OKLAHOMA STATE UNIVERSITY AND THE GREAT ADVENTURE IN INTERNATIONAL EDUCATION, 1951-1976

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PREFACE

Oklahoma State University emerged as a leader among American colleges and universities in international technical assistance projects when President Harry S. Truman appointed Henry G. Bennett, President of Oklahoma State University, first Administrator of the Technical Cooperation Administration (forerunner of the present Agency for International Development). Then in 1952 TCA awarded OSU a contract to provide technical assistance to Ethiopia, the first nation to request help from TCA. In the following quarter-century Oklahoma State participated in more than twenty other university contract programs abroad with AID, the National Science Foundation, Ford Foundation, Rockefeller Foundation, Kellogg Foundation, and the World Bank. OSU's pioneering efforts in international technical assistance projects gained national recognition, and in 1969 the Institute of International Education and the Reader's Digest Foundation presented OSU the "Distinguished Service Award" for outstanding achievements in international education. Oklahoma State University was the first land grant university to receive this award.

During the quarter-century from 1951 to 1976 Oklahoma State University grew from a small regional college on the plains into a major university and citadel of international learning, the number of international students enrolled on campus grew from less than 100 to more than 1000, and international outreach was firmly established as a fundamental mission of the University. This commitment to international

education uniquely distinguishes OSU from most other land grant and state universities and is a source of pride to the academic community and to the alumni of the University. Oklahoma State's "great adventure in international education" is a stirring story--a story of dedication and conviction by regents and administrators, a story of courage and sacrifice by participants and their families.

In this study of Oklahoma State University's efforts in international education, emphasis has been placed on the background and inception of OSU's involvement in international education and on its participation in major technical assistance programs abroad. Smaller projects (in length and number of OSU personnel involved) have been summarized, and international programs on campus have been mentioned briefly, as have the efforts of OSU faculty and staff who served overseas for other universities, private foundations, and government agencies.

Hundreds of faculty and staff members have served overseas on Oklahoma State contract programs during the past twenty-five years and hundreds more have provided valuable support services on campus for international projects. Others have worked in Stillwater to develop programs for international students on campus, to increase intercultural awareness of OSU faculty and staff, and to internationalize the content and curriculum of courses taught at OSU. To mention all international activities on campus and overseas during the past quarter-century and to credit every individual who participated in these endeavors would be nearly impossible. But if there has been a project or an individual omitted that should have been included in this study, the writer accepts responsibility and hopes that the oversight will be forgiven and that it will be accepted as an error in judgment, a sin of omission rather than

editorial intent.

Many individuals helped make possible the research and writing of this study. Invaluable research assistance was provided by the staff of the Truman Library, Independence, Missouri, and I am also indebted to the staff of the Oklahoma State University Library for their generous assistance. Heather Lloyd, Head Reference Librarian, granted free access to the Special Collections on the second floor and provided research space nearby; Harriet Alexander and Lloyd Wallisch helped locate research material in the Presidents' Papers and other obscure documents in the OSU Collection; and Vicki Phillips, Head Documents Librarian, located important government documents.

Many others gave generously of their time. William S. Abbott and Hugh F. Rouk deserve special attention for their whole-hearted support of this project, for their encouragement, and for providing this writer with important research material and invaluable information and insight into the background and evolution of international programs at Oklahoma State. Key participants in OSU technical assistance projects abroad graciously granted interviews and loaned letters, diaries, and other miscellaneous materials from their personal papers. Deans, department heads, and directors granted free access to files pertaining to international projects, and also Edwin E. Glover, Director of the Office of Internal Audit, who made available for research inactive files on past international contract programs. Thanks is due also to the many secretaries who helped sift through the hundreds of files in the various academic offices, and especially to Virginia Schenandoah, administrative secretary to the Dean of the Division of Home Economics.

