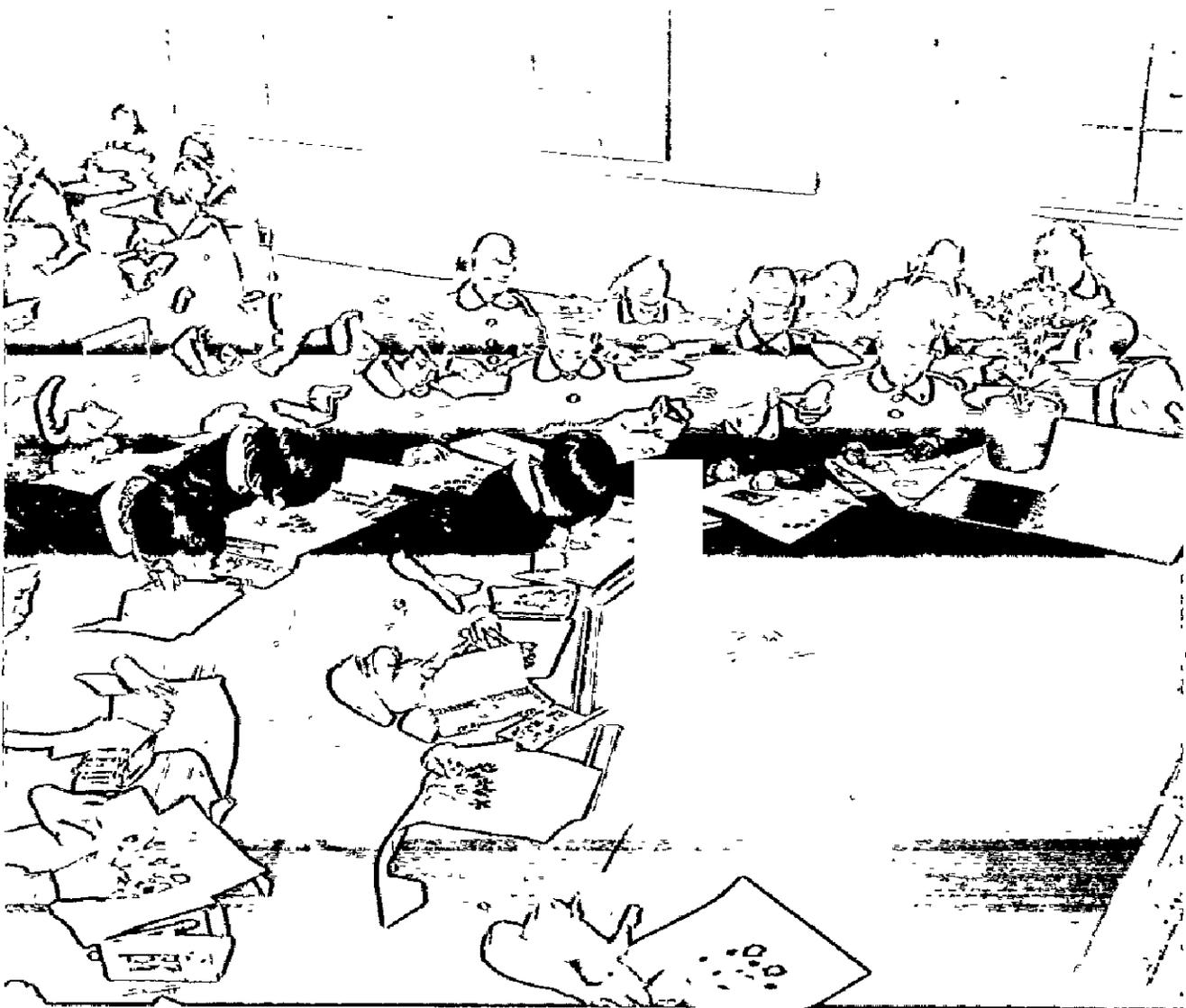


TECHNICAL COOPERATION IN EDUCATION



INTERNATIONAL COOPERATION ADMINISTRATION

370
Ib/a

Contents

	Page
Introduction	1
The Partnership Process	3
Elementary and Secondary Education	7
Teacher Training	11
Vocational Education	16
Higher Education	20
Educational Materials	24
Special Programs	27
Personnel in ICA Programs	30
Conclusion	30

COVER: Korean children study drawing in a primary school class at the Seoul Normal School.



A regional education workshop in Peru.

TECHNICAL COOPERATION IN EDUCATION

Introduction

In the world of today education has taken on a new meaning, totally different from that of 100, or 50, or even 25 years ago. The common man in every country is reaching out for knowledge. He knows now that knowledge is directly related to his well-being.

His government knows that through education he seeks a better life for himself and his children and that he is determined to have it. Governments abroad have called on the United States to help them meet the educational challenge of this "revolution of rising expectations." The United States has responded and today has cooperative education programs with 43 countries. Technical cooperation in education is a part of the much larger Mutual Security Program, which embodies joint efforts in many fields. This booklet reports U.S. efforts to help the newly developing countries to establish educational systems patterned to meet their needs.

The Desire of Many Millions

The motives behind an individual's desire for education do not vary greatly, whether he lives in the most highly developed nation or in the least developed one. These motives relate to the desire for increased opportunity, for escape from poverty and ignorance, for a higher standard of living, and for a better way of life.

In many countries in the past, no effort was made to educate the illiterate villager. His role was assumed to be simply to produce food or other raw materials. He himself knew little of education or its relation to his own betterment. This has changed. He has found out about education. One of the terms that has come to be used in technical cooperation is "felt needs." Development experts have found that progress is more certain if it takes place on the basis of what a man feels he needs. It is not surprising now that illiterate farmers in many parts of the world list education as one of their principal

“felt needs.” Their first request may be for help in establishing a school.

The number of schools in many countries has increased greatly in the past decade, but many more are needed. Costa Rica had 690 primary schools in 1949 and 1,397 in 1958, but more than 39,000 children were unable to go to school in 1958 because there were no schools for them. In 1958 Afghanistan had 803 elementary and rural schools which had an enrollment of 141,000. If its educational system were at a level of that of the United States, it would have 11,700 schools for 2,060,000 children. Of Ethiopia's 3.5 million children, only about 180,000 are in school.

The Need of Many Nations

From the viewpoint of governments of the newly developing countries, the need for education is more than a matter of individual ambition. Lack of education of the country's citizens is the biggest single obstacle to economic, political, and social progress. This lack exists at all levels—the farmer who could be a better farmer, the industrial worker who could produce more, the teachers who could be better teachers, the managers who could operate businesses and factories more efficiently. Thousands of technical specialists are needed but are not available. And even government itself lacks stability and efficiency through lack of administrative skills and trained government employees.

Political stability and a broadly based educational system usually occur together. Violence and political strife generally occur where public education is weakest. The term “immature political institutions” is used where a responsible citizenry has not been developed through universal education.

The defects of educational systems in many countries are not only the result of centuries of poverty and lack of communication with the outside world. Often they are the legacy of history in nations which formerly were colonies and where such education as existed was geared to the culture, language, and needs of the colonial power. In many others education has traditionally been for the more privileged groups, for the few instead of the many.

Other defects may have resulted solely from lack of progress in a country's educational system itself. The subjects taught in school are those that have been taught for many years, and they may bear little relation to the life and needs of today. Nearly all newly developing

countries lack teachers and especially trained teachers. Of 115,000 elementary teachers in Pakistan, more than one-third have had no professional training of any kind. About half of Colombia's teachers are not certified—this means that they themselves have had less than 9 years' schooling.

Teaching materials are not available in a majority of cases and in some countries the only textbooks are those the teacher owns. In Paraguay basic textbooks do not exist for most elementary school subjects. And even in the Philippines, which has more than 27,000 primary schools and more than 1,200 secondary schools, some 32 million textbooks are needed.

