



An inter-American meeting jointly planned by the Consejo Nacional de Ciencia y Tecnología and the American Association for the Advancement of Science.

**25–30 June**

## Opportunities in Education for Development

As an illustration of the give and take that occurs in the planning of an inter-American meeting, consider what happened to the title of this central theme. The title started out simply as *Opportunities in Education*. But if you translate that into Spanish—*Oportunidades en la Educación*—it doesn't sound right for the simple reason that "oportunidades" has the colloquial meaning in Mexico of "special sale" implying a bargain. Our Mexican counterparts suggested *La importancia de la educación en el desarrollo*. Translate that into English and "importance"—the literal translation of "importancia"—does not convey the shades of meaning, related to moment and concern, that it has in Spanish (or in French). They threw in "for development" because it reflected their deep concern that education should have development as its aim. So we settled for a compromise title in Spanish and another one in English.

The scene of the discussion was the office of my co-arranger, Guillermo Massieu, at the Center for Research and Advanced Studies of the Instituto Politécnico Nacional of Mexico City where he is director of the institute and professor of neurochemistry. Others present included officers of CONACYT and Leonard Rieser, president-elect of AAAS, whose interest in education had compelled him to join us.

But what a theme we had chosen! By comparison with some of the relatively narrow topics of other central themes such as earthquakes and earthquake engineering, the scope of education for development is vast. We gave thought to our boundary conditions. Whom were we trying to reach and

what kinds of education did we have in mind? Discussions of high intensity for a couple of days in the rarefied atmosphere of Mexico City convinced us that since the theme of the meeting was "Science and Man in the Americas" we could limit the scope somewhat by concentrating on science education focused on intercontinental needs. How can one delineate these needs considering the great economic disparity that exists not only between nations but even within the confines of any single country, regardless of its affluence? It was possible because all countries have disadvantaged regions in drastic need of improvement of science education.

Questions such as the following arose and seemed relevant to the whole hemisphere. (i) Can educational technology increase the effectiveness of the



Mexican children working on a scientific experiment during class.

teaching-learning process, decrease its cost, and serve the needs of a rapidly increasing student population? (ii) Is the experimental work performed by the student himself in the laboratory, the home, or the field really necessary? Can demonstration lectures and audiovisual aids serve as substitutes for actual "hands-on" experiments by students? (iii) What makes pupils want to and be able to learn? What is the effect of negative factors such as inadequate nutrition, poor health, and cultural deprivation? (iv) What are the objectives and modes of operation of schemes for effecting wide territorial coverage and continuing education such as the Open University? (v) Can the concepts of systems analysis be applied to planning education at national and institutional levels? What is the current thinking on identifying the variables of education, specifying the objectives, executing a program, and continuously assessing and correcting the system? (vi) Can teachers be motivated to use the approaches and materials of the new courses by involving them in the process of their design and development? How can these activities be built into the educational program of teachers?

A program has evolved which will try to respond to the concerns suggested by these questions. The morning sessions on Monday through Saturday, 25–30 June, will be open to the public. It is expected that the topic of education for development will attract a large audience consisting of teachers at all levels, educational decision-makers, representatives of national and international interests, students, and the general public. The titles of the topics to be dealt with on successive days are "The Utilization of Educational Technology in the Improvement of Science Education," "The Special Role of Experimentation in Learning Science," "Understanding the Learning Process and the External Factors That Affect It," "The Open University and Other Means of Effecting Wide Territorial Coverage and Continuing Education," "The Role of Planning in Education," and "Improving the Initial and In-Service Education of Teachers by Involving Them in the Process of Design of New Courses."

There will also be two related symposiums. Originally planned independently from the central theme, they are now essentially integrated with it because the topics were so interrelated.



Mexican children on science field trip.

The first of these is "Applications of Educational Technology and New Methods and Equipment in Science Teaching," arranged by Thomas Taylor (Department of Chemistry, University

of the Americas, P.O. Box 507, Puebla, Puebla, Mexico). This session runs consecutively 25-27 June, inclusive, in the afternoons and possibly in the evenings. Taylor is also arranging "The Utilization

of Educational Technology" mentioned earlier, and he is planning extensive extracurricular activities including an exhibit before and after the week of the central theme. He may be contacted directly for information on these subjects.

The second symposium, entitled "Educational Planning," (29-30 June) is arranged by Donald Adams (International Education Program, University of Pittsburgh). He is also responsible for "The Role of Planning in Education." These symposiums should be of particular interest to specialists in their respective fields.

It is envisioned that at least 30 participants from the United States, Canada, Mexico, and the remainder of Latin America will take an active part in presenting papers during this week, but it is hoped that a considerably larger number of attendees will participate in other ways.

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## 27-28 June

### Sociolinguistics and Language Planning

Language plays a crucial role in human social interaction; it is the major vehicle for education and socialization. The colonial history of the Americas has produced significant ethnic and linguistic pluralism usually accompanied by painful social inequalities among language groups. The large native American (Indian) populations of Latin America, the Chicanos and Puerto Ricans in the United States, and the speakers of creolized forms or stigmatized dialects of the official languages in urban centers are currently the targets of extensive sociolinguistic research and its application in educational reforms, leading in some cases to radical changes in national legislation.

The symposium on "Sociolinguistics and Language Planning" (27-28 June 1973) will focus on the assessment and solution of problems in specific situations of language contact and bilingualism on the one hand, and on a discussion of fundamental issues of language research and planning on the other.

Symposium speakers and discussants include scholars from Mexico, Bolivia, Jamaica, Paraguay, Peru, the United

States, and Canada who have been active in both the fundamental research on language conflict situations, and in the application of its results in formulating language policies to resolve the conflict and to prepare programs for practical implementation on a regional and national level. They will be joined by representatives from national research institutes and governmental ministries who are currently involved in the decision-making process.

Topics presented for discussion will cover linguistic, social, psychological, and educational aspects of bilingualism and language contact or conflict, the problem of language standardization, the preparation of teaching materials, and the role of the media as factors in the planning process. The presentation of some special cases and the participation of discussants with extensive practical experience will provide close contact with concrete situations and, thus, a testing ground for methods and theories proposed and elaborated during the symposium.

Interpretations and discussions are open to all attendants at the AAAS/CONACYT meeting. They should be

especially interesting and valuable to linguists, educators and educational administrators, officers of governmental planning agencies, and teachers at all levels of instruction. Psychologists, sociologists, and anthropologists will find the concerns of this symposium very close to certain aspects of their fields.

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## 29-30 June

### Educational Planning

Since educational planning has many definitions, deciding how to design the program on educational planning generated considerable frustration. Economists, system analysts, futurologists, and educational administrators all view planning from quite different perspectives. Moreover, the process of educational planning is constrained by time (there is short-, middle-, and long-term planning) and space (there is national, regional, local, and institutional planning).

For the Mexico City meetings discussions will focus on middle- and