

特別寄稿

Science, Education, and Modernization

*William Morris Williams

Science and technology are at the heart of almost everything we in AID do in cooperation with host country people. We call what we do by the name of "technical assistance" as we try to help transfer applicable U.S. technology to developing countries.

In this effort AID as an agency has drawn on the best scientific and technological talent in our country to assist in the transfer and adaptation of scientific knowledge and practices to the priority problems of a developing country. We have enlisted the aid of people from land grant colleges, from giant industrial firms, from major research institutes, and from prestige organizations of scholars such as the Smithsonian, the National Academy of Sciences, and the National Science Foundation in our effort to share with others the fruits of this age of science and technology.

And this sharing is not a one way street, either, since in the dialog among men of science in the world our own country often gains. One example of this benefit to the United States is the contribution of Japan to our knowledge advance in the Earth Sciences.

The International Rice Research Institute in the Philippines can be cited as concrete evidence of AID commitment to cooperation with Asia in applying science and technology to high priority problems of Asian nations.

The Foreign Assistance Act of 1970 contains Section 220 in which emphasis is placed on the AID Program for Peaceful Communication through modern techno-

logies. This act directs our Agency to the extent possible to assist developing countries with research, training, planning, and project support, including the use of television and related technologies including satellite transmission as a medium for sharing such knowledge.

The implications for education in carrying out such policies are clear. The Agency for International Development has a major bureau in Washington called the Technical Assistance Bureau which has the responsibility for looking at problems of science, agriculture, health, and education on a global scale. This bureau sponsors research, surveys, studies, and seminars on problems which are not country-specific, but which are broad enough so that advances in knowledge or even solutions to problems would benefit several countries as a region.

Another bureau in AID/W is concerned with our international training program. From the very beginning of the Point 4 program, ICA, and now in AID we have made heavy investments in the exchange of students and the training of host country people so that they could return home and share their knowledge and teach others.

As many of you in this room are aware, The Republic of Korea has profited from this exchange training program.

Since 1954 through 1971 we have spent about 15 million dollars on participant training in Korea. Your own government has spent during that time about 3 million dollars for salaries and international travel for this same group.

This investment helped to train 3,546 Koreans abroad, certainly a significant effort in sharing modern

*United States Agency for International Development
Office of Education

science and methods. About three fourths of these individuals were sent to the United States for study and the rest to Japan, Taiwan, the Philippines, Thailand, and so forth. Training for people engaged in formal education and those engaged in industrial organizations accounted for half of those sent. The others were in agriculture, public administration, health fields, and so forth.

On the other hand, since 1954 AID has often brought American scholars and scientists to Korea by means of contracts. Many of you can recall our joint efforts with the University of Minnesota, Indiana, Peabody College, Washington University and so on.

Grants and loans in Korea have been made by AID in pursuit of its responsibility to assist in the transfer of science and technology to Korea's priority problems.

KIST, KAIS, and KDI are current examples of projects we share together with a view to institutionalizing and making permanent centers for the study and application of science and the scientific method to problems in Korea.

In KIST where we are meeting today, USAID has been instrumental in bringing together some of Korea's leading scientists and the Battelle Memorial Institute in a cooperative effort to apply modern scientific methods to the solution of emerging problems in Korea's industrial and manufacturing industries.

Every report I read and comments I hear lead me to believe that this cooperative venture is having a high order of success.

KAIS is another example of our joint efforts to produce at the graduate school level men who can serve Korea's growing economy as engineers in applying science to the problems encountered in modernizing industrial technology.

We will have to wait a while to find out how well this idea will work. The plans are well laid and the staff and leadership are of outstanding quality. I am optimistic about the future results.

KDI, while not an example of the hard sciences at work is our joint effort to apply the methods of the modern social scientist to the economic and policy questions which arise in modernization.

As an educator and generalist in the education field

I am well aware that the training of men and women in modern methods of thought and modern processes of investigation does not begin at the graduate level.

If we are to develop individuals who can live by the spirit of science and liberate their intelligence to serve mankind in peace and dignity, we must start while they are young. To communicate the spirit of science and develop people's capacity to use its values and benefits should therefore be among the principal goals of education.

Fortunately the leadership in Korea recognizes the role of education in this task and both the the Ministries of Education and of Science are working together at every level in the education system and in other centers to open up men's minds to the scientific method.

At the moment we in USAID are pleased to be associated with the Ministry of Education in the Korean Educational Development Institute.

KEDI is funded partially by a 7.5 million dollar loan to perform an R & D service for the Ministry in developing for grades one through nine a Korean education system which will be relevant to Korean traditions and future needs and which will be cost efficient. KEDI is expected to make use of modern technologies and media for instructional purposes in order to institute a curriculum and learning environment suited to the modern world in which Korea must compete for survival and progress. Notice that I speak of a modern world, not a Western world.

I should like to make it clear that I as a Western man do not accept the view that Western civilization should be diffused throughout the world. My view is rather that all of mankind is struggling for the elements of enlightenment and the benefits of science, and that we are gradually creating a world culture. But in this process, which I call modernization, each nation will build on its traditional foundations, seeking a new sense of liberation and discovery as development proceeds and the larger world culture forms.

It is in this spirit that I hope our interchange of ideas, knowledge, and science will proceed. And it is my hope that Korean scientists and educators will work in this some spirit toward modernization.