

COMMONWEALTH CO-OPERATION IN EDUCATION WITH SPECIAL REFERENCE
TO SCIENCE EDUCATION

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This paper gives an overview of the educational programme of the Education Division of the Commonwealth Secretariat, and indicates areas in which co-operation can be further promoted, especially in science education in member countries of the South Pacific region. These areas can be described as: the collection and dissemination of information; the organization of conferences/seminars; the organization and support of training courses; the promotion and support of professional Commonwealth associations; and collaboration with other inter-regional or international organizations. Apart from the regular Secretariat budget, most of these activities are financed through the Commonwealth Fund for Technical Co-operation (CFTC).

Information

The Commonwealth Secretariat acts as a clearing-house for information about educational developments world-wide, particularly in the Commonwealth.

The collection of information is done in various ways, for example, through visits by staff to the various countries or by visitors to the Commonwealth Secretariat, through correspondence, journals and periodicals which the Education Division receives, and through participation by staff in Commonwealth and non-Commonwealth regional and international meetings. When necessary, the Secretariat commissions specialists to undertake studies/surveys of various subjects. It was, for instance, one such commissioned study that resulted in the publication The Production of School Science Equipment.

The dissemination of information is effected through a number of publications. Reports of Commonwealth meetings as well as results of various commissioned studies and surveys are published from time to time. Also published are the Education in the Commonwealth series dealing with various aspects of education, and a number of special publications such as Educating and Training Technicians and Mathematics Teaching in Schools.

Meetings

Commonwealth Secretariat meetings dealing with education vary from large triennial ministerial conferences and pan-Commonwealth specialist conferences to smaller meetings like workshops, seminars and symposia on various aspects of education. The Secretariat is paying increasing attention to the seminar-workshop type of meeting which, in addition to discussing problems in general terms, provides some measure of training for participants. The present workshop at which practical laboratory work features quite prominently is a case in point.

Training

The Commonwealth Secretariat provides and supports training in various ways, some of which are:

- (a) Bursaries: The Secretariat encourages Commonwealth countries to send personnel to train at courses which are already in existence. Emphasis in training has been mainly on the training of middle-level personnel and awards have been made for a wide variety of courses in technical and professional institutions, including such well-known centres as the Regional Educational Centre for Science and Mathematics (RECSAM) and the Colombo Plan Staff College for Technician Education.
- (b) Provision of Consultants: The Secretariat often procures consultants to assist in national, regional and pan-Commonwealth training programmes. For instance, in 1978 a team of consultants assisted by local counterparts carried out a study in the Bahamas which, it is hoped, will lead to training of science and mathematics educators for effective teaching and learning of these subjects. Also, whenever possible, Secretariat staff are made available from time to time to provide advice to governments, UNESCO and other regional and international organizations.
- (c) Regional Training Courses: Where regional training courses already exist, as for example in RECSAM, the Secretariat is prepared to consider requests to support personnel sent there for training.

Since 1977, the Commonwealth Secretariat has launched its own programme of regional courses. The first course, held in Nairobi, Kenya, from January to April 1977, provided training in educational administration and supervision for school administrators and supervisors drawn from Commonwealth Africa. A second 10-week course dealing with the same subject was held in Fiji for similar personnel from Commonwealth Pacific countries from May to July 1978, and the third in the series is planned for the Caribbean region in May this year.

Another course which merits mention here is a Commonwealth Caribbean regional course in Book Development, held in Guyana from July to September 1977 for personnel from Ministries of Education, other Ministries, and other institutions.

- (d) Educational Visits: The Secretariat has in the past provided a number of grants to enable personnel from the developing countries to travel to other developing countries so as to examine special areas of interest in education. Though these visits have proved useful, it is now thought that training attachments would be even more desirable.