Finally public education depends not only on buildings, teachers, and teaching materials, but on efficient organization and administration. There is a serious lack in these fields. Statistics, research, planning, training institutions, and many other aspects of modern educational systems are needed.

What the United States Can Provide

Obviously the United States cannot meet all the educational needs of 43 friendly countries, nor even of one. Education is a domestic problem. The United States however does have much of value that it can and does share.

It can help organize education. It can help train educational specialists. It can help introduce technical skills and train personnel who will teach these skills. It can advise on how to teach, how to construct buildings, how to provide for child health, how to prepare textbooks; and it can often advise also on how to save money in doing these things.

The United States has learned how to extend educational opportunities to all the people and how to relate education to life in a democracy. U.S. specialists can show others how this is done. Technical cooperation in education is made up of many activities.

The Partnership Process

In most of the newly developing countries education is a function of the central government, and there are relatively few instances in which this is a provincial or state responsibility, as in the United States. Increased public education, therefore, is a matter of national policy—and more than that, one of the major aspects of national

policy—in many countries. Chile in recent years has spent 19 percent of its national budget on education, Panama 21 percent, the Philippines about 23 percent.

When another government asks assistance from the United States, the request is a part of the overall technical cooperation program of the two nations. Other projects may be in the fields of agriculture, health, industry, labor, transportation and communications, and community development. The education program is related to all of these, since the need of knowledge and the lack of technically trained people affects all.

Officials of the foreign government—the so-called “host” government—and members of the U.S. Operations Mission in that country discuss educational needs, determine what projects may be jointly undertaken, what the host country will provide and what the United States will supply. In the case of the United States, this is usually the services of educational specialists. Equipment for schools and laboratories where demonstration programs are to be carried out also may be supplied. Cooperating nations provide buildings, transportation, services of local employees, and other items.

The Servicio—A Joint Program

The earliest joint projects in education were in the Latin American countries and these date from the time of World War II. In Latin America a particular type of administrative unit was devised—the servicio. There are today servicios in the fields of education, health, and agriculture. Each has charge of projects in its own particular field. Individual projects in education can be in teacher training, vocational education, demonstration schools in elementary or secondary education, improvement of higher education, or development of educational materials such as textbooks and teaching aids.

A servicio may develop one phase of an education program, help train personnel for it, and later help extend the program on a nationwide basis. When the program gets to be a going concern, it then continues in regular operation by the Ministry of Education. Technical personnel of a servicio come from both the United States and the host country; expenses are paid from contributions of both. Salaries of U.S. technicians are of course paid by the United States. The close association of U.S. citizens and those of another nation in joint endeavors as in servicios has again and again given evidence of increased good will between the two countries.

The pattern of cooperation outside Latin America may vary from the servicio model, but the approach, through support of definite projects mainly of a demonstration or training nature, is more or less the same throughout the world. In some cases a top adviser from the United States works with the Ministry of Education in top-level planning. Sometimes consultants are provided for a short time. Quite often top officials of other countries come to the United States to study educational institutions or practices here.

A summer course for elementary school teachers at the USOM/Jordan communications media center.



Over the years, thousands of educational specialists from other countries have received training in the United States. Training periods range from several months to several years.

ICA Contracts With U.S. Universities

The very great resources of U.S. universities have contributed in large measure to technical cooperation in education. Contracts are made by the International Cooperation Administration (ICA) with U.S. institutions to supply assistance to foreign universities or ministries of education in developing education programs. This assistance includes technical specialists, participant training, and even equipment. The particular task involved may be improvement of curriculum and teaching, establishment of a new faculty, or, in some cases, advice in planning a whole new institution—its campus, buildings, equipment, curriculum, personnel requirements, and administration.

In cooperative education programs the United States is not trying to develop American education in a foreign country. It is recognized that what is taught and the way it is taught must at all times take into consideration the culture of the host country. Advising on how to improve the teaching and how to make it contribute to economic and social and political growth is the normal function of technical cooperation in education. As much as possible, U.S. technical specialists sent abroad are chosen because their experience will be useful in the new assignment. Universities are selected on the basis of a suitable location or specialty. The University of Wyoming, for example, is doing work in Afghanistan, which is somewhat similar to the State of Wyoming in terrain and resource pattern. The State University of New York has assisted in more urbanized Israel.

Land-grant universities such as the University of Illinois, Kansas State College, the University of Missouri, Ohio State, and the University of Tennessee assist with agricultural education in the agricultural regions of India.

Education programs are adapted to conform to cultural patterns of the host countries, as for example in Bolivia. It has been found advisable there to organize rural education on the pattern of "nucleos." These follow the practice of ancient Inca rule, where groups of communities were the domain of a particular member of the royal family. Now in the "nucleo" there is a central school that has effective administration and supervision of all schools in the group and serves as a model for its dependent schools.

Adaptations also have to be made on the basis of the facilities or lack of facilities in a particular country. It was regarded necessary

in Nepal to give some training to elementary teachers even while they continued on the job. Since they could not come to the capital, Kathmandu, mobile normal schools were organized, were sent to the rural areas, and remained for a while in particular locations where a number of teachers could receive instruction.

Preparation of textbooks involves the training of local specialists who can derive subject matter from local life but need advice from the specialists on effective presentation of subjects. In higher education the problem is even more acute. Technical books in local languages are few and the labor of accurate translation will take many years. Under these circumstances it is practicable to give intensive courses in English, thereby making the technical literature in English accessible. This situation is similar to that found in the United States not so many years ago, when American scholars, particularly in medicine, were learning German and French to be able to read technical literature in those languages.

Elementary and Secondary Education

To plan for broad public education it is necessary first to know what the needs are now for elementary and secondary education and what these needs will be in the future. Governments can then make plans for classrooms, teachers, and methods of instruction. Often the role of U.S. technical cooperation is to supply the specialists who can help make surveys and help Ministry of Education officials plan for improvements and extension of school systems.

One of the most thorough-going projects in elementary and secondary education now receiving U.S. assistance is the program in Nepal. Two specific goals are:

- The development of an elementary system of 5 years' schooling to bring about an increase from 150,000 children in elementary school to 420,000. Some 2,200 new primary schools will be required, each classroom staffed by a trained teacher and with ample supplies and teaching equipment. In addition 5 model elementary schools are to be established for demonstration purposes in training teachers. Although this program will be history-making for Nepal, it still represents a compromise with Nepal's ability to finance the system, and even 420,000 children in elementary schools will represent only one-fifth of those of elementary school age.

- Creation of a multipurpose secondary school system of 5 years (grades 6 through 10), principally by modifying the 92 schools now



Arithmetic teacher demonstrates fractions in a Brazil-U.S. teacher-training project.

in existence. Each high school is to be adequately housed and equipped and will have a science laboratory, shops, library, home economics room, and a classroom and land for practical agricultural purposes. Since there has been no adequate source of trained vocational teachers for these schools, an additional project is being undertaken to supply these teachers. Improvements in the secondary school system are expected to increase enrollment from 14,000 to 20,000 students in 5 years.

A different situation exists in Brazil where the immediate problem at the elementary and secondary school levels is the need for more and better trained teachers, as well as a greater number of school

buildings. U.S. assistance has helped to educate staff members of Brazil's teacher training institutions through an education center in Belo Horizonte. Two hundred and thirty-five teachers have received instruction in modern methods, theory, and practice.

Another project calls for training of 1,000 secondary school administrators, supervisors, teacher educators, and teachers. A demonstration center is to be established. Twenty Brazilian specialists have received advanced training, with observation of U.S. schools, at the University of Southern California and other institutions in the United States.

