-benefits, and such calculations often tend to emphasise the *status quo*.

Yet the pleadings of the moral order demanding greater social justice and democracy in education could be urgent. The very legitimacy of a non-conforming university unable to respond to these pleadings could be questioned. Where the university remains impervious to the pleadings of the moral order, and where that order is unable to effect change even by applying sanctions through the political order, there is danger that a university conforming only to the particularism demanded by the political order may still lack the legitimacy which can only come from society as a whole.

Does the salvation of the university lie in acting in conformity with the commands of both the moral and political order? If so, can the university be the prophet of its time, creating sets of values for the future moral order of society, when at the same time it has to conform to the urgent demands of the here and now? Mass human resources development is the latest of the particularistic demands of society upon the university. In the final analysis, while the university must be willing to respond to these demands, it must also escape from total bondage to time and circumstance in order to pursue the eternal and universal. How can this be done?

Firstly, by universities becoming more effective and efficient as institutions and users of scarce resources. Modern universities are engaged in searching for ways in which to improve their efficiency in areas such as management techniques, learning and teaching systems, programme evaluation, research orientation and staff development. They may thus generate an internal dynamism for change and efficiency which would earn for them greater respect from the free market system, the political order, the moral order and other agencies involved in development.

Secondly, to enable them to serve society better, universities need far greater assistance than they normally receive. The concerns of a development-oriented society and the search for a more just world, prescribe far-reaching implications for university concepts, roles, and structures. Universities, when adequately assisted, are capable of generating sufficient dynamism to face up to today's challenges while at the same time rising above the bondage of contemporary particularism.

4. The Role of Non-Formal Education: *Manzoor Ahmed*

Introduction

Without going into the question of definitions and concepts of education - formal, non-formal and informal, I would like to stress that the demarcation lines are by no means clear and rigid; there are large grey areas between programmes characterised as formal and those described as non-formal, and between non-formal programmes and informal learning. It is of no consequence how a programme is characterised as long as it serves its purpose. In fact in real life, in many instances, educational solutions that fall into the grey zone between formal and non-formal, combining elements of both, are likely to be the most pragmatic solutions.

It is, of course, appropriate and necessary (for analytical purposes rather than for neat administrative classification) to distinguish between non-formal and formal approaches to learning and to examine the operationally significant features of non-formal education.

It is important, for example, to note that the significance of the concept of non-formal education and its practical application lies not in labelling certain programmes as non-formal but in creating the awareness that education is not to be equated with schooling, that a very large amount of systematic and vital learning goes on outside the school system, and that the planning, resource allocation and strategy building for national education must take into account the totality of organised education including components other than the formal institutions.

It is also necessary to remember that non-formal eduation does not constitute a system in the sense that formal education does, and it cannot be viewed as a parallel or alternative to the formal system or as a counter-system. In specific instances, of course, a non-formal effort may serve the same or a comparable educational purpose as a formal programme.

In respect to the human resources of a country and the role of non-formal education, an essential point is that the problems relating to human resources are only partially educational. The development design, priorities and objectives, the economic dynamism of the country or a region, and the values and norms of society, are crucial factors that affect the process of mobilising human resources and set the parameters within which the educational variables function. Educational measures alone cannot solve the problems of unemployment or of poor income and productivity of workers. We return to this question later.

Keeping in view the above premises, we now proceed to examine some critical concerns in human resource development; consider the possible application of non-formal education approaches in efforts to solve the human resource problems; and, in conclusion, discuss the conditions for effective use of the non-formal education approaches.

Some Issues in Human Resource Development

The main human resource concern is that all working-age citizens should possess such skills and knowledge as they can apply to productive pursuits in order to ensure a reasonable standard of living for themselves and their families and to contribute to the general welfare of society.

Obviously this concern cannot be allayed for a country when a large proportion of its children for one reason or another cannot enjoy the benefit of primary education, when the absolute number of illiterate people is growing, when large numbers with various levels of educational achievement are unproductively idle, and when the majority of the population is trapped in a vicious cycle of underemployment, low productivity and low income. Unfortunately, this is too familiar a picture.

The Demographic Factor

In any prognosis of educational progress in the developing Commonwealth countries, the demographic factor looms as a dark cloud. Projections prepared by UNESCO statistical office on the assumption that present educational growth trends will hold, show that in the three developing regions of the world school enrolment must increase between 1975 and 2000 by 418 million students compared to actual increase of 252 million achieved with enormous efforts during the previous 25 years from 1950 to 1975. Even this level of increase will leave in Africa 28 per cent, in South Asia 27 per cent, and in Latin America 8 per cent of primary-age (6-11 years) children out of school in the year 2000. As for the age-group 12-17 years, the out of school proportion in the year 2000 will be 51 per cent in Africa, 61 per cent in South Asia and 29 per cent in Latin America.[1]

The main constraint to expansion of educational opportunities is, of course, financial. Between 1960 and 1974 the share of GNP going to public education expenditure increased globally for the developing countries from 2.3 per cent to 3.9 per cent. Data for more recent years are not available for many countries. But already by 1974, many countries seemed to have been approaching the ceiling of the share of national wealth devoted to education.[2] The conclusion is inescapable: in the years ahead it will become increasingly difficult for developing countries to continue to increase the share of GNP and of the total public budget devoted to education.

A pertinent point regarding educational costs is that economies of scale do not seem to apply. Over the years the global trend is for expenditure per student to increase just as the total enrolment has increased. Moreover, as larger proportions of secondary-level children are enrolled, the cost per student will also rise. It has been found that in Africa second-level education is six times as costly per student as primary level, two-and-a-half times as costly in Asia, and double the cost of primary level in Latin America.[3]

The quantitative dimensions of the problem of education are certainly different for different Commonwealth countries. The above global picture is indicative of the nature of the problem that affects all developing countries in varying degrees - some are affected much more seriously than others. However, the problem of quantitative expansion is not the only - or even the main - headache for most countries.

From the human resource point of view, the critical question is what happens after, or as a result of, an individual participating in an educational programme.

What Happens after Primary School?

A number of African Commonwealth countries, such as Botswana, Kenya and Zambia, have reached over 80 per cent participation rate at the primary level and a high rate of completion of primary schooling. Tanzania, by sheer determined effort, is also approaching universal primary education. These countries are now faced with the two-fold question: "How many of those who complete the primary level should go to secondary schools?" and "What should the rest do?"