Teaching about the Commonwealth

It is recognized that much ignorance exists in Commonwealth countries about what the Commonwealth is, what it does, and what it has to offer to member countries. Commonwealth Heads of Government therefore gave strong support in 1977 for programmes to improve the knowledge and understanding necessary for effective co-operation between member countries. In August 1978, the Secretariat provided support to an African regional seminar on Teaching about the Commonwealth, which was organized in Nairobi by the African Social Studies Programme. The Secretariat next plans to sponsor a similar seminar in the Caribbean.

Commonwealth Association

The Commonwealth Secretariat gives support to a number of non-governmental organizations. One such body, the Commonwealth Association of Science and Mathematics Educators (CASME), is serviced by the Education Division of the Secretariat. It is an Association aimed at promoting the social significance of science and mathematics education. Founded in 1974, it has already organized two regional seminars; the first held in Accra in 1975 dealt with "Languages and the Teaching of Science and Mathematics with Special Reference to Africa"; the second concentrated on "Relevance in Science and Mathematics Education" and took place in New Delhi in 1978. A third seminar on "Training Science and Mathematics Educators with Particular Reference to the Social Context" is planned for the Pacific region in Darwin, Australia, in March 1980. CASME also publishes a quarterly journal, The Science Teacher which is distributed free to members. The Association also organizes an awards competition for science and mathematics educators annually.

The Commonwealth Association of Polytechnics in Africa

As a first step towards the ultimate establishment of a pan-Commonwealth Association of Polytechnics, the Secretariat, through the Education Division, initiated and supported the launching, in December 1978, of a Commonwealth Association of Polytechnics in Africa. This resulted from a recommendation of the Commonwealth Ministers of Education Conference, last held in Accra, Ghana in March 1977. An Executive Committee headed by a President, and three Vice-Presidents came into being with temporary headquarters in the Polytechnic of Mombasa, Kenya. The main objectives of the Association are to foster the exchange of staff and students, and to assist the development of curricula, research and teaching experience in these young institutions in Africa.

It is planned to launch a similar Association in the Asia-Pacific as well as the Caribbean regions in the next few years. In this way, co-operation in the fields of staff training, student curricula, and the production of technical and vocational equipment will be increasingly encouraged. Clearly, the issues of science teaching equipment and the training of technicians for maintenance and production are closely related to the existence of such an Association, and participants will no doubt wish to follow developments in this field most attentively.

Co-operation in Science Education in Commonwealth Pacific Countries

Apart from the common features in the structure of education in South Pacific countries, it is interesting to note from the country reports presented at the workshop that the problems of teaching science in these countries are strikingly similar - over-dependence on expatriate staff and on importation of equipment from overseas with all the attendant difficulties and frustrations. It is therefore not surprising that the workshop discussed the possibility of establishing a regional equipment production centre.

Inter-Regional Co-operation

The similarity of problems in science education throughout the Commonwealth confirms the value of co-operation between science educators in this region, in Africa, in the Caribbean and in Asia. The need to reduce wasteful experimentation where relevant experience and systems are already available in member countries has long been recognized. So has the need to facilitate inter-

regional travel, wherever possible. The presence of representatives from Guyana and Malaysia at this workshop illustrates this point. What needs to be emphasized is that all countries should endeavour to take advantage of pan-Commonwealth conferences and seminars to make post-conference study visits and to look beyond regional frontiers for opportunities of Commonwealth co-operation in science education. However, it is also crucial to the success of such co-operation that communication channels within Education Ministries/Departments should be strengthened and generally improved, and that mechanisms for regional and inter-regional collection, dissemination and exchange of information and experience should be increased and, where necessary, streamlined. Information on educational experiments, innovation, problems, and how such problems have been solved, should be forwarded to the Secretariat's Education Division which is currently reviewing its educational newsletter with a view to improving its clearing-house function for member states.

It is in this way that the Commonwealth Secretariat as the central agency can be assisted by member states to improve its service to individual countries and to the Commonwealth as a whole. For we believe that such a two-way flow of educational information is critical to the continuing value of Commonwealth co-operation in education generally and in Science and Mathematics education in particular.