A general education project in the Philippines, designed to improve the quality of elementary and secondary education, will affect 27,000 schools and 3.8 million pupils. At least 2 elementary schools will be established in each province as demonstration centers.

Showing What To Do

The demonstration school is a time-honored technique in American elementary and secondary education. Originally an adjunct of a normal school, it has undergone countless extensions and variations, has been used in both rural and urban settings, and has been created for special occasions, such as vacation workshops. Used in the newly developing countries, it provides an expert operation that can be observed by many thousands of elementary and secondary school teachers. In this way a limited amount of U.S. technical cooperation can be made to have far-reaching effects. In addition to being a vehicle for teacher education, the demonstration school is the example, to be copied and applied in countless ways.

A joint U.S.-Cambodian project in rural development through education uses the demonstration principle in many different ways. Fourteen experimental elementary schools are to be completed by the end of fiscal year 1961, and 17 model secondary schools by the end of fiscal 1964. A model workshop in arts and crafts at Phnom Penh, the capital, will be used as a training center for teachers and specialists. Annual workshops are being held, study tours are being arranged in countries abroad, and a Rural Teacher Education Center and a National Training Center for Community Educators are being developed.

In Colombia a demonstration program of improved elementary education has been operating in the Department of Valle since November 1958 and is expanding into other departments as education authorities in those departments request it. This project involves pro-

fessional training for administrators and inservice teacher training in annexes to four normal schools, in four cooperating public schools, and in summer workshops. In 1959 the city of Cali designated four primary schools on a temporary basis as cooperating schools for a school improvement program. They serve as a laboratory setting for inservice training of supervisors and principals and administrators. A plan developed by U.S. and Colombian education specialists emphasizes improvement of the physical environment, health facilities and practices, teaching methods, and educational materials.

A Pattern of Self-Help

New classrooms are being opened over the world by the tens of thousands. Few of the governments in the newly developing countries have sufficient resources to provide buildings and equipment. In programs receiving U.S. assistance the element of self-help on the part of communities obtaining new schools is constantly stressed.

The local contribution may be labor in constructing buildings, labor plus materials, or supplying a site. In 1955 at the beginning of U.S. assistance to Laos, 49,000 students were enrolled in 972 elementary schools. Four years later these figures had risen to 96,000 students in 1,463 schools. More than 400 new schools had been constructed on a village self-help basis. U.S. assistance had provided cement, nails, roofing, and sometimes simple tools.

Libya has a 5-year school construction program with a target of 1,750 classrooms. Despite an increase in elementary classrooms from 1,165 in 1953-54 to 2,090 in 1958-59, the ratio of pupils to classrooms had gone up even faster. All elementary schools in Libya now have at least two sessions daily and 20 percent of them have three sessions.

A joint U.S.-Viet-Nam program has resulted in the construction of more than 2,300 elementary classrooms in the last 5 years through an aided-self-help program. Assistance is given in the form of roofing materials and equipment, and teachers' salaries in some cases are paid for 6 months. Many new elementary schools are now being built entirely at the expense of local communities.

Farmers and shopkeepers are aware of the importance of education for their children, even if they themselves can barely read or write. In many Vietnamese homes children read the newspaper to their elders or help their fathers with simple bookkeeping. Courses in school include grammar, mathematics, science, geography, history, civics, and—as a mark of a changing world—traffic safety rules.

Teacher Training

The demand for schools in the newly developing countries far exceeds the supply. Part of this demand arises from the fact that the percentage of new generations, as compared to the older ones, is larger than it used to be. In the Philippines more than half the country's population is less than 17 years old. In Tunisia half is under 20 years old. In Korea also about half the population is under 20 years.

Part of the demand for educational facilities, however, results from the fact that adult illiterates want to acquire at least a part of the education they have missed. In Viet-Nam in 5 years a million and a half persons learned to read and write. In Morocco in 1958 some 350,000 persons applied for literacy training and 10,000 persons had to be recruited to teach them, under a United Nations program.

School enrollment in many countries has increased at a remarkable rate as new governments in newly independent nations extend to as many as possible the educational advantages that formerly were for the few. In Cambodia the number of children attending primary school increased from 32,000 in 1946 to 350,000 in 1956. In Viet-Nam primary school enrollment went from 329,000 in 1954 to 873,000 in 1959. In Libya it went from 60,000 in 1954 to 107,000 in 1959.

A health educator in a Libyan school.



In many countries, however, communities may build school buildings in the hope that teachers can be supplied, only to discover that teachers are not available. In one recent year Laos had 561 schools without teachers. Demand was so insistent to open these schools that even unqualified persons had to be put in charge.

Teachers Without Training

The number of well-qualified teachers in the newly developing countries ranges from "nearly none" to "too few." Libya has had no native-born teachers in secondary schools—they have been recruited from other countries. In Ethiopia there are only 80 Ethiopian secondary school teachers; 450 others are foreign nationals. In Cambodia the number of foreign teachers in secondary schools is 133; Cambodians, 69.

Some of Ethiopia's elementary teachers have had less than a sixth grade education themselves. Rural normal schools in Turkey accept students who have had only a 5-year primary course, and they are given a 6-year training course. Bolivia, Brazil, and various other countries require completion of the sixth grade before entry into teacher training, which lasts from 2 to 5 years.

All too frequently the pattern of rural education is that the village teacher is a youth who has had 1 or 2 years' schooling more than the majority of those in the village.

Under the circumstances education officials in newly developing countries have difficult choices to make. Will they attempt to give thorough professional training to a relatively few teachers? Will they set new standards and gradually weed out those who do not meet them? Will they take the untrained teachers and, through workshops and vacation schools and training on the job, attempt to increase their competence?

The choice is the more difficult when finances are so heavily involved. The improvement of education in a particular country rests largely on the ability to increase teachers' salaries, thereby raising their status in the community and encouraging and helping them to obtain more education and professional competence themselves.

Experience in the United States

Qualifications of American teachers have steadily risen for nearly a century, but the major growth of American education has come about within the memory of many American educators. Some American high schools formerly included courses in teacher training, since

high school graduates often went out to teach in rural schools. Normal schools have become teachers colleges. The tradition of teachers spending vacation periods to get more education is well established. Workshops and demonstration schools are conducted. Many American educational specialists sent abroad in technical cooperation programs recall methods formerly used in the United States which are highly applicable to the situation in a foreign country.