In Tanzania, by deliberate government decision, the access to second-level education has been kept at a level commensurate with employment opportunities, and at present less than 5 per cent of primary-school completers enter secondary schools. In Kenya, where also there is an official policy to restrain secondary enrolment but where the private sector in education has a somewhat freer hand, about one-quarter of primary-school completers go to secondary institutions. As for the rest, the expectation is that they should enter the world of work by taking up their family's traditional occupations in farming, pastoral activities, various rural trades and services, or begin a phase of institutionalised or informal preparation and apprenticeship for various artisan skills and trades.

The arrangement, we all know, leaves much to be desired. Whatever method is used to decide who should be chosen for the secondary school, the decision is viewed as unjust by those who are left out. The frustration and unhappiness of students and parents, the constant pressure for the expansion of secondary-level facilities, and the length parents are willing to go (including financial sacrifices and illegal methods) are ample testimony to the fact that rigidly restrictive policies satisfy few. The high level of unemployment among the youths and young adults, and the large numbers that flock to urban areas, show that the primary school leavers (and drop-outs) are not satisfied with their assigned lot. At any rate, the implicit assumption that sufficient economic opportunities exist to offer a reasonably satisfying livelihood to young people with a minimum level of education and with or without some additional occupational preparation, is plainly invalid in most situations in the poorer countries or poorer regions of countries.

This unhappy state of affairs raises many questions. How can the privilege of post-primary education be granted more equitably - or at least how can the perception of injustice and the consequent resentment be minimised? Are there reasonably effective ways of handling the transition between the completion of primary education, or a certain level of secondary education, and entry to the world of work? To what extent can the learning experience at the primary and secondary levels be restructured to facilitate transition to the productive economic role? And are there alternatives to the restriction of educational opportunities on the basis of presumed demands of the job market? Answers to these questions have ramifications beyond education. But it will be argued later that the principles and methodologies of non-formal education must figure prominently in approaches to the resolution of these questions.

Mobilising People's Productive Potential

The greatest human resource challenge, particularly in countries with agrarian economies and high population density, is the unleashing of the creative energy of the people, raising their consciousness about the potential of their collective efforts and helping them organise for self-help and self-reliance. One element of this process is the growth of community organisations which can manage essential social services and run co-operatives and other collective production enterprises. Another is the formation of cadres of community workers who can serve as the bridge between the extension and service agents of the government and the community. A third is the development of the capability and motivation of the masses for active participation in decisions that are expected to transform their life. The process of mobilising the productive potential of the masses is to a large extent an educational process - creating a critical awareness among the masses about their situation and the potential for change, bringing new knowledge and information to the people, training vast numbers of rural cadres, reorienting and changing the attitudes of bureaucrats and government decision makers and even technical experts, helping people learn about forming and running local co-operatives, and so on. This certainly is not just a Ministry of Education task but a national challenge. However, an Education Ministry, if it so chooses, can play in partnership with other agencies, a central role in this endeavour.

In the context of community-based provisions for basic services and popular participation in the development process, the question of literacy assumes a special significance. Literacy, by opening the door to the world of printed words, can become an invaluable instrument for consciousness-raising and popular participation in the development process, when the contents and methods are chosen appropriately. The problem of illiteracy in the developing world remains serious. Although some slow progress has been made in reducing the proportion of illiterates, their absolute numbers keep rising. Some 1000 million people in the world today are estimated to be illiterate. A literacy campaign need not be, and generally should not be, the precondition for community-based basic services and a larger community role in development efforts. But where a large proportion of the adults in a community are illiterate, serious and sustained popular participation in local development is unimaginable without literacy and other adult education components. Therefore, developing viable approaches to the removal of illiteracy in conjunction with the provision for basic services and other community-based development activities is an important issue in human resource development with a very distinct bearing on non-formal education possibilities.

Schools as Community Learning Centres

The question "How can the primary school be restructured so that school leavers can adjust reasonably well to life outside?" has already been raised. Another important question is how the primary school can make a contribution to the community's self-help and development efforts.

Tanzania has made a determined and successful attempt to universalise primary education and at the same time has tied restricted secondary school access to the employment prospects for secondary graduates. Tanzania's answer to the two questions raised in the previous paragraph is the community school.[4] The community school, originating from

experiments begun in Kwamsisi in 1971, embodies the principles of education for self-reliance propounded by Julius Nyerere. It is a centre of many communal activities. Every school includes an important element of productive work and self-reliance activities in its curriculum; manual work is a core subject for all pupils; and each school must contribute significantly to its own upkeep. Village development projects including the provision of basic services are adopted as "centres of interest" in the school curriculum; and parents as well as children benefit from the educational services of the school. The management of the school and the development of its productive activities are in the hands of a village education committee.

The propagation and growth of the idea and practice of the community school is the responsibility of a group of change-agents known as MTUU (Mpango wa Tanzania/UNICEF/UNESCO) which includes a team of Tanzanian teachers, curriculum specialists and inspectors who are stationed in teachers' colleges throughout the country. Their job is to help village schools develop curricular materials, test teaching methods and materials, assist in the training of teachers, and advise on various problems faced by individual schools. The community school programme has spread by now to 35 experimental schools and is to be extended throughout the nation by 1982.

Whether and to what degree the community schools answer the questions posed above will depend on the extent Tanzania is successful in its programme of building Ujamaa villages aimed at transforming the life of the rural people. The greater the stride made in rural development, the greater will be the prospects that the students of community schools will find the opportunities for a satisfying life in their villages.

"Second Chance" for Youth

We have noted that large numbers of young people in the developing countries of the Commonwealth never enter primary schools or drop out from them without acquiring a useful level of literacy and numeracy. Even when a full coverage of all primary-school children is reached, which is far from being a reality for the majority of the less developed countries, a large number of children will not complete the cycle nor will they achieve a functional proficiency in literacy and numeracy. At the secondary level, few if any of the less developed Commonwealth countries have over a quarter of the age-group in school. Should all these disadvantaged children have an educational opportunity to attain a minimum level of functional skills, and should some of them who choose to do so continue beyond that minimum? Cutting off educational opportunities for the majority of the children and youth, except probably in the form of sporadic adult literacy courses, is certainly a denial of the development of the human resources up to their full potential.

At the primary level, it is possible to organise abridged and part-time programmes for the adolescents and youth, and it has been found that they can cover the whole primary cycle in a relatively short period because of their greater maturity. The costs for such programmes can be quite low because they can be implemented through existing facilities and teaching personnel.

