

ADDRESS BY MR REX E O AKPOFURE
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It is a special pleasure and privilege for me to bring you this morning sincere greetings and good wishes from the Commonwealth Secretariat in London. On behalf of the Secretary-General, His Excellency Mr Shridath Ramphal, I wish to welcome all of you who have found time to come to this opening ceremony. I welcome also our participants and observers, including those who are due to arrive later today. Thirty-nine participants representing 14 countries of Commonwealth Africa are expected at this seminar/workshop which has had the distinction of being "over subscribed", by which I mean that participants have exceeded the numbers originally envisaged. This clearly indicates that the subject is one to which member states attach high priority. Indeed, the calibre of participants nominated to attend is such that we expect a very high quality seminar.

The theme, as you have already heard, is "The Production and Use of Low-Cost Science Teaching Equipment". Specifically, the objectives we shall be trying to achieve are the following: to consider methods by which school science equipment may be most effectively developed through greater involvement with curriculum innovators and school teachers in order to fulfil curriculum objectives; to examine the role of teachers, instructors, technicians and the community in the development and production of low-cost science equipment; to consider the implications for teacher education, if teachers are to participate meaningfully and effectively in innovative teaching strategies using low-cost science teaching equipment; to provide workshop experience in designing, developing, and evaluating locally constructed low-cost science teaching equipment; and to consider ways of improving Commonwealth co-operation in the interchange of ideas and experience in the development and production of school science equipment.

Since the first Commonwealth Education Conference was held in Oxford in 1959, Commonwealth Ministers of Education, now representing 36 countries, have met every three years in one of the member states to review the state of education and, among other things, to identify areas of priority for action. The latest of these conferences took place in Accra last March. That conference endorsed as a priority the emphasis already laid by its predecessor on the need to implement ideas concerning the provision of low-cost science equipment for schools so that science can be meaningfully taught and the development of technology can take tangible strides forward. As a result of recommendations arising from these conferences, the Commonwealth Secretariat has planned a series of training workshops. The first of these was held at Nassau in the Bahamas in November 1976. The workshop being opened today is the second in the series. It covers the Africa region of the Commonwealth. The third is planned for the Asia or Pacific region sometime next year. So far, experience has indicated that the workshop approach is a valuable strategy.

Let me now briefly underscore the scope of this seminar/workshop. It deals not merely with science equipment but also with the curriculum content on which it is based, the methods by which the curriculum should be taught, the methodology by which teachers are to be educated for their task,

and the roles which various agents in the community may be expected to play. It will communicate laboratory practical skills and experience; indeed, it will be a workshop in a full sense. Drawing on our experience from the Caribbean region, we will try to determine how to reduce bookish learning and science teaching by the talk-chalk method and increase the practical component in science education. We hope to persuade participants and teachers to subordinate their fear of students breaking expensive apparatus to the need for them to learn by experimentation. We hope also to stress that the physical forces that children read about can be observed, measured and recorded in their own environment with equipment made - or largely made - locally (even by themselves) without first going to Europe, or Asia or the Caribbean. We shall exhibit prototype examples of equipment from some Commonwealth African countries, and display examples of apparatus manufactured in one of the developing countries represented here at this seminar.

Our fathers and forefathers - hunters, fishermen, wood-cutters - had eyes which read and interpreted the spoors of animals in the forest, and the meaning of the flow of the tides. They understood the peculiar calls of birds at times denoting the presence of predators or other signs of danger - even a broken forest leaf. Today most of us, and most school children, walk through woods and forests with eyes and senses dulled to signs and signals all around; the skill of keen observation seems no longer to be with us. Likewise the many objects used for the arts and crafts of traditional industries, many of which showed exquisite skill, no longer capture children's interest. We appear to have educated children away from the use of their hands and their eyes into seeking the shortest cuts and the easiest ways out - for example, by copying what someone else has designed or produced.

Science is an active process and its study does not lie only on the pages of books which are but the record of the findings of others. In this workshop, therefore, our targets are to reduce costs and the problems of foreign exchange, and to show how science can be taught widely to all pupils through a curriculum that is relevant to every-day life. We hope to examine how various national agencies such as Ministries or Departments of Industry, Trade and Agriculture might be involved, and how the experience gained in other Commonwealth regions may be shared, not only between member states but also with international and regional agencies like UNESCO, UNICEF and Science Education Programme for Africa, to name only a few. For each participant at this workshop, there will be the obligation on returning home to initiate action at the national level or develop further action to establish or strengthen the design and production of science teaching equipment with an eye on low costs.

The work of the Commonwealth Secretariat does not consist of science workshops alone. Its work includes Commonwealth consultation and co-operation in a number of fields: International Affairs, Trade, Finance, Economic Affairs, Law, Youth, Information, Health, Science, and Food Production and Rural Development. In each of these areas of activity, Ministers from Commonwealth countries meet regularly for consultation and the exchange of information and experience. Programmes such as the Commonwealth Scholarship and Fellowship Plan and the Commonwealth Fund for Technical Co-operation (CFTC) to which voluntary pledges last June for example, exceeded envisaged targets, are all ways in which practical expression is given to the idea of Commonwealth co-operation. Indeed, this seminar, like its predecessor in Nassau, has largely been made possible by funds provided through the CFTC. Thus the Commonwealth association of 36 sovereign States (voluntarily bringing together some 900 million peoples

across the continents through its Secretariat in London) does attempt by means of its various programmes to assist member states in ways which proceed much more quietly than the fan-fares of its political gatherings would seem to indicate.

Because of the size of the Education Division (9 professional staff) our strategy in seminars and workshops is to initiate schemes of action in areas which have been identified by member states and to depend for follow-up action on the members who attend them. Our methods also include the commissioning of educational publications, studies and research through experienced and outstanding specialists. In this way, especially through the dissemination of the information thus gathered, the benefit of individual experience - whether in research, in fellowships or in training opportunities - is spread to relevant members where the need is felt. From this particular workshop we hope such a result will follow.

I cannot end without expressing thanks, on behalf of the Commonwealth Secretary-General, to all those who have made this gathering possible. First, gratitude to our host Government, the United Republic of Tanzania, for its hospitality in hosting this workshop and for the facilities it is providing through the Institute of Education. Although the Honourable Minister of Education is unable to be present in person, his able representative Mr. Gwangilo has more than guaranteed us his interest and support. Later today we are to enjoy further hospitality given by our hosts. In addition, I thank the staff of the Institute of Education, with its Director Mr. Migembe in the vanguard, and the University, for providing the magnificent setting and facilities not only for this ceremony, but for the workshop. Next, we must thank our consultant, Mr. E. Bengtsson, and our resource persons Dr. Dyasi, Mr. Nalletamby and Mr. Morgan. All are experienced in this field. Our observer organizations have so regularly attended our seminars that we are sometimes tempted to take them for granted; to them too, I must add a special welcome.

One last point and I am done. Many of us have heard a great deal of, and some have previously enjoyed, the warm hospitality of this great city. All of us look forward to receiving, if not a golden key, a key of some other metal to open the gates to the city, so that after work there may be play at the end of the day. In that confident anticipation, I thank you all on behalf of all the participants for your kind attention, and in closing would add "Asante Sana".