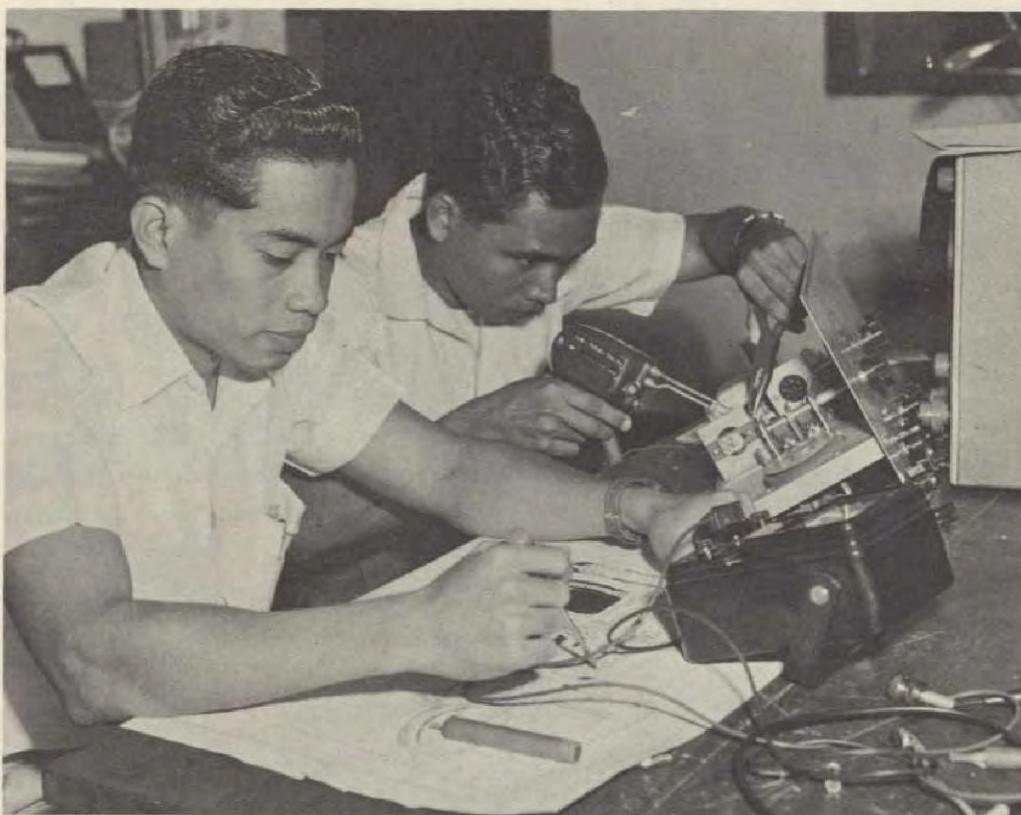
How To Get More Teachers

The most obvious way to get more teachers is to increase the number of teacher training institutions or to expand the facilities of those already in existence. U.S. educational specialists have acted as advisers in many situations where such an expansion has taken place. Strong support by the government of the cooperating country is an important requirement, since physical facilities must be expanded and staffs must be enlarged.

An unusual example of expansion of teacher training is to be found in a project in Thailand, in which educational centers are being established in each of 12 geographic regions. Directed particularly to meeting the needs of the rural population by producing 18,000 new qualified teachers, the program calls for seven schools to have supervision from each center. The project began with surveys of buildings, grounds, classrooms, teaching equipment, and supplies in each center to determine needs. Supervisory units are being established for each center; most of the personnel supplied received training in the United States or in other countries.

The program, begun in fiscal year 1958 and scheduled to last until fiscal year 1963, has already resulted in the training of 11,000 teachers. Sixty workshops and seminars have been held to give added training to 6,500 teachers. Nine U.S. educational specialists are working with Thai educators in developing the training program.

A program of the Government of India for vocational teacher education also is being developed on a regional basis. Four regional teacher education institutions are being established, along with four experimental high schools attached to them as demonstration schools. Two model vocational or "multipurpose" high schools are being developed in each state, and ultimately 300 model high schools will be established in the 300 districts of the nation. Ohio State University, under contract, is supplying the technical specialists who work with officials of the Indian Ministry of Education in developing the program.



Thai students construct a television transmitter at the Bangkok Technical Institute.

How To Get Better Teachers

The task of increasing the competence of teachers in a particular country is a highly complex one. First of all there is the question of incentives for the teachers themselves. Next administrators and supervisors must be in sympathy with any program for improved training and willing to undertake the long process involved. Finally the government must foster many accompanying measures, such as establishment or improvement of teacher training institutions, provision of improved classrooms and teaching facilities, passage of legislation setting new teaching standards, and provision of adequate financial support.

With the assistance of U.S. advisers, many countries not only have expanded the facilities for better teacher education but also have taken the other necessary steps in legislation and budgeting.

Guatemala found that 55 percent of its uncertificated teachers had completed only the fifth grade and had no further professional educa-

tion. A long-term program is underway to give these teachers the opportunity to take an intensive course of two summer sessions, followed by 2 years of teaching and study on their regular jobs under supervision of mobile normal school teams. Those teachers who successfully complete the program receive certificates and higher pay.

Nepal, Korea, and Iran have instituted long-range legislative programs for improving teacher training. In Iran, U.S. education specialists have helped to develop inservice training courses under which 42,600 teachers took 755 courses from 1952 through 1958. There were courses in kindergarten, elementary and secondary education, fundamental education, homemaking, physical education, vocational education, and other subjects.

Much of the task in improving curricula for teacher education, for developing administrative methods, and for relating teacher education to community needs is accomplished through university contracts. In these instances the International Cooperation Administration (ICA) arranges for a university in the United States to be associated with a teacher training institution in a newly developing country. Faculty members of the American institution may serve on the faculty of the foreign institution, usually while faculty members of that institution are taking advanced studies at the university in the United States.

Contracts providing general teacher education include those with Teachers College of Columbia University for work in Afghanistan and India, Ohio State in India, Brigham Young University in Iran, Ohio University in West Nigeria, George Peabody University in Korea, and Indiana University in Thailand. Various other universities assist in vocational teacher education and in other special fields.

In fiscal year 1959 a total of 606 participants in education, exclusive of those under university contract arrangements, arrived in the United States for advanced study and to observe U.S. educational practice. These included teachers at all levels, supervisors, Ministry of Education, and other administrative personnel. Other education personnel received training in so-called "third countries," as for example in Japan, the Philippines, and Thailand and at the American University at Beirut in Lebanon.

The necessity for English language training has been met by courses in teacher training institutions in many countries. An experiment in bilingual training in the United States also has met with success.

Recognizing that outstanding teachers and supervisors sometimes were denied opportunity because of lack of English language facility, ICA experimented with training a group at Pennsylvania State University, using Spanish as the language of the course. The university

is now teaching its third group of this kind. A second project was conducted at the Geneseo Teachers College in New York State, also in Spanish. A French center for Tunisian and Moroccan participants was instituted at Kansas State College at Emporia for one semester and at Ohio State for the second semester.

Vocational Education

For new nations seeking economic progress, few needs are more urgent than that for skilled workers. In many nations, beginnings have been made over the past several decades to train more skilled workers. Without adequate training facilities, however, numbers of skilled workers are everywhere limited.

One of the key factors in economic development is improved transportation. In the present-day world this usually means highway transportation. The number of passenger and commercial vehicles in many countries is increasing rapidly. In Guatemala there were 5,200 passenger and 4,000 commercial vehicles in 1948, 19,900 passenger and 9,500 commercial vehicles in 1957. In Iran there were 14,800 passenger and 18,200 commercial vehicles, exclusive of government vehicles, in 1950. In 1955 there were 28,600 passenger and 24,100 commercial vehicles. In Ethiopia there were 3,200 passenger and 1,500 commercial in 1949; 16,700 passenger and 6,200 commercial in 1957.

For effective operation the increase in vehicles presupposes a proportionate increase in numbers of trained automobile mechanics. This unfortunately has not occurred.

In most of the newly developing countries, radio has become a highly important means of communication. The number of radios in Ecuador went from 4,000 in 1937 to 100,000 in 1956, in Turkey from 46,000 in 1938 to 1,083,000 in 1957, in India from 64,000 in 1938 to 1,076,000 in 1956. These figures indicate the number of new radio repairmen that are required.

Electric power development has grown rapidly, yet not the number of electricians. For more books, magazines, and other printed material, more printers are needed. Sanitary facilities, badly needed to check disease, require many thousands of trained plumbers. And for greater agricultural production, young men and young women trained in vocational agriculture schools are the best hope.

U.S. assistance in developing vocational education has been extended to many countries. In some instances shop equipment has been supplied. Vocational specialists have been sent to instruct voca-

tional teachers, and vocational teachers have been brought to the United States or have been sent to third countries for training. The emphasis of all these efforts has been to establish the systems whereby more and more skilled workers can be trained on a continuing basis.