The principle of universal opportunity for education at the primary level is not disputed in any country. But at the secondary level, how

wide the access should be is a policy issue. Some countries follow a rigidly restrictive policy, and almost all developing countries in the Commonwealth attempt to regulate the expansion of secondary education. The reluctance to expand secondary education hinges partly on its cost and partly on the expectations it arouses regarding occupations and earning that cannot be fulfilled. These objections can be met if the costs of secondary education can be lowered and the occupational categories can be delinked from formal education qualifications.

It is also possible to utilise secondary facilities and personnel for part-time and evening programmes for those who do not enter the regular full-time programme, for those who drop out, and for those who look for a second chance later in life. The range of possibilities for low-cost alternatives is wide and may include the use of distance learning methods and a combination of productive work with academic learning.

The ultimate solutions of the problem of occupational expectations created by secondary education are, first, effective rural development that opens up economic opportunities in rural areas, and second, measures to reduce the gap between white collar urban jobs and manual occupations. While these solutions can produce results in the long run, there is evidence that where a relatively non-restrictive policy in secondary education has been permitted, as in South Asia, the currency of the secondary diploma has gradually become "devalued" and these diploma holders have begun to accept jobs other than white collar ones.

In most developing countries, an institutional solution has been sought in the form of vocational and technical training schools for some of the young primary school leavers who do not find a place in the regular secondary school. By definition, these vocational and technical training facilities are more expensive than academic schools and cannot be opened to a large proportion of the young people. Moreover, in most situations, in the context of agriculture-based low-income economies, the formal and institutional approach to middle-level skill development does not appear to work very well. What Philip Foster called the "vocational education fallacy" some 20 years ago in the case of Ghana to describe the inefficiency, inappropriateness and false expectations of formal vocational training whether in agriculture or in industry, is still applicable for this type of programme. The lessons have remained unlearned by national educational establishments as well as by external donors.

Some programmes that go by the label of non-formal education do not necessarily offer the right solutions. Pertinent examples are the youth service projects in Kenya and Jamaica which combine camp life, military discipline and practical training for selected youths. While the results in employable skill development seem to be good for these projects, the intensive resources they require put them beyond the reach of all but a very small proportion of the out-of-school youth.

The question of a viable approach for skill development is taken up later. To sum up the arguments presented above, it may be said that countries following restrictive policies in second-level education should rethink whether the goals of democratising education, fair play for the youth of the nation, and optimal development of the human resources, do not demand that second-level education is more widely open. Various non-formal approaches, some mentioned above and others to be mentioned later, can be used to initiate affordable education

programmes at the post-primary stage. While the alternative of a freer access to secondary education is not a painless process, the costs in terms of perceived social inequity, frustration of young people, and the waste of human potential of a rigidly restrictive policy are surely higher.

Combining Learning and Production

Three major educational problems brought out in our discussion so far are: (a) how to organise effective skill development programmes so that the needs of economic development are satisfied and the young people find employment; (b) how to make the general primary and secondary education more relevant and meaningful for life rather than just a preparation for the next stage of formal education; and (c) how to handle the problem of rising costs that continue to plague all efforts aimed at the quantitative and qualitative improvement of education.

Certainly no one line of action or approach can be expected to solve these problems. However, one promising strategy that should figure prominently in any serious approach to their solution is the possibility of combining productive and income-producing work with learning activities.

Primary and secondary schools can have production and service units attached to them; their nature depending on the environment and market demand. Schools in rural areas can concentrate on agriculture, manufacturing and the services needed in rural communities; whereas in towns the emphasis will be on repair, construction, craft work and the services in demand there. Primary-level children will not be expected to do a man's work, but they can contribute their labour according to their physical capacity as they normally do in their own homes. Parents, community members and teachers can be involved in the economic enterprises of the school according to the school's needs and be paid for their services.

Sporadic examples of the school as an economic entity are found in many countries - mostly managed by private and missionary organisations. Cuba has gone further than most countries in introducing large-scale commercial farming in their secondary-level "schools in the countryside", where each day students alternate between work and study shifts.

In spite of a general problem of youth unemployment and that of the quality of skills acquired by workers, almost all middle-level skill training - an area in which there often are specific shortages - can be carried out more effectively and at lower costs through guided on-the-job practice than through institutional courses. There is also a greater assurance that the skills learned will be used, and that the training will lead to employment.

All economic enterprises - especially the larger ones and co-operative and collective projects - can play an educational role in both skill training and general education for workers and their families. It is a matter of self-interest for economic establishments to do so, and also a social obligation since these establishments make use of the physical, human, and institutional resources of the community.

As a general rule, educational services designed to reach the most underprivileged and poorest groups have a better chance of success

when they are combined with production and income generation. Economic poverty and the poverty of the institutional setting, which often go together, prevent these groups from benefiting from conventional educational activities. This constraint is likely to be better overcome when ways of raising the income of the participants and their families can be blended with the educational efforts.

Again sporadic examples can be found in developing countries of efforts to use productive activities as a vehicle for learning. One such case that has generated many useful lessons is the Brigades in Botswana. They enable young out-of-school people to engage collectively in specific types of paying activities (construction, manufacturing, service, etc.) which are so organised that the young people while working systematically learn certain skills and get a general education - at no cost to the public or themselves.

The idea suggested here must be clearly distinguished from various attempts to introduce vocational and practical arts in schools - invariably raising the costs of schooling and achieving little by way of teaching employable skills.

Mass Media - the Unexploited Resources

Mass media facilities are widely available in most countries for public information and entertainment. Only in a very few developing countries, however, is the potential for systematic educational use of the communication media fully exploited. The most under-utilised media are printing and radio, both of which can be low-cost, reach large audiences, and be adapted for specific groups. A combination of print-media and the radio can be used for following-up literacy courses, training and orientating community-level workers of all kinds, up-grading teachers and administrators, informing farmers of new farming practices, and giving a chance to motivated youths and adults to complete the primary or secondary programme they may have missed. The possibilities are as wide as the imagination and ingenuity of the planners and implementers of the mass media-based education programme.

