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AFRICAN ELEMENTARY SCIENCE PROGRAM

EDUCATIONAL SERVICES INCORPORATED  
Newton, Massachusetts

R E P O R T

to the

AGENCY FOR INTERNATIONAL DEVELOPMENT

for the period

DECEMBER 1, 1965 - FEBRUARY 28, 1966

AID Contract No. csd-772

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March, 1966

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REPORT TO AID FOR THE CONTRACT PERIOD

DECEMBER 1, 1965 - FEBRUARY 28, 1966.

Progress has continued in the African Elementary Science Program during the three month period under review. Arrangements for the 1966 summer Workshop to be held in Tanzania are extremely promising; and commitments for the creation of new science centers in Tanzania and Malawi have been received. It is anticipated that support for an additional center in Benin-City, Nigeria, will be officially pledged in the near future. Further progress along the lines indicated in this Report is being constrained until we are assured of the continuation by AID of the Program beyond the present contract period. A proposal for such a continuation was submitted to AID/Washington in February 1966. That proposal covers the two-year period July 1, 1966 to June 30, 1968 and seeks the sum of \$1,499,839.

1966 WORKSHOP

After careful deliberation, Dar es Salaam was selected as the most suitable site for the 1966 Elementary Science Workshop. The location is singularly appropriate since one of our requests for a new Science Center comes from Tanzania - the Center to be at The University College, Dar es Salaam. The University College will cooperate to the fullest extent possible with the Workshop, making its facilities available to participants; and members of the Faculty will participate whenever their schedule permits. Local schools are in progress during most of the Workshop period which will greatly facilitate trial teaching of the units produced during the Workshop. Dar es Salaam has the advantage of being easily accessible to participants coming from the various countries.

The Ministry of Education of the Government of Tanzania has expressed enthusiasm for our holding the Workshop in Dar es Salaam. We are assured of its

active cooperation in arranging the much needed access for participants to local schools which forms such an important facet of the Elementary Science Workshop.

Invitations to submit nominations for Workshop participants have been issued to Ministries of Education in the nine program countries, and to African university scientists and educators known to have a special interest in or qualifications for the Workshop. Twelve official nominations have so far been received.

No significant problem has yet appeared in connection with continued participation in the program by any of the countries involved. This is in spite of the fact that schools are in session in a number of these countries and releasing qualified science personnel to participate in a six-week workshop is often a hardship

The net has been cast more widely in issuing invitations to American participants this year and the response has been prompt and enthusiastic. Scientists qualified in areas not considered at the 1965 Workshop have been invited, including specialists in Tropical medicine and epidemiology to consider the development of science materials relevant to Public Health. It is clear that a good nucleus of last year's African and American participants will attend, providing the desired continuity; and a lively and extremely fruitful session is expected to generate valuable and exciting materials.

#### SCIENCE CENTERS

In addition to the Science Center plans described in previous reports, the period under review has increasingly revealed the need for science centers and has brought requests for such centers. Tanzania and Malawi are establishing science centers within the next several months. The main reasons for tardiness in finalising requests for centers in the program countries are the difficulty of locating skilled local staff personnel, shortage of space needed for a center, and of housing for the ESI Science Innovators. The Science Innovators proposed by ESI for the Centers

are acceptable to the host Governments in each case, and we are confident they are well qualified to bring originality and thrust to the curriculum development programs in their respective countries. The decisions to initiate these Centers represent great strides forward in the establishment of local institutions for science curriculum development work and gratifyingly reaffirm the demand for the science center concept in Africa.

In the case of Tanzania, the new Science Center will be housed at The University College, Dar es Salaam (as already indicated), and will be administered by the Institute of Education there. Dr. Eugene A. Godfredsen will take up his appointment as the Science Innovator seconded by ESI to the Institute of Education (subject to AID approval already formally requested) in late August, 1966.

Full details are not yet available on the proposed Malawian Center. Cabled acceptance of Mr. Richard S. Kimball as ESI Science Innovator has been received with the promise of full details to follow. It is expected that the Science Center will be at the Donasi Teacher Training College near Zomba. Previous visits by ESI program personnel have established that adequate facilities exist there. Mr. Kimball's credentials will be forwarded to AID/Washington for official approval as soon as full Center details are available.

The Ministry of Education in Benin-City, Midwestern Nigeria reports that facilities have been allocated at the Benin-Delta Teacher Training College for the establishment of a Science Center there. Final plans for the commitment of the necessary personnel and resources are currently in progress. A qualified Science Innovator has been located and is ready for assignment to Benin-City.

In all cases it is understood that ESI participation in the development of the Science Centers mentioned above is contingent upon the availability of new program funds.

Kenya. ESI's Science Innovator at the Curriculum Development Centre (Science Section), Nairobi, William S. Warren, Jr., reports enthusiastically on his work there. As well as working at the Centre, including organizing seminars for science teachers and tutors, he is doing demonstration teaching at several local primary schools and at a nearby Teacher Training College. He is cooperating with local personnel in the existing movement towards curriculum reform and development at the Centre.

Nigeria. Our Science Innovator attached to the Nsukka Science Centre, Miguel B.R. Savage, has recently sent a number of preliminary drafts of newly written units to ESI for constructive criticism and comment by the African Elementary Science Program. These units have been tested in local schools.

An exchange of experiences in the trial teaching of the units written at the 1965 Workshop will prove extremely helpful to those participating in the 1966 Workshop.

#### EVALUATION

Program evaluation has received much attention during the review period. Dr. Gardner Quarton, Massachusetts General Hospital psychiatrist and member of the African Elementary Science Planning Committee, has written a report setting forth recommendations for the future direction of the evaluative effort. The Proposal for the Continuation of the African Elementary Science Program contains a section on Evaluation borrowing heavily from Dr. Quarton's study. The report in its entirety was forwarded to AID/Washington for review. In keeping with the recommendations contained in that Report, plans for the summer Workshop include attendance by one and possibly two trained psychologists. Their function would be to become closely involved with those developing the materials and to foster a "capacity to evaluate" attuned to program needs and goals.

**GENERAL**

Mr. Akindele O. Osiyale of Ibadan, Western Nigeria, who spent a summer with the Elementary Science Study and was a participant at the 1965 Workshop, recently attained his Master of Science degree in Science Education at Cornell University. He is now working for a few months jointly with the Elementary Science Study and the African Elementary Science Program, prior to attending the 1966 Workshop. This is proving mutually beneficial, providing us with accurate information on current needs in elementary science in Africa, and giving Mr. Osiyale a good grounding in the present work of the Elementary Science Study.

Dr. Roger Brown of the University of Illinois spent a day with the African Elementary Science Program on his way to take up an appointment as replacement for Dr. Frank Klassen, AID Advisor at the University of Njala, Sierra Leone. Dr. Brown gave us some very useful information covering a wide range of subjects in Sierra Leone, including the Faculty at the University, and most particularly the possibilities for a Science Center at that University. A Science Centre Planning Committee is currently considering implementation of ESI's proposal.

Mr. Charles Ebert, the Chief Inspector of Education in Midwestern Nigeria was our most recent visitor. He brings great optimism that a Science Centre in Benin-City, as proposed by ESI, would be of invaluable assistance to current Ministry programs for adding Science to the primary school curriculum in the region.