Making a Beginning

In some instances there were virtually no organized training facilities. Paraguay's first vocational school was opened in the capital city, Asunción, with U.S. assistance in 1948; for the past 2 years it has been operated entirely by trained Paraguayans. Over an 11-year period its enrollment increased from 79 students to 400. It developed into a well-rounded institution with courses in auto mechanics, plumbing, electricity, refrigeration, forging and welding, machine shop, carpentry, radio, leatherwork, and graphic arts.

A second vocational school was started in 1959 at Concepción with funds provided by residents and an international electric company. Some equipment was supplied through U.S. assistance. One of the teachers had been trained in Asunción. The present enrollment, including night classes, is 170.

A new vocational school, complete with shop facilities, is being built in Guatemala City, capital of Guatemala. The Guatemalan Government is furnishing the equivalent of \$400,000 in cash and land valued at \$900,000. Twelve prospective teachers have been sent with U.S. assistance to study in Puerto Rico.

Improving Present Facilities

In some countries the problem is to increase training facilities or rehabilitate them. After World War II a major effort was made in rehabilitating vocational schools in the Philippines. Assistance was given in reequipping 34 trade and industrial schools and 45 vocational agriculture schools. U.S. technicians worked with Philippine specialists in training teachers. Inservice training has been given to 1,400 staff members, and 350 teachers have received preservice training. Enrollment is 32,000, double the number enrolled in 1950. Of some 7,000 graduates each year, 65 percent are employed, most of them in their own fields of special training.

In Korea U.S. assistance has been given in rehabilitation and improvement of 19 shops, and equipment has been ordered for some 59 schools. Inservice training has been given to 964 vocational teachers, and 37 have been sent to the United States for special training.

In Liberia, Prairie View Agricultural and Mechanical College of

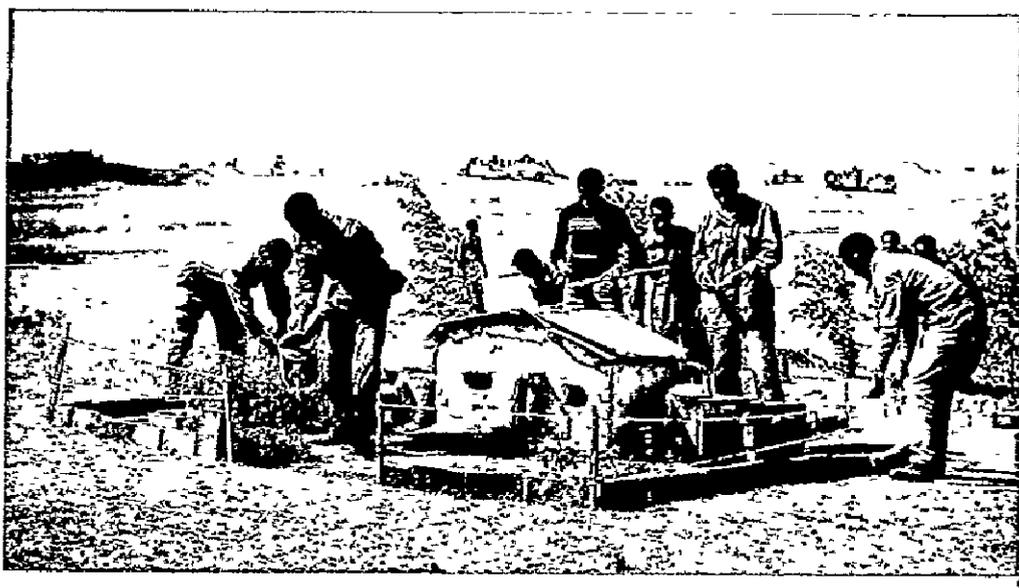
Texas, under ICA contract, has been assisting the Booker Washington Agricultural and Industrial Institute in training prospective teachers and in increasing the number of skilled workers. Twelve vocational faculty members have been educated and are on the job; 206 students have been graduated. Nine shops, a powerplant, and a water filtration plant have been completed. Courses include auto mechanics, machine shop, electricity, plumbing, home economics, secretarial science, arts and crafts, cabinet making, carpentry, masonry, and communications.

A rubber company provides \$7,500 in cash annually and scholarships for 15 students at Booker Washington Institute. An iron ore concession provides 20 additional scholarships.

How To Teach To Do

In shaping a countrywide system of vocational education, many different aspects have to be considered—the number of institutions and their location, the number of teachers required and facilities for training them, the amount of shop equipment, the preparation of manuals in the language of the country, the cooperation of the nation's private industry, and the governmental organization to administer the program. For this reason it has been found advisable often to turn these multiple tasks over to a U.S. educational institution, under contract with the International Cooperation Administration.

Student teachers at an Ethiopian training center construct a model village building.



Wayne State University of Michigan was engaged in 1956 to assist Thailand in improvement of vocational education facilities, instructional techniques and equipment, and in participant training. Faculty members of Wayne State worked with members of the Bangkok Technical Institute. Since that time 12 U.S. technicians have worked on physical plant improvement, organization, curriculum development, and inservice training. Thirty Thai participants have been sent to the United States to study business administration, radio, vocational administration, visual aids, electricity, metals work, and auto mechanics. A total of more than 700 teachers have had inservice training. Some 1,400 students were graduated in 1959.

The Thai Government bought a site and provided funds for construction of 20 modern shops and administrative buildings at a site in Bangkok and also is providing 18 buildings at regional centers in Chiangmai, Songkla, and Korat.

In Brazil a program for improvement of textile education, assisted by individual U.S. technicians, ended in 1959 as a cooperative effort but is being continued through cooperation of the Brazilian National Industrial Apprenticeship Service (SENAI) and the National Confederation of Industry. In 6 years technical training was given to 2,264 technicians in 600 processes of textile manufacturing. Diplomas were given to 829 technicians who supervised on-the-job training for 60,000 industrial textile workers. Students from 12 other countries attended the courses. More than 40 research problems were undertaken and completed.

The Skills of Farming

- In Taiwan since U.S. assistance began in 1954, 24 vocational agriculture schools have received aid toward improving facilities, courses of study, and teaching materials. In 1958, assistance was given to 21 schools, which had 16,959 farm youths in regular classes and had a graduating class of 4,100. An expansion program calls for enrollment of 40,000 youths annually by 1964. The Taiwan Provincial College of Agriculture graduated 36 vocational agriculture teachers in 1959.

- In Afghanistan the Kabul Vocational Agriculture High School has been receiving U.S. assistance since a contract was signed with the University of Wyoming in 1952. Since 1953 about 250 students have been graduated. At present approximately one-half of the graduates enroll in the Kabul University Faculty of Agriculture and Engineering.

- In Honduras a vocational agriculture education farm demonstration school was established in 1951, and in 1952 it was turned over