For the opportunity to research and write this topic I am indebted

to Russell V. Conway, Director of the Office of High School and College Relations, and Dr. Richard W. Poole, Vice President for University Relations, Development, and Extension, who recommended a leave of absence from my normal university duties, and to the Regents of Oklahoma State University who granted that leave. Sincere appreciation and thanks are extended to Dr. Robert B. Kamm, President of Oklahoma State University, who supported this study and who encouraged the author by writing letters of introduction and by allowing himself to be interviewed. Also, this study would not have been possible without the support provided by a research grant from the Oklahoma State University Development Foundation.

A debt of gratitude that can never be repaid is owed Dr. Odie B. Faulk, who assisted this writer in countless, untold ways through the graduate experience and who shared his academic talents and professional writing skills freely. Appreciation is also extended to Dr. LeRoy H. Fischer, Dr. James M. Smallwood, Dr. Carl N. Tyson, and Dr. Gordon A. Weaver for critically evaluating this study. My apologies and appreciation go to my wife, Susan, and our children, Derek, Lance, and Andrea for their support and understanding.

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CHAPTER I

THE WORLD IS OUR CAMPUS

> We must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.... The material resources which we can afford to use for the assistance of other peoples are limited. But our imponderable resources in technical knowledge are constantly growing and are inexhaustible.
>
> --Inaugural Address of President Harry S. Truman

> The Point 4 Program is education, from first to last. It is in fact the essence of education: an adventure in the sharing of knowledge; an adventure in which those who share their knowledge gain new insight and new experience.
>
> --Henry G. Bennett, President of Oklahoma State University, 1928-1951, and first director of the Point Four Program

On the campus of Oklahoma State University, just north of the library, lies the International Mall, symbolic of OSU's involvement in international education. Modified Georgian red brick buildings trimmed in white border the mall on the east and west, and from the south the white frame tower atop the university library overlooks the beautifully landscaped Mall. Sidewalks and pathways wander through the Mall, creating a patchwork of grass, flowers, shrubs, and trees. At the north end, nineteen silver-colored flagpoles stretch east and west across the Mall; atop these fly flags of many nations, a collage of colors splashed on a canvas of blue sky: red and white, green and gold, yellow and blue.

Crosses and crescents, stripes and stars, scythes and circles dance, wave, flap, and flutter, tugging against the restraining silver spires.

These flags, representing the native lands of students attending OSU, stand proudly alongside the American flag symbolizing equality of purpose and partnership. Near the base of the middle flagpole rests a large granite marker with a bronze plaque commemorating the United States' Point Four program of technical assistance to developing countries pioneered by Dr. Henry G. Bennett, President of Oklahoma State University for twenty-three years. The memorial recognizes that "technical assistance and international programs became an integral part of the program of the University" and dedicates the International Mall to the philosophy of international service and a "world better tomorrow than today." On the southwest corner of this Mall a six foot high granite and concrete pedastal supports a white marble replica of a large dove perched on a globe of the earth. This "Monument of Peace Presented to Oklahoma State University in appreciation of its international efforts" by the International Student Association at OSU, was dedicated on May 12, 1971, by Chakravarthi V. Narasimhan, Undersecretary General of the United Nations.[1]

The International Mall attests to Oklahoma State University's active participation in technical assistance projects and other international programs in the quarter-century from 1951 to 1976. During this period OSU has been involved in more than twenty contract programs abroad, providing technical assistance and educational services to developing countries around the world. OSU faculty and staff have served in Africa, the Middle East, Southeast Asia, Central America, and South America--from the Amazon to the Nile, in barren deserts and lush

tropical forests, in teeming cities and small villages, in modern classrooms and primitive wilderness.

In this process Oklahoma State has developed contractual agreements and close working relationships with governmental agencies and private foundations to provide technical assistance requested by emerging nations. OSU entered contractual agreements with the United States Agency for International Development (AID), the National Science Foundation, the Ford Foundation, the Rockefeller Foundation, the Kellogg Foundation, and the World Bank. OSU's largest contract program was with AID in Ethiopia; from 1952 to 1968, 183 teachers, administrators, and technicians from Oklahoma State provided 550 man-years of service as the university administered grants totaling $11.8 million to develop a national agricultural program and an agricultural college in Ethiopia. OSU participated in two contract programs with the Ford Foundation in Pakistan--one in technical education and the other in home economics. From 1955 to 1971 twenty-eight advisors and consultants served in Pakistan, developing model technical institutes and working 854 man-months on grants totaling $2,860,400. The home economics project from 1957 to 1972 included grants of approximately $1.4 million and involved thirty-one OSU advisers.

