

THE ORGANIZATION AND MANAGEMENT OF SCHOOL SCIENCE EQUIPMENT

This paper was originally prepared for and discussed, in broad terms, at the Commonwealth Conference on Materials for Learning and Teaching which was held in New Zealand in 1975.

At the seminar/workshop held in the Bahamas to deal specifically with science equipment, participants considered the possibility of establishing a Caribbean-wide production unit, and the place of resource centres in the Caribbean.

Caribbean-wide Production Unit

In the main, a Caribbean-wide production unit could be justified on the following grounds: saving of foreign exchange; the psychological satisfaction of being self-reliant; the social and economic advantage of using local labour especially in these days of unemployment; utilization of raw material resources of the region; assurance of the relevance and suitability of equipment produced for local curriculum programmes; ready availability of supply; and provision of a blue-print of a successful local production enterprise.

Nevertheless, attention was drawn to a number of factors that might militate against the immediate establishment of such a unit. Besides political considerations, economic and social difficulties included the limited market, currency differences, territorial tariffs, expensive regional freight services, intra-communication barriers, and inter-island rivalry.

The need for a special effort to minimize the negative effects of intra- and inter-territorial communication barriers was pointed out. Also noted was the fact that such a venture might become a success if the types of equipment produced could be limited to those for which the Caribbean possesses adequate technology.

Before such a production unit could merit the serious consideration of governments, however, it would be necessary to undertake feasibility studies on cost-effectiveness. It was suggested that such an exercise could be carried out by university personnel working under the direction of a CARICOM-appointed economist, or by experts from outside the region if necessary.

On the question of staffing of a possible production unit, it was agreed that the structure of the Science Curriculum Centre in Njala University College in Sierra Leone would offer a suitable one to follow. This consists of a general manager with overall administrative responsibility, a design and production manager, an educational consultant with responsibility for sales and storage, and a few technicians.

It was noted that the Caribbean itself could produce the staff required for the type of production unit envisaged. Thus, if and when the various territories decide to set up such a centre, the main training emphasis would be on familiarizing local staff with the specific techniques used in the production

of low-cost science equipment. In this regard, it would be necessary to provide new recruits with on the job training and/or to second them, on attachment courses, to existing production centres like Kenya's Science Equipment Production Unit and India's National Council of Educational Research and Training.

Such training efforts should be supplemented with technician training based on the SEPU-type of workshop experience, and sponsored by agencies like UNESCO, the Commonwealth Secretariat, and the British Council. The type of training suggested is one that might last for about six weeks and involve about 30 people in the management and repair of secondary school science equipment. Also, participants at this meeting should be people who, on going back to their own countries, could be used as resource persons in local seminars/workshops.

Resource Centres

Even though it was felt that the concept of a resource centre was not clearly understood in many countries, there was general agreement on the usefulness of such centres.

A resource centre was defined as a facility which produces and acquires suitable educational materials (e.g. textbooks, kits, films, slides, charts, etc.) and makes them available to teachers. Thus it services the needs of teachers and teacher educators, schools and colleges (including teachers and pupils), and the community at large. It was noted that at present the following countries have resource centres in various stages of development: Bahamas, Barbados, Belize, Bermuda, Guyana, Jamaica, St Lucia and Trinidad and Tobago.

In establishing such centres in the Caribbean, certain factors must be borne in mind. The centres should be tailored to meet the specific needs of the community they are designed to service, they would need to "sell" the concept of the resource centre to the public, and they may be sited to their advantage in the vicinity of or within existing educational institutions. Also, for proper administration, each of such centres should be made the full responsibility of one individual who should be assisted by a librarian and a secretary. The detailed staffing arrangements at such a centre would, however, depend on local circumstances and the stage of development of the resource centre.