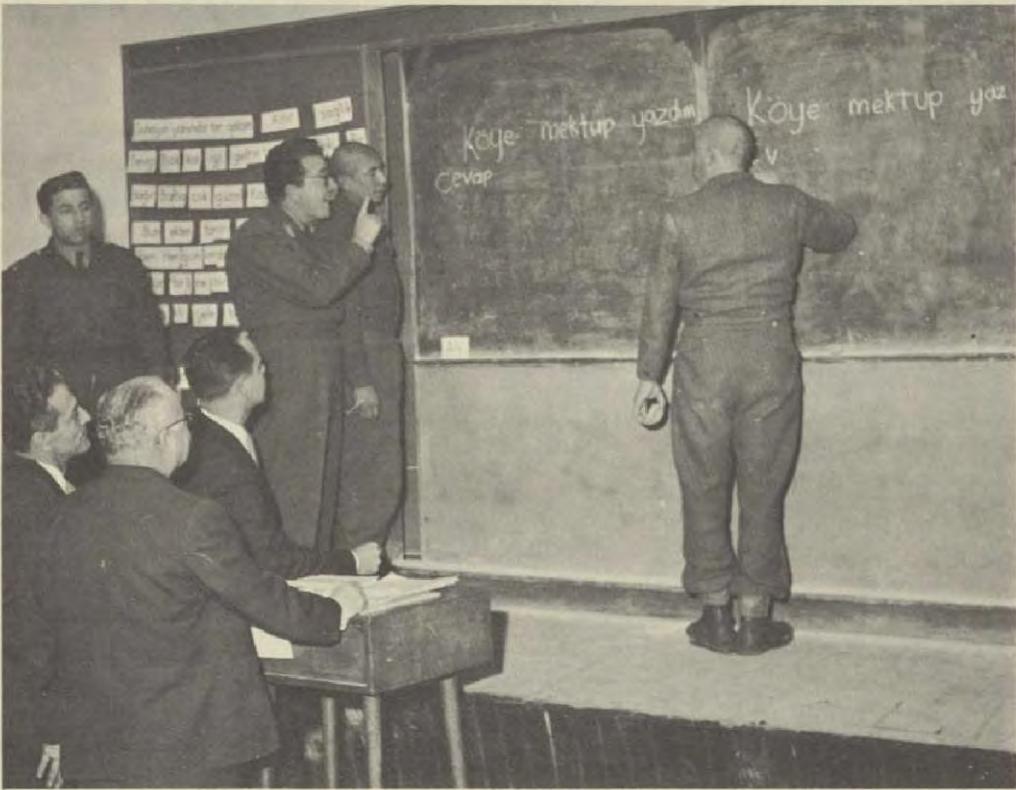
to the education servicio for administration and operation with funds provided by the Government of Honduras. The school offers a 3-year course for rural young men from all departments of the nation, and 35 are selected annually from 500 to 600 applicants. There are courses in livestock raising, rural industries, dairy production, poultry production, agronomy, horticulture, farm mechanics, machinery operation, cooperatives, and academic subjects. One half of the day is spent in the classroom, and the other half is devoted to actual farming. Up to October 1959 there had been 136 graduates. A survey showed that 27 had returned to their home farms, 15 were working with other farmers, 15 were with the U.S.-Honduran joint organizations, 9 were with the national Agricultural Development Bank, 11 were working outside Honduras, and 15 were in the Ministry of Natural Resources. The remainder either could not be located or were working in occupations not related, for the most part, to their training.

Higher Education

The difference between higher education in the United States and in the newly developing countries is far more than a matter of many universities in the one case and few universities in the other. It may be a difference of legal framework—whether higher education is closely administered by the national Government or is relatively autonomous. It may be a matter of whether universities and research are ordinarily placed together, as in the United States, or are separated. Laboratory facilities in the United States are extensive, in most of the newly developing countries very limited. U.S. university libraries are among the largest in the nation, with open shelves and ready access. In some universities abroad libraries are small and books are kept under lock and key.

But the main difference is in the numbers of trained graduates. In many countries formerly in colonial status, technically trained people by and large came from the colonial power. Independence, therefore, resulted in a shortage of technicians when many returned to their home country. More than that, the educational facilities in the underdeveloped countries were not sufficiently strong to supply the increased numbers of technically trained persons needed.

U.S. assistance to higher education abroad has included help with administration, curricula, establishing new training courses, and even establishing wholly new universities. In the main the International



U.S. and Turkish technicians observe a Turkish soldier who is learning to write.

Cooperation Administration has relied on U.S. universities, under contract, to accomplish these tasks.

As of March 31, 1960, 57 U.S. universities and technical schools held contracts for work in 24 different countries. The total number of contracts—some universities have several contracts—was 104. All the contracts deal with some aspect of education or spread of technical knowledge; 33 are specifically in the professional field of education.

University Rehabilitation

One of the most extensive jobs of rehabilitation and improvement carried out with U.S. cooperation occurred at the College of Agriculture and Central Experiment Station of the University of the Philippines. Technical assistance was provided by Cornell University, which furnished technical consultants, professors, and equipment for instruction, laboratories, and research. Members of the staff were trained at Cornell.

The College of Agriculture, almost totally destroyed in World War II, was completely rebuilt with 16 major buildings and 26 minor ones, a new powerplant, an electric distribution system, a water system, a library of more than 15,000 volumes, and other facilities.

The student body in prewar days was about 880; by 1958 this had increased to 3,000. The Filipino professional staff numbered 99 in 1952; 5 years later it was 247. Sixty courses were revised and upgraded, new curricula established in 5 departments, and 12 undergraduate and 14 graduate courses added. A sound research program was instituted with more than 600 projects of value to Philippine agriculture. Among these were projects which produced a new high-yielding hybrid corn and improved upland and lowland varieties of rice.

The College of Agriculture, at Los Banos, has already become an important training center for hundreds of young men and women from other countries of the Far East. The Rockefeller Foundation made a grant of approximately \$250,000 for an International House where Philippine and foreign students live together.

A comprehensive contract with the University of Minnesota provides assistance to Seoul National University in Korea in 5 of its 12 colleges—agriculture, engineering, medicine, nursing, and public administration. Particularly significant are new research projects, new courses and laboratory facilities, and course content related to modern-day Korea.

At Kasetsart University in Thailand, the University of Oregon is assisting in raising teaching standards, improving administrative practices, developing curricula, and advising on improvement of physical facilities. Sixty Thai educators have been sent to the United States for additional training.

Developing Special Fields

A major contribution toward increasing the numbers of trained medical personnel in Indonesia has been made by a University of California project, now completed. Following independence Indonesia, with only about 800 physicians of its own, hired 400 European physicians on 3-year contracts. Even this was a total of only 1,200 for a population of 80 million.

Beginning in 1954 the University of California and the Indonesian Government set to work on measures to increase the numbers of physicians graduated by the University of Indonesia Medical School. At the conclusion of the contract the number graduated each year had been raised from 18 to 150. The University of California has since

taken a second contract to assist the University of Airlangga Medical School to increase the number of its graduates by 130 each year. In this case the device used will be to take one entering class, which started in September 1959, and carry it through a 6-year course, improving facilities each year and thereby expanding instruction for all succeeding classes.

Geological training is a project in Chile also, a nation which obtains 70 percent of its foreign exchange from minerals and mineral products. Stanford University is helping to develop a School of Geology at the University of Chile and a national Institute of Geological Investigation.

Creating New Institutions, New Approaches

In Turkey the University of Nebraska has had a dual task—to create a brandnew university at Erzurum, in a region where no university existed before, and to strengthen the agricultural courses at the existing Ankara University. The new university at Erzurum, named for Kemal Ataturk, founder of modern Turkey, went into operation in November 1958. At Ankara improvements have been made in teaching of agriculture, veterinary medicine, home economics, and agricultural extension. Staffs of both Ataturk and Ankara have received extensive training at the University of Nebraska. As of October 1959 this training had amounted to 111 man-years.

In India contracts were signed in 1955 for five U.S. land-grant universities to assist India with agricultural education—to increase the number of graduates in agriculture, veterinary science, and animal husbandry; to improve curricula; to procure scientific equipment not available in India; and to institute research as a part of education. The five universities—Illinois, Ohio State, Kansas State, Missouri, and Tennessee—also were to advise on legislative and administrative improvements to develop agricultural education in the pattern of the land-grant institutions.

Collectively they have assisted two national agricultural institutions; 35 state agriculture, veterinary, and home science colleges; and 8 private institutions. As a part of this project a new university is to be established in 1960 at Rudrapur in the Terai, a newly reclaimed agricultural area in northern India. The new university will have Colleges of Agriculture, Veterinary Medicine, Agricultural Technology, and Home Science, and a School of Sciences and Humanities. Attached to it will be a 16,000-acre farm for experimental and production purposes. The State of Uttar Pradesh has passed special legislation establishing the new university on a full autonomous basis.