Two related factors appear to have undermined the wide use and effectiveness of the media for education. First is the resistance of the educational establishment to entertain the idea of other pedagogical approaches than the face-to-face classroom technique. It is difficult for the education profession to accept that the primary and secondary teachers can be trained by radio and correspondence lessons complemented by on-the-job apprenticeship rather than by a full-time teachers' college course. Yet in Tanzania it has been found that a multi-media approach is the only way to meet the large teacher demand created by the universalisation of primary schools, and the result appears to be better than the traditional method.

The second category of problems with the educational use of mass media has to do with the logistics of the programmes themselves. Far too often insufficient attention is given to organising the recipients of the media messages into homogeneous interest groups with common motivation and concerns. Nor is sufficient attention given to adapting and relating the messages to the specific situations and needs of groups, or reinforcing the messages through a combination of media such as printed materials, radio, and face-to-face group contacts.

We cannot discuss here the technicalities of launching an effective media programme. Experience in many countries demonstrates both the problems and the potentialities. Some years ago an imaginative district agriculture officer in a South Indian district is said to have worked a "miracle" in the agricultural production of the district by maintaining a weekly radio contact with all his extension agents to which the farmers' groups also tuned in. It is possible that this experience has been replicated in other districts. The rural radio forum of the All India Radio continues to render a valuable service in many parts of the country. Another significant experience is that of the Distance Learning Centre of Lesotho. The Centre uses printed materials, correspondence and radio for a variety of purposes including up-grading teachers, complementing and enriching instruction in schools, and reaching a variety of rural audiences.

Educational Components of Basic Services

The educational elements of the process of self-reliant socio-economic development have been mentioned earlier. More specifically, in relation to the provisions for basic services for health, water supply, sanitation and shelter as well as for food production and nutrition, we can speak of several categories of education needs:

(a) Disseminating knowledge and skills necessary for the general population for making good use of services and opportunities available.

(b) Educating the population to organise themselves for community control and the management of rural services.

(c) Training the community-level auxiliaries; and training and orienting planners, managers and specialists at different levels for rural services.

The educational components of basic services - which by definition have to follow non-formal approaches - often are not viewed as integral parts of the total system of organising and providing services. For some services, such as agricultural development, the educational needs have received more attention than for others. There are both positive and negative lessons from the agricultural extension experience that can be applied in the other types of educational activities in the context of basic services. A few of the important lessons that have general validity are:

(a) The clienteles of the educational activities linked to basic services need to be organised into homogeneous interest groups on the basis of their economic or "class" standing, especially if the disadvantaged segments are to be served.

(b) The front-line workers in the programme must be the selected and trained members of the groups or communities that are to be served rather than outsiders.

(c) Ways must be found to continually replenish and refresh the knowledge and information of the front-line workers and the back-up personnel with appropriate, timely, and locally adapted learning materials.

(d) Most important, the educational activities must be synchronised and meshed with the necessary plans, provisions and action for effecting the social transformation - be it raising grain production or improving sanitary conditions, or a series of such transformations.

Another issue that will assume a larger significance if the educational components of basic services are taken seriously is the co-ordination of educational activities within various development services especially at the local and community level so that the intended beneficiaries are not confused by a multiplicity of overlapping and conflicting channels and messages. Mechanisms have to be found for co-ordination at the local level, possibly through the local administration, and collaboration at higher levels.

Literacy programmes can play a critical role in the context of provisions for basic services and income-raising activities rather than as campaigns divorced from concrete action for development. The content, methodology and organisation of literacy programmes should logically bear the imprint of the arrangements, objectives, and distribution of clientele for the basic services and economic projects of which the literacy effort should be a part. The legacy of disappointment and frustration that we are left with today from many well-intentioned literacy projects warns us that these efforts can succeed only when linked with concrete plans to improve the social and economic situation of the participants.

The Need for Co-ordination

Besides agricultural extension, other scattered educational efforts related to basic services and rural development programmes can be found in all Commonwealth developing countries. Only rarely however; is a comprehensive and co-ordinated approach taken with regard to the various categories of educational needs referred to at the beginning of this section for improving and expanding basic services. One project for training and the development of training materials and methods for rural development workers of various types that has received international attention, is the Bangladesh Academy for Rural Development at Comilla. The Academy over the last two decades has done commendable work in training thousands of workers of all levels. Even this project can benefit from closer collaboration with the various development agencies in the country in regard to the approach to training and utilisation of the rural cadres of the different agencies.

At the other end of the spectrum is the massive National Adult Education Programme of India, the goal of which is to carry out adult education activities including literacy projects in support of the overall efforts to improve the quality of life of the masses. The programme is in its early stages and any judgement about how it is functioning would be premature. The first reports indicate, as might be expected, that the picture is uneven regarding getting the effort underway and sustaining the enthusiasm of the learners. However, very encouraging progress has been made in many places. In general it appears that a great deal of exploration and hard work will be needed to find and apply the modality of organically merging educational activities with local development projects and provisions for basic services.

Conditions for Effective use of Non-Formal Education

The Development Context

To the extent they have to function in the context of an established formal educational system, non-formal education approaches cannot be effective unless a nation is committed to the principles and objectives of an egalitarian society and its development programmes and priorities are based on this commitment. The problem of the wastage of human resources in the form of unemployed educated youth and the masses in low-productivity and low-income occupations is symptomatic of a more serious disease - a dual society comprising a small modern-sector island in a sea of the traditional undeveloped economic structure with most of the development resources and efforts going to the former. Only by eliminating the enclaves of a modern sector and embarking on a development design that improves productivity, employment and the basic public services all over the country can the root of this problem be attacked.

In the educational sphere, steps have to be taken to eliminate the duality between the full-time formal institutional education and non-formal education. If "second chance" programmes, the training of personnel, and skill development programmes through non-formal approaches are to succeed, they have to be accorded full "parity of esteem" with corresponding formal education programmes. Moreover, bridges have to be built between the two. All possibilities of combining formal and non-formal approaches, when this is desirable to achieve the educational goal or reach the clientele, must be fully utilised. Non-formal programmes cannot gain acceptance if they are seen as "poor cousins" of formal schools.

The Organisational and Administrative Framework

Because the spectrum of non-formal educational activities is so wide and the purposes and clienteles it may serve are so diverse, non-formal education cannot be the exclusive preserve of the Ministry of Education, although it must have the responsibility for expanding the opportunities for primary and secondary education and general adult education through a combined formal and non-formal strategy. The Education Ministry may also be the focal point, the principal advocate and the initiator of policy review and formulation in relation to the nation-wide efforts for human resource development. However, many other government, community and voluntary agencies and organisations must be actively involved in what may be called a nation-wide learning system.

