

COMMONWEALTH CO-OPERATION IN THE PRODUCTION AND USE OF SCHOOL SCIENCE TEACHING EQUIPMENT

Presented by the Commonwealth Secretariat

This paper seeks to indicate areas in which the Commonwealth Secretariat can assist in promoting Commonwealth co-operation in education in Africa.

The educational programme of the Commonwealth Secretariat can be described under three main heads: the organization of conferences, seminars and workshops; the collection and dissemination of information; and the organization and support of training courses.

Information

One of the main functions of the Commonwealth Secretariat is to act as a clearing house for information about educational developments in the Commonwealth.

(a) The collection of information is done in various ways, for example through visits to Commonwealth countries, through correspondence, and through the large number of journals and periodicals that the Division receives. When necessary, the Secretariat may commission specialists to obtain information in various fields. For instance, it was as a result of a commissioned study that we were able to publish The Production of School Science Equipment. The Secretariat also organizes surveys in order to provide information required by Commonwealth countries.

(b) The dissemination of information is effected through a number of publications. The Secretariat publishes reports of its seminars, workshops and other conferences, as well as results of surveys. There is in addition the Education in the Commonwealth series of publications dealing with special areas of education, and a number of special publications such as Educating and Training Technicians, Mathematics Teaching in Schools, and The Production of School Science Equipment.

Conferences, Seminars and Workshops

Commonwealth Secretariat meetings dealing with Education are handled by the Education Division. The meetings vary from ministerial conferences to specialist conferences and smaller meetings like workshops, seminars and symposia on various aspects of education. Of late the Secretariat's emphasis has shifted more to the seminar/workshop type of meeting which, in addition to discussing problems in general terms, aims at providing an element of training for participants. The present seminar/workshop is a case in point.

Training

Training in the field of education is provided and supported by the Commonwealth Secretariat 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. So far 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.
- (b) Provision of Consultants. The Secretariat has often procured consultants to assist national training programmes. For example, the Commonwealth Secretariat was involved in a review of educational policy and programmes in Sierra Leone, and in 1975 a team of consultants was invited to advise the Government of the Bahamas on the organization and administration of their educational system.
- (c) Regional Training. Where regional training courses already exist, the Secretariat is prepared to consider requests to support personnel sent there for training.

In response to a recommendation of the Sixth Commonwealth Education Conference, the Commonwealth Secretariat has launched a programme of its own regional courses. The first, which took place in Kenya from January to April 1977, provided training in educational administration and supervision for school administrators and supervisors drawn from Commonwealth Africa. Similarly, a six-week Commonwealth Caribbean course which provided training for those engaged in book production was held in Guyana in July-September 1977. These are the first of what we hope will be a number of regional courses if the demand for them continues.

- (d) Educational Visits. The Secretariat has in the past provided a number of travel grants to enable personnel from developing countries to travel to other developing countries to examine special educational areas of interest. These visits have proved very useful.

Bilateral Co-operation

It is encouraging to note that the widening of the range of Commonwealth co-operation through the Secretariat has not lessened the importance of bilateral co-operation. The following could be considered as areas suitable for increased bilateral assistance:

- (a) Visits of personnel through travel funds to the donor country or a third country to see educational projects.
- (b) Training by means of awards given in the donor country or in other countries in selected fields.
- (c) Support for trainees at regional training centres.
- (d) The supply of personnel to support national training programmes.
- (e) The exchange of materials for the teaching of science.

Commonwealth Associations

There is room for Commonwealth associations as well as other organizations

to assist with the training of personnel. Commonwealth Secretariat support may be requested by any professional education association in the Commonwealth, including Science Teachers' Associations and Teachers' Unions wishing to assist with training personnel for the manufacture, supply or use of low-cost science equipment.

National Science Teachers' Associations can be particularly useful by arranging in-service training courses and encouraging teachers to participate in them. In addition, the contact and exchange of information and personnel between such national associations is proving beneficial to science teaching through the transfer of experience arising from them.

Teaching about the Commonwealth

There is a great deal of ignorance in Commonwealth countries about what the Commonwealth is, what it does, and what it has to offer to member countries. At their meeting in London in June this year, Commonwealth Heads of Government gave strong support to the Secretariat's plans to stimulate the knowledge and understanding necessary for effective co-operation between member countries. In Britain, kits of information about the Commonwealth designed for school use are produced by the Commonwealth Institute in London. Other countries may wish to produce materials of their own, in which case the Commonwealth Secretariat will provide whatever assistance it can. Discussions are already going on between the Education Division and the African Social Studies Programme on the production of new materials for teaching about the Commonwealth in schools and colleges of the Africa Region.

Commonwealth Regional Co-operation in Science Education in Africa

Regional co-operation in science education already exists to a certain extent among African States (e.g. Botswana, Lesotho, and Swaziland), through the Science Education Programme for Africa and through national science teachers' associations. Regional co-operation is also desirable in the production of science teaching equipment. Such co-operation would enable the cost of designing apparatus to be shared and thereby reduced. It would increase the degree of utilization of the production facilities. In addition, it might be able to overcome problems arising over the importation of essential raw materials. A case in point is a test-tube making machine which has been lying idle in Ghana possibly because of foreign exchange difficulties which prevent the procurement of glass. If a regional mechanism were to be in existence whereby other countries could provide the glass on some mutually beneficial terms, Ghana could produce test tubes to meet the needs of West Africa, thus reducing costs and possibly delays that occur between a school wanting the apparatus and actually getting it.

Regional groupings can themselves be used to by-pass difficulties arising from strains in bilateral relations. Several instances have occurred where regional and international organizations have opened communication avenues for specialists who would otherwise have been unable to interact due to breakdown of communication at the bilateral level.

It is well known that regional and international co-operation can contribute directly to national educational development in a variety of ways. Some of those by which the Commonwealth Secretariat already provides assistance have already been described. In addition there is an emphasis on "third country" exchanges. The personal contacts thus created are **important** in strengthening professional linkages and in revealing mutually useful information which cannot always be conveyed through

correspondence. The Secretariat intends to continue to build up its clearing house of information so as to be able to assist member states more effectively, and it is hoped that Commonwealth Governments will continue their co-operation with us in this regard.

The foregoing suggestions and ideas have been put forward on the premise that meaningful trade and economic relations, and a general atmosphere of co-operation, exist or can be promoted between member countries of Commonwealth Africa. It is suggested that such co-operation should be extended in the promotion of educational development and especially in the production of low-cost science teaching equipment. Clearly, any arrangements reached on a bilateral, regional or international basis would need to include provision for individual countries to have equipment produced to meet their national requirements. These arrangements could be devised so as to develop science equipment from locally produced prototypes which had been trial tested. They could thereby foster the encouragement of local initiative and educational experience in science and achieve a reduction in costs.