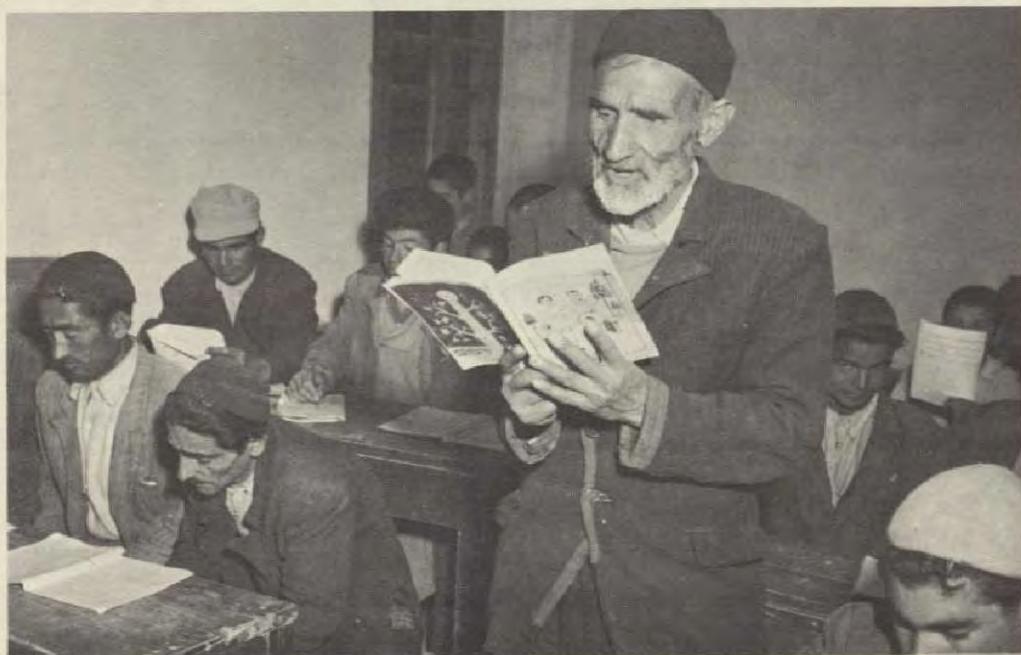
The increased interest in agricultural education has resulted in larger numbers of trained people. In 1953-54 there were 792 graduates from 22 agriculture colleges; and in 1958-59, 1,675 graduates from 31 colleges. In the same years the number of veterinary colleges went from 9 to 14; and the number of graduates, from 256 to 779.

Educational Materials

Millions of schoolchildren in Latin America, Asia, and Africa never enjoy the luxury of a reader or book of stories of their own. If there is a book, it belongs to the teacher. More often than not, even the book that the teacher has cannot be classed as an example of scientifically prepared educational materials. It is likely to be any book, or even any back copy of a magazine, that the teacher can lay his hands on.

This great scarcity of educational materials—not only books but also posters, charts, maps, films, filmstrips, and the many other aids to teaching—reflects the low income levels of many countries, the lack of economic development, and the large extent of illiteracy, all of them bound in a vicious circle. Lacking economic development, a government cannot make large outlays for education. Lacking edu-

An Iranian laborer learns to read.



educational facilities, human beings cannot make best use of their energies and intelligence in aiding economic development.

Yet on those occasions when it has been found necessary in the United States, as in wartime, to teach many thousands new techniques, foreign languages, or safety measures, educational materials have been a primary technique. Such materials in effect multiply the number of teachers. In education programs today the importance of immediately producing more educational materials is well recognized.

Developing a Textbook Program

In a newly developing country the problem of developing a textbook program is not as simple as might be expected. Even if the government of a particular country is willing to allocate sufficient funds and has them to allocate, many other questions arise.

What language will be used? The official language of Guatemala is Spanish, but 4 Indian languages and 45 subsidiary dialects are spoken among the rural population. In Ethiopia although Amharic is the official language, the greater part of the population speaks other languages and dialects. In such cases weighty policy decisions are involved. How far are various regional languages to be preserved? What amount of prestige will be given to each in the nation's education?

What will be the content of textbooks? In many nations which were formerly under colonial status, the history that was taught was that of the foreign nation which happened to be exercising domination. The prestige language was a foreign language. In some cases this was not altogether bad. The language of the colonial power often tended to unify people who spoke varying dialects. The books in the language of the colonial power contained more advanced scientific information. Sometimes indeed the local language actually did not have a vocabulary adequate to the needs of economic growth, new inventions, new techniques, and new concepts. In determining course content today, compromises have to be made. Compromises even have to be made in the matter of language. For a variety of reasons, some new textbooks in Tunisia for example are in Arabic, some in French.

The lessons to be learned today are different also. Today's textbooks in the newly developing countries have to incorporate material which will aid in economic and social progress—new ideas about agriculture and health, about community life and homemaking, about national needs and resources.

Finally there are such technical problems as printing facilities, sources of paper stock, illustration, and circulation. At the simplest level this resolves into a question of technical cooperation in education—teaching teachers to prepare materials that are valuable in immediately meeting a great deficiency.

U.S. experience in development of educational materials can assist the educators of a newly developing country in avoiding too much wasted effort. U.S. training and advice can help establish the newly developing country's own continuing programs for preparation of educational materials.

U.S. Assistance

- In Guatemala the need for educational materials is particularly acute in rural elementary and adult education. With U.S. assistance a materials production center has been established. A 6-weeks' workshop early in 1959 resulted in the training of 12 rural supervisors in the techniques of writing instructional materials. A seven-book series of primary readers was written and is now in the manufacturing process. The voluntary organization CARE contributed \$20,000 in paper supplies for production of reading textbooks.

- In Afghanistan U.S. education specialists have assisted the Ministry of Education in the experimental preparation of more than 50 books. A number of these have received final acceptance for use in schools. A well-equipped materials production center has been organized and has a staff of 2 or 3 Afghans and 1 American adviser. The Asia Foundation and the United Nations Educational, Scientific and Cultural Organization (UNESCO) also have assisted the educational materials program.

- In Ethiopia a total of 59 textbooks, 13 teacher guides, 47 pamphlets, and 3 educational journals have been developed through cooperation of U.S. technicians and Ministry of Education personnel.

- In Nepal the United States is assisting in selection, preparation, and distribution of educational materials, including literacy texts, classroom texts, pamphlets, posters, filmstrips, and other aids. A complete printing establishment with a capacity of 250,000 books a year has been installed, and it will eventually be integrated into the new educational materials production center now underway. The printing plant is temporarily situated on the campus of the new College of Education, which the United States helped to organize through a contract with the University of Oregon. The staff of the College of Education and members of the Ministry of Education pre-

pared a sufficient number of manuscripts to keep the press operating at full capacity for 6 months following installation.

- In the Philippines a textbook production project calls for provision of a total of 25 million copies of textbooks over the next few years. Even this will amount to only about 80 percent of Philippine requirements. Since the country has many printing facilities, U.S. assistance is principally in the form of imported paper and paper products.

- An outstanding textbook program, particularly in relation to associating materials with development activities, has been carried out in Viet-Nam. The textbook Publication Service reported in December 1959 that more than 90 items had been prepared and printed, 38 with major assistance of members of the U.S. mission to Viet-Nam. Some of the textbooks included: Health Education, 1st-yearbook—40,000 copies, 2d year—40,000 copies, 3d year—32,000 copies; Civic Education, grades one through seven, 32,000 for the 1st year, 5,000 to 8,000 for each of the other years; teacher editions of both the Health Education and Civic Education series; Arithmetic for adult education; and World History.