Responsibility for educational programmes for youth and adults linked to basic services and economic development projects must belong mainly to the respective ministries or to a strong rural development co-ordination body. In actual implementation of the programmes, a rejuvenated local government structure should play an important role along with national voluntary organisations active in rural development as well as local community organisations and voluntary groups.

Education and training of field personnel and auxiliary workers from the communities for the rural services such as agricultural extension, health care, family planning, co-operatives. etc., has to be in the hands of the agencies responsible for the respective services if they are to operate successfully.

For technical-vocational skill development, if the principle of combining learning and production is accepted as the main strategy, the Ministries of Labour, Industry, Commerce and Agriculture as well as public corporations, associations of industries and trades and individual enterprises should share the burden. The Ministry of Education can be a partner in the process to the extent it is willing to abandon the emphasis on formal training institutions and turn them into multipurpose, flexible technical service centres for economic projects.

Obviously a special Ministry of Non-Formal Education or a Board or Commission as the executing agency will not serve the purpose. The need is for a body or a focal point for human resource concerns so that problems and needs are kept in national focus, appropriate national policies are developed, and the diverse efforts and activities of the many agencies involved serve the common goal. Such a body may be located in the national planning organisation or the office of the head of government. This body can also sponsor the analyses and reviews necessary for policy formulation on subjects such as manpower requirements, the structure and policies in regard to remuneration and rewards in different occupations, the use of resources and cost-effectiveness in various educational programmes, the links and articulation between formal and non-formal programmes, ways of encouraging and using voluntary organisations, and so on.

Decentralisation of Authority and Popular Participation

It is unthinkable that economic projects in schools, or skill development programmes combining learning and production, or the adult education activities for local groups as a part of local development projects, can be run by central ministries and their agents waiting for orders from the capital.

Effective local government bodies and strong participatory institutions at the local level have to serve as the vehicles for integrated locally-managed development services. The national planning body, the national-level decision-making authorities and the sectoral agencies would in this case lay down national policies and priorities, set overall guidelines, determine aggregate resource allocation, and play a facilitating and supportive role as providers of technical and financial assistance to the local bodies but would abdicate the role of being the director and controller of programmes which are intended to serve local communities.

The local government organisations, which exist in one form or another in all countries can be built up as the area-wide organisational structure for the optimal exploitation of the total land and human resources of an area, and local participatory institutions can play their part within this structure. In the context of such an institutional setting, relevant educational components of rural services can be planned and managed to a large extent at the local level and to a lesser extent by the national and regional level government agencies who would increasingly assume a facilitative role.

It is essential to mention that far-reaching changes are needed in the style of development planning and the structure of public administration, because education cannot be an "island" of decentralisation and community participation without changes in other spheres.

The Political Framework

The educational process functions within a given socio-economic structure. The goals set for the educational efforts and the results achieved are defined and limited by the socio-economic framework of a nation. The lessons of contemporary and past experiences around the world are that appropriate educational measures support and accelerate socio-economic change but the initiation and guidance of structural change in society is essentially a political process. The overall national development objectives and priorities, and the institutional and logistical measures adopted in support of these objectives and priorities, define the tasks for all educational efforts and set the limits to what education will achieve by way of social transformation. Non-formal education only opens up a wider range of educational options by bringing the non-school vehicles of education within the orbit of organised and planned nation-wide learning efforts. Political determination, backed by the commitment of the highest level of national leadership and concrete measures reflected in resource allocation as well as development priorities and policies, must be present if the goal of reorienting the educational system for optimal mobilisation of human resources is to be realised.

It is not, however, being suggested that all the conditions for success must be met before non-formal education programmes are launched and other measures for the development and use of human resources are taken. The millennium is not around the corner and if we have to wait for the ideal environment there will never be a chance to begin anything. Progress towards the creation of a favourable environment for the success of non-formal education can be made simultaneously with the introduction, experimentation and development of the education programmes themselves - provided the goodwill and determination exist. At the same time, it is necessary to be fully conscious of the factors that can help or hinder the progress of programmes and to make realistic assessment of what is possible in given circumstances.

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Addresses

1. Address by His Excellency Mr. Shridath Ramphal, *Commonwealth Secretary-General*

It is our special privilege, Mr President, to have you with us today. It is a privilege enhanced by your deep personal interest in education and your decision to be yourself custodian of the portfolio for higher education. Your personal commitment and involvement is symbolic of the support which Sri Lanka has given to the Commonwealth over the years in so many different fields. And not only to the Commonwealth; the long tradition of Sri Lanka as a centre for international conferences is testimony to this country's ethic of internationalism and its vitality within the community of nations. And it is a tradition in which you have yourself played a notable part. It was three decades ago that you contributed so significantly, at the memorable meeting of Commonwealth Foreign Ministers held in this capital city, to the creation of the Colombo Plan, that pioneering exercise in international co-operation for development.

The ten-year cycles in which we are accustomed to mark the passage of history provide convenient points to take stock of our experience and get bearings for the future. One thing that is clear as we start the eighties is that we do so with a remarkable lack of confidence about what they hold for each and all of our several societies.

Certainly, the experience of the last few decades has led us to question, and even to discard, some of the received wisdom which guided us in the past. Education has not been exempt from this challenge to once-accepted dogma. Simple faith in the social benefits of educational investment has been an early casualty. Our resolve to respond to the moral compulsion to treat education as a basic right of all people remains undimmed, and indeed it should, but our confidence that education will automatically promote development has been eroded.

We have learned that education, when it is not geared to the needs of real development and when it is not accompanied by progress in other spheres, can lead more to despair than to development, more to frustration than to fulfilment, and more to social tension than to social advance. The loss of faith in the conventional certitudes has given rise to a whole range of questions, about the suitability of inherited models, about curriculum reform and the role of examinations, about orienting education towards employment, about the relative priority to be given in investment to the three layers of the education structure.

There is discussion as to how education systems designed to produce recruits primarily for the modern sector of national economies - for the

bureaucracy, the professions and commerce - can be reformed to serve the advancement of the traditional sector. There is questioning about the appropriateness of a structure in which the lower tiers have no self-sufficient objectives but serve mainly to qualify their products for entry into the next higher tier. There is concern about the value systems which education seems to strengthen, and which make young people prefer white collar to blue collar jobs, office to factory, factory to farm and town to country, and to think that: "All that is rural is bad, all that is urban is better, all that is foreign is best". There is worry about the inflated respect for paper qualifications - what one writer dubbed the diploma disease - and the role that examinations play in emphasising the value of rote learning as against the development of practical skills and aptitudes.

These are among the issues which clamour for attention from Ministers of Education, but they demand not just educational answers but decisions within the harder domain of politics. They emphasise the need for Ministers of Education, in association with their colleagues in government, to gear education so that it can more effectively reinforce and reflect the thrust of national development policy. These decisions are, of course, made harder by the harshness of the economic weather that now threatens rich and poor alike, underlining our common fragility.

The economic crisis which provides the backdrop for this meeting must sharpen our resolve to find the right answers, for to get them wrong can be more costly now than when conditions are buoyant. And that resolve must extend as well to those issues which arise directly out of short-term economic constraints but have major long-term implications like the future of pan-Commonwealth educational exchange which the matter of overseas students fees has served to highlight. I am confident that the processes of Commonwealth consultation can contribute to finding those right answers if while respecting national prerogatives they build upon the heritage of co-operation which is the special asset of education in the Commonwealth.

I started by recalling, Mr President, your own initiative of 30 years ago that led to the Colombo Plan. It is pertinent today to recall also that two decades have passed since the Commonwealth Trade and Economic Conference held on the initiative of the then Canadian Prime Minister, John Diefenbaker. At the meeting in Montreal in 1958, Commonwealth membership was eleven - only slightly larger than in Colombo a decade earlier - but its enlargement was in sight and in its prospect several African and Caribbean countries joined those already members. With one accord Commonwealth representatives in Montreal stressed their belief in the fundamental importance of education as an indispensable condition of development. They said that the people of the Commonwealth should be able to share as widely as possible in the advantage of education of all kinds and at all levels; they resolved to help one another as much as lay within their power, and they agreed in principle to establish a new scheme of Commonwealth scholarships and fellowships.

Montreal led to the Oxford Conference of Commonwealth Educators in 1959, and Oxford to the first Commonwealth Education Ministers Conference in New Delhi in 1962. The Commonwealth Education Liaison Committee had by then been established. It celebrated 20 years of dedicated practical service to education in the Commonwealth last December. How symbolic, is it not, of the reality of Commonwealth linkages in education that the Committee's Chairman, present with us today, should be Sir Roy Marshall - a son of Barbados and now Vice-Chancellor of the University of Hull?

And the bonds of Commonwealth collaboration for education are a reality of immense significance to education in the Commonwealth and to the Commonwealth itself. They have been forged over the years by the successive conferences of Education Ministers following New Delhi: in Ottawa, Lagos, Canberra, Kingston and Accra. They have been reinforced by the several Specialist Conferences on Rural Education, Teacher Education, Learning and Teaching Materials, and Non-Formal Education held between ministerial consultations. And they are constantly being strengthened by the day to day work of the Secretariat's Education Division in furtherance of the highest purposes of Commonwealth co-operation in education.

At the Oxford Conference 21 years ago the formulation of those purposes included the following assertion: "The free association in the Commonwealth of countries which share a belief in the common principles of justice, a democratic way of life and personal freedom, affords a special opportunity for the pooling of resources. There is an obligation on those with more highly developed educational facilities to help their fellow members. But all races and peoples have made their characteristic contribution to the building up of knowledge, culture and values and all have something to give". I commend those precepts to you. Their fulfilment is not only the rationale of our coming together here in Colombo but of wider import to the vitality of the Commonwealth itself.

2. Inaugural Address by His Excellency J. R. Jayewardene, *President of the Democratic Socialist Republic of Sri Lanka*

I am very happy to open this Conference and to deliver the Inaugural Address. The Commonwealth is a body which we have the honour and privilege to be a member of. Sri Lanka has grown with the Commonwealth. It was a colony in the British Empire. It had representative institutions, became a dominion, and helped later to form the Commonwealth of Nations of which we are a distinguished and happy partner. The Commonwealth has many similar institutions. Ministers of Justice meet often. Ministers of Agriculture and Heads of State also meet. We exchange ideas, pool resources, and work for the common good.

I am proud to be the leader of a democratic country and I am proud to welcome the delegates who represent the Education Ministers in their countries. I mention democracy because when you consider education it is not only the question of teaching the young that has to be considered. Education does not belong only to the human race. Long before humans began to speak, when they were in the hunting stage, both animals and humans educated their young. Animals do it still. Parents teach their offspring how to hunt by signs, by sound, by instinctive behaviour. Man in the hunter stage of development did the same thing; for to educate, primarily, whatever words you may clothe it with, is teaching people to be able to look after themselves, to earn their living and to buy their necessities. As man stepped out from the animal stage to the human stage, as he began to live in settled communities, as he began not only to hunt but to grow his food, and as he began to speak and write in various languages, a new dimension happened in the history of the world. The ordered community in which he lived had to have rules. Discipline became important. Language gave the method of communication, and the three R's - Reading, Writing and Arithmetic - became part and parcel of education. In the sixth century B.C., which has been called the period of the adolescence of the human race, we find in India Gauthama the Buddha crystallising and co-ordinating the philosophies of the Hindu savants. We find in China, Confucius; in Persia, Zoroaster; and in Greece the great philosophers, Aristotle and Socrates and Plato. Thus began a new period of human history. Human life began to have values, when the humanities began to be encouraged, when family life became part and parcel of human existence. It is from the teaching of the Greek philosophers that western civilisation developed, and in this mainstream of civilisation Sri Lanka had its beginning. In the sixth century B.C. the Sinhala people founded the Sinhala race in this small island. There were monasteries which taught the Buddha doctrine. There were monasteries in India which had similar purposes and we still find their remains in Taxila and Nalanda.

This system developed and other nations began to take an interest in our country. The Roman galleons came to our harbours and left behind some of their goods and coins. We had ambassadors in the Court of Rome in the time of Claudius Caesar, and in Pliny's letters we find reference to them when he refers to the eruptions of Vesuvius. We had Arabs visiting our land; Sindbad the sailor and Ibn Batuta. We had Marco Polo coming here. But once the Western powers discovered the route to India

around the Cape of Good Hope, they came here not with peaceful intentions but with other ideas.