The editing staff included Vietnamese writers who were experienced in textbook writing and who were afforded an opportunity to improve their skill. Two items were a Vietnamese-Koho dictionary, printed in 10,000 copies, and a first-year arithmetic book in Koho dialect. Koho is the most commonly used tribal dialect in the highlands of South Viet-Nam.

Special Programs

Adult Literacy Training

Many efforts are being made over the world to reduce the heavy burden of illiteracy in the newly developing countries. The worldwide leader in this field is the United Nations Educational, Scientific and Cultural Organization (UNESCO). Private foundations also conduct programs, and national Governments have enacted laws to require literate persons to teach others to read and write. Literacy training is carried on in many countries by elementary teachers who conduct afternoon and night classes in addition to their regular schoolwork. Although literacy training is not a major effort of U.S. technical cooperation in education, effective projects have been begun in some countries.

In Nepal an adult literacy program was started in 1956 as part of a U.S.-Nepal education development project. Instruction is by trained elementary teachers. More than 9,000 persons have been trained to read and write; 13,200 more are enrolled in literacy classes in 410 villages. By 1964 it is hoped to reach 600 villages and 30,000 adults a year.

A different approach is being made in Turkey where, at 17 centers, tens of thousands of young men in the armed forces are being trained to read and write. Recruits spend their first 7 weeks in the armed forces at the training centers. Teachers are regular elementary school teachers in military service as reserve officers. A group of linguistic experts from Georgetown University, under ICA contract to develop English-language training, work with Turkish educators in carrying out the literacy program for the armed forces.

A similar project was carried out in Iran several years ago. Some 16,000 men in the national gendarmerie were trained to read and write in less than 2 years. At the height of the program 1,682 classes were being held at various places in Iran, with instruction lasting approximately 6 months. The teacher corps was obtained from among the gendarmes themselves and received special instruction from a U.S. education specialist.

English Language Training

One of the big obstacles to be overcome in training foreign technical specialists in the United States is lack of sufficient knowledge of English. In those cases where newly developing countries lack to a great extent a technical literature of their own, English-language training is an almost imperative need.

• A three-nation project in English-language training—to increase the numbers of persons with a knowledge of English and thereby qualified to take advanced technical training in English-speaking countries—has been started in Viet-Nam, Laos, and Thailand. The project, being carried out by the University of Michigan, is made up of several steps: first, analysis of the local language; second, preparation of teaching materials for teacher training; and third, establishment of a training program for teachers. In Thailand 50 teachers will have been trained by July 1960, and inservice seminars held for 120 secondary school teachers of English. In Viet-Nam instruction of 20 second-year teachers of English has begun at the Faculty of Pedagogy, and 25 students in English are at the Faculty of Letters. Forty teachers of English received instruction at a summer workshop

in Saigon. In Laos language analysis has been completed and a curriculum prepared, and 35 teachers are in a special preservice training program.

- In Afghanistan a teacher education program begun in 1954 includes training of Afghan teachers to teach English. On an interim basis U.S. teachers of English are being supplied, but the project, in conjunction with the Institute of Education of the University of Kabul, provides a 4-year curriculum for instruction of Afghanistan's own teachers of English.

- In Libya, to improve the quality of English instruction in schools as well as to provide English language training for Government officials and employees, a project is being carried out to provide 20 to 30 Libyan teachers of English a year and instruction to some 4,000 adults.

Women's Education

The education of girls and women is far more extensive in the United States than in any of the newly developing countries, where education for women has for the most part been limited to a very few fields. Provision usually has been made for training women to be teachers. Home economics or home science courses may now be offered. More women are taking nurses training. Yet many occupations have not been open to women, and many types of training facilities are lacking.

- In Ethiopia the Ministry of Education and the U.S. mission have joined in conducting a demonstration project at a women's vocational school in Addis Ababa. The Ministry is represented by the Ethiopian Women's Welfare Association, and the United States is represented by two technicians supplied under a contract with the Young Women's Christian Association. The project was housed in tents when it began in 1957 but has since moved to a compound supplied by the Ethiopian Government. Seven hundred women and girls applied and 150 enrolled. Most of the students, who were illiterate in the beginning, took courses in reading and writing, in homemaking, and in citizenship.

- In the western region of Nigeria the United States is assisting in a survey of vocational training opportunities for girls and women. The need for such facilities is indicated by the fact that in 1957 there were 363,000 girls in elementary schools, 9,250 in secondary schools, 2,510 in teacher training, and only 200 in vocational training.

Personnel in ICA Programs

As of December 1959 ICA had 312 direct-hire education specialists assigned to work in programs in other countries. Titles of their positions included chief education adviser; elementary education adviser; secondary education adviser; higher education adviser; and advisers in adult education, technical and industrial education, vocational agriculture, teacher education, education materials, educational administration, community education, and business education. Additional personnel also were supplied by various universities and technical schools under university contracts. These normally number about 200.

During fiscal year 1959 a total of 606 education specialists arrived in the United States to study U.S. educational systems. These included 213 from the Far East, 188 from Latin America, 150 from the Near East and South Asia, 44 from Africa, and 11 from Europe. These totals are exclusive of participants who came under the university contracts program; in 1959 these numbered 336, the majority of whom worked specifically in education.

Conclusion

Millions of people in all parts of the world are experiencing in a matter of a few years social, economic, and political change which in other countries was centuries in the making. In these rapidly developing countries hundreds of thousands of youths and adults are suddenly becoming literate; universal and free primary education is an accepted goal; a growing number of native children are being provided education previously reserved for the colonist; their leaders in numbers never dreamed of before are going to foreign countries to observe and study; universities and colleges, technical and vocational schools are rapidly being organized or expanded.

Thus the demands multiply for more schools and better schools, for more teachers and better teachers. Future national and world stability depends to a great degree upon the type of education which these millions of eager students of all ages are receiving and thus upon the quantity and quality of the present teachers and those being prepared for teaching.

More than 40 nations have asked for and are receiving U.S. aid in education. Inherent in their requests is a receptivity to American ideas and ways of working and an opportunity for our education

specialists to make uniquely American contributions to their educational programs.

The American Dream—Our Most Exportable Item

Successful accomplishment in the field of education in a technical assistance program of the magnitude undertaken by ICA is dependent upon many factors—economic, political, intellectual, and social. But the most compelling force in the struggle for the hearts and minds of the uncommitted masses of the world is in the realm of the spirit. Technicians inexperienced in working with the uneducated are apt to doubt this, thinking that material assistance is all that can be appreciated. Yet the development of America was inspired by a dream which has held and still holds hope and promise for mankind. James Truslow Adams described it thus:

The American dream, that dream of a land in which life should be richer and fuller for every man, with opportunity for each according to his ability or achievement. It is not a dream of motor cars and high wages merely, but a dream of a social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position.

No, the American dream that has lured tens of millions of all nations to our shores in the past century has not been a dream of merely material plenty, though that has doubtless counted heavily. It has been much more than that. It has been a dream of being able to grow to the fullest development as man and woman unhampered by the barriers which had slowly been erected in older civilizations unrepressed by social orders which had been developed for the benefit of classes rather than for the simple human being of any and every class. And that dream has been realized more fully in actual life here than anywhere else, though very imperfectly even among ourselves.

That dream was not the product of a solitary thinker. It evolved from the hearts and burdened souls of many millions who have come to us from all nations. That dream strikes a responsive chord in all human hearts longing for freedom and for equal access to opportunity for their children if not for themselves. It helps them understand what they have not been able to comprehend before, that it is more than material advantage which prompts American citizens to tax themselves so heavily to help other people struggling for freedom and for the better things of life.

International Cooperation Administration

DEPARTMENT OF STATE PUBLICATION 7024

Economic Cooperation Series 58

Released September 1960

Office of Public Services

Bureau of Public Affairs