The Portuguese landed in Sri Lanka in 1503. Then came the Dutch, then the English. In 1815 the whole country came under the domain of foreign rule. During those 400 years, and especially during the last 100 years, the civilisation we had built up was almost destroyed. Our language was put into a corner, our religious institutions almost disappeared. However, great patriots revived our culture and civilisation, and ultimately in 1947/48 we regained our freedom.

During the latter period of British rule, schools were developed - two types of schools. There were English schools teaching English in the main towns where the parents who could afford it sent their children to study through the medium of English. But 90 per cent of the schools taught in Sinhala and Tamil and their pupils became village teachers or village doctors, Ayurvedic physicians or notaries in the villages. The sons of the rich went to the fee-paying schools, learnt the English language and became lawyers, doctors, and clerks in government institutions. That was the purpose of education in those days.

In 1931, we obtained universal franchise, and for the first time we elected ministers though we were not a free country. One of them, Dr. C. W. W. Kannangara, and several others appointed a committee which looked into our educational structure. I became a member in 1943, and in 1945 we adopted revolutionary proposals. We decided that the media of instruction should be the mother tongue: Sinhala for Sinhalese pupils, Tamil for Tamil pupils, with English as an extra language. We decided that there should be free education. We decided that opportunities should be provided not only for primary but for secondary education and higher education wherever possible. The system of education which we see now has developed since 1945. There have been many changes off and on - the age of admission to schools has been changed, the curriculum has been altered, examinations have been changed by name and by subject, universities have undergone various changes. There is nothing static or fixed in education.

Many of the changes have been caused by the need to respond to our economic surroundings. What is good for the economy of Britain does not suit the economy of Sri Lanka and thus the education of Sri Lanka. Today we have an economy where 40 per cent of our people live below an income level of Rs. 300 a month, almost on the borderline of starvation. We have 1½ million unemployed youth. We have 200,000 leaving our schools every year with little chance of employment. Therefore, one of the main purposes of our Government has been to activate our economic structure so that people who leave schools and universities may be able to find employment as quickly as possible. About 70 per cent of our students leave school at the age of 14 plus because they cannot afford it. That is why I said that education must be geared to the economy that surrounds it, that is to its environment. Today we have a low level of income. We have a low death-rate. We have an economy that is gradually coming out of its slumber. We have, on the other hand, a high birth-rate, and a high level of literacy - 70 to 75 per cent.

Therefore, as I said at the very beginning, education is mainly for giving opportunities to find employment. However great you may be as a scientist, academician, author or poet, without the means of existence you cannot go far. I am reminded of Samuel Johnson waiting for the crumbs that fell from the table of a distinguished lord so that

he could go back and write his great literary works. One should read what he said about that lord, about the letter he wrote to that lord because he was neglected. Income is vital if a man and his family are to exist. Education therefore - whatever theory you may have - is primarily directed to employment opportunities. Apart from that, I know that the humanities are important. Today, a man can live by writing poetry; he can live by painting; he can live by many other professions dealing with culture, art and civilisation. Education has stepped into those fields. There are schools with art classes, agricultural classes, literary classes, giving everybody an opportunity to find a way of living by the arts so that they can practice and be perfect.

We have in addition to teach our people discipline, for no democracy can exist without discipline; discipline among those who have been chosen to rule their country, among those officials who carry out the policies of the Government, both high and low in every sphere of life. No ordered community, no civilised people, can progress unless there is discipline: that is the foundation of all democracy. Ladies and gentlemen, in this little land, 25,000 square miles in extent, a microcosm of a civilised democracy, we are trying to attune our education to that environment. May I hope that, as I have always stressed, not only this Commonwealth but all peoples will seek to attain the Parliament of Man and the Federation of the World.

Appendix A

Report of the Ministerial Steering Committee on Programme Priorities

At its meeting on 10 August the Steering Committee of Officials recognised that in view of the large number of recommendations made by the Meeting of Officials for Commonwealth co-operation in education, and the possibility that further recommendations were likely to be made by the theme committees, it would be necessary to consider priorities for action by the Commonwealth Secretariat in relation to the limited resources directly available to the Secretariat for implementing the recommendations.

Accordingly it appointed a sub-committee to examine and recommend programme priorities for action in the light of available resources. This sub-committee was composed of Sir Roy Marshall (Chairman), Mr. W. L. Renwick, Dr. J. A. Mwanza, Mr. L. T. Bowen, Dato Rahman Arshad, Dr. J. M. Mitchell, Mr. J. Carter, Miss J. S. Attah and Mr. E. Rawlins.

The Steering Committee of Ministers considered the Report of the sub-committee and noted that the recommendations with a resource implication can be grouped into six categories: (i) regional workshops, (ii) commissioned studies and publications, (iii) regional meetings, (iv) experts' meetings, (v) pan-Commonwealth conferences, and (vi) liaison visits, with categories (i), (iii) and (iv) usually being funded from the CFTC's allocation to the Education Division of the Commonwealth Secretariat, and categories (ii), (v) and (vi) being funded from the Education Division's regular vote.

In selecting items for the work programme of the Secretariat from among these categories, *the Steering Committee recommends the adoption of the following criteria,* subject always to the level of resources available to the Secretariat:

(a) High priority should be given to: (i) new initiatives; (ii) support to Commonwealth Associations; and (iii) strengthening the links between the Education Division's workshops and seminars and its publications programme.

(b) Certain projects may need to be continued in order to complete a regional pattern.

(c) The value of disseminating information is highly rated, to the extent that the number of commissioned studies may have to be reduced so that the number of circulated copies can be increased.

(d) In putting this programme into operation, the Secretariat should continue to maintain close liaison with UNESCO and other international organisations so as to avoid duplication of activities.

The Steering Committee also notes that the Seventh CEC recommended that the Commonwealth Education Liaison Committee should determine the programme of priorities within the recommendations made by that Conference, because priorities for Commonwealth co-operation differ from region to region and depend on the level of funding available. The Steering Committee sees a definite advantage in this procedure so as to give member governments time to consider the recommendations of the present Conference. It therefore recommends that this procedure should be followed on this occasion also, and during the review period the method of implementing recommendations should be carefully examined.

However, the views of member governments on the priority order of the recommendations will have to be transmitted to their High Commissions in London, and the Steering Committee notes that such briefings are of vital importance in the consultative process. Not all the Commonwealth High Commissions in London enjoy the services of a full-time education attaché, and this underlines the need for Ministries of Education to pass on their views regularly to their High Commissions.

Finally, the Steering Committee believes that the programme of activities proposed by the Conference is of much potential value to member countries of the Commonwealth and that where the Secretariat is unable to undertake them with the funds directly available to it, external sources of funding should be sought.

Appendix B

Report of the Working Party on the CSFP

Following a wide-ranging discussion of the everyday working of the Commonwealth Scholarship and Fellowship Plan, it is agreed that such working party meetings are of value in providing an excellent opportunity for those directly interested in the CSFP to reach agreement on matters or problems of common concern and not least because of changing personnel in Commonwealth Scholarship agencies who might need to be reminded of the agreed procedures as recorded in the *Administrative Handbook on the CSFP*.

The course of discussion on particular aspects of operation is set out below:

Prospectus for Awards

It is noted that in some countries the Commonwealth Scholarship prospectus is not frequently revised. In order to attract the best and widest field of candidates, it is important that the prospectus should be updated in time for each competition.

Publicity

The meeting endorses the references in the *Handbook* to the value of awarding agencies' disseminating concise and up-to-date information about facilities for study in their countries.

Invitation to Nominate

Attention is drawn to the difficulties arising if this invitation is not issued in sufficient time, and if the closing dates for receipt of nominations are not observed.

It is suggested it would be helpful if countries which in the past have offered awards and do not propose in a particular year to invite nominations, should make that fact clear at an early stage.

Information to Candidates

Awarding countries wish to stress the need to remind candidates that the CSFP is a competition and that nomination does not necessarily secure an award.

Annual Report on the CSFP

On the assumption that the Conference will accept the recommendation of Sector Committee 3 that Reports on the CSFP, compiled by the Association of Commonwealth Universities, should again appear annually, note should be taken of the importance of each scholarship agency supplying to the Association of Commonwealth Universities prompt and complete replies to the annual questionnaire. It is pointed out that any exercise in evaluation, such as might be carried out in connection with the proposed Ten Year Review of the CSFP for 1971-1980, could depend in part on the accuracy of information in the Annual Reports.

Application Form for Commonwealth Scholarships

No desire exists to alter radically the wording and layout of the questions on the application form or the agreed procedure under which each scholarship agency prints it (with the appropriate variations in detailed wording) for use by Commonwealth Scholarship candidates of its own country.

It is recommended that the Association of Commonwealth Universities again be asked to circulate a sample application form to incorporate the following amendments:

Question 8 : Add : Do not name your spouse if she/he is to accompany you to the awarding country.

Question 20 : Amend : footnote to read: When candidates are selected for a scholarhsip, the awarding country will find places for them. A candidate, after signing the form, should take no steps to secure a place at an educational institution *in connection with this scholarship.*

Question 23 : Delete: Attention is drawn to the practical disadvantages of printing the application form in a local language alongside the questions in their English form; and the hope is expressed that all countries will find it sufficient to print only the English version.

Administrative Handbook on the CSFP

It is recommended that the *Administrative Handbook,* revised by the ACU to take account of the points discussed above and to incorporate the specific amendments noted below, should be reissued and circulated for use by all Commonwealth Scholarship agencies.

It is recognised that some agencies pay insufficient attention to the *Handbook* (even to the extent of impairing their ability to profit from the availability of the awards) and that some way should be found, perhaps by more frequent reminders to agencies, of making those dealing with CSFP matters aware of its provisions. It is suggested also that any review of the CSFP should include consideration of the desirability of a wider circulation of the *Handbook.*

The amendments proposed are:

Page 16 : Under Invitations to Nominate *add* after (third paragraph) ..... for which they apply*. "Prospectuses should be regularly updated in time for each competition."

Page 27 : To Appendix Two (List of Scholarship Agencies) *add* a footnote as follows: "An updated version of this list may be found in successive issues of the Commonwealth Universities Yearbook Appendix ."

Appendix C

Conference Documents

GENERAL

8CEC/GEN/1	Provisional Conference Agenda and Draft Timetable
8CEC/GEN/2	Conference Documentation

WORKING PAPERS

8CEC/WP/1	Commonwealth Co-operation in Education
8CEC/WP/2	Education in the Island Developing and other Specially Disadvantaged States
8CEC/WP/3	The Contribution of Higher Education to Non-Formal Education
8CEC/WP/4	Commonwealth Scholarship and Fellowship Plan - A Case Study
8CEC/WP/5	A Feasibility Study for the Establishment of a Commonwealth Regional Training Centre for Educational Administration
8CEC/WP/6	A Feasibility Study for the Establishment of a Teacher Exchange Programme for the Commonwealth
8CEC/WP/7	Curriculum Reforms in Secondary Schools - A Commonwealth Survey
8CEC/WP/8	Overseas Student Fees
8CEC/WP/9	Commonwealth Scholarship and Fellowship Plan: Seventeenth Report for the Periods 1976-77, 1977-78 and 1978-79

LEAD PAPERS

8CEC/LEAD/1	The Role of First and Second Cycle Institutions Dr. M. K. Bacchus
8CEC/LEAD/2	The Role of Tertiary Institutions Dr. K. Legg
8CEC/LEAD/2a	The Role of Tertiary Institutions - the Universities Prof. A. Wandira
8CEC/LEAD/3	The Role of Non-Formal Education Dr. M. Ahmed

REPORTS

Report of the Meeting of Officials
Report of the Theme Committees on Education and the Development of Human Resources
Report of the Ministerial Steering Committee on Programme Priorities
Report of the Working Party on the CSFP

COUNTRY PAPERS

8CEC/CP/AUS	Australia
BAH	Bahamas
BAN	Bangladesh
BAR	Barbados
BER	Bermuda
BOT	Botswana
BRI	Britain
CAN	Canada
CYP	Cyprus
FIJI	Fiji
GAM	The Gambia
GHA	Ghana
GRE	Grenada
GUY	Guyana
IND	India
JAM	Jamaica
KEN	Kenya
KIR	Kiribati
LES	Lesotho
MLW	Malawi
MLY	Malaysia
MAL	Malta
MAU	Mauritius
NZ	New Zealand
NIG	Nigeria
PNG	Papua New Guinea
StV	St. Vincent
SEY	Seychelles
SIL	Sierra Leone
SIN	Singapore
SRL	Sri Lanka
SWA	Swaziland
TAN	Tanzania
TUV	Tuvalu
UGA	Uganda
ZAM	Zambia
ZIM	Zimbabwe

Appendix D

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