Other major projects included agreements with AID to help develop a regional college of veterinary medicine in Central America with instruction, research, and extension capabilities and to develop model vocational trade and industrial schools and teacher training programs in Thailand. Thirty-five specialists in animal science and veterinary medicine worked with the College of Veterinary Medicine at the University of San Carlos in Guatemala, and AID provided $707,082 over a six-

year period from 1965 to 1971. Twenty-six OSU advisors and special consultants worked in Thailand from 1968 to 1973 on a grant of $1,092,469 from AID. In addition to these large-scale projects, Oklahoma State University participated in other contracts, consortium agreements, sub-contracts, and informal agreements to provide technical assistance and educational services to dozens of developing countries.

Many faculty and staff members from Oklahoma State also traveled and studied abroad, participating in short-term, non-contract programs. These international activities included research grants, language studies, lectureships, visiting professorships, cultural exchange programs, professional meetings, and private consulting work. Although these activities were not affiliated with long-range contractual programs sponsored by the University, they contributed significantly to OSU's expanding role in international service and to the growing international-intercultural awareness of the faculty and professional staff on the Stillwater campus.

Oklahoma State University also exported its technical expertise through professors and professional staff members working directly for other universities, federal agencies, and private foundations. These individuals took sabbatical leaves, secured leaves of absence, retired, or left OSU to serve overseas in non-University capacities, often rendering important international service. For example, Glenn C. Holm, Dean of the College of Veterinary Medicine, left OSU and worked four years with AID in India and Central America, while Randall Klemme, OSU Vice President, took a leave of absence to do consultancy work for the Ford Foundation in Pakistan and India and later left the University to work full-time for the Ford Foundation as Principal Representative in

Pakistan. James S. Plaxico, Head of the Department of Agricultural Economics, first served as a consultant to the Ford Foundation, then later secured a leave of absence from OSU to serve thirteen months as Program Officer for all agricultural projects in Columbia for the Ford Foundation. After his mandatory retirement from OSU, Henry P. Adams, Director of the School of Engineering Technology, worked directly with the Ford Foundation in Brazil and in other countries. A special relationship developed between Oklahoma State University and the Ford Foundation because of their many successful international projects and because of the many OSU administrators who had worked as direct-hire representatives for that organization overseas. One of the most successful university contract programs abroad was the OSU-Ford Foundation projects in Pakistan from 1955 to 1972. In recognition of this special relationship, Oklahoma State University awarded George Gant, Principal Representative of the Ford Foundation in Pakistan from 1954 to 1956, the Henry G. Bennett Distinguished Service Award, the highest award given by the University.[2]

Oklahoma State University has received state acclaim and gained national recognition for its international technical assistant projects. In February of 1969 the Institute of International Education (IIE) and the Reader's Digest Foundation presented OSU the educational institution Distinguished Service Award for outstanding achievements in international education. OSU was the first land grant university to be honored with this award. IIE, which is headquartered in the United Nations Plaza in New York, is a non-profit organization dedicated to international education and cultural exchange; the Reader's Digest Foundation is the philanthropic arm of IIE.

Dr. Robert B. Kamm, President of Oklahoma State University, attended an awards dinner at the Statler Hilton Hotel in Washington, D.C. in February of 1969 and received a citation recognizing OSU's international efforts and a check for $1,000. The Oklahoma congressional delegation attended the presentation ceremonies and heard guest speaker Hubert H. Humphrey praise OSU's efforts "to create independent and self-reliant neighbors." The award presented to OSU read in part:

> To thousands of students in remote towns and villages all over the world, the campus of Oklahoma State University surely must seem to be the source from which the fountain of knowledge emanates. Each year--for almost twenty years --groups of teachers, consultants, researchers and advisors have spilled forth in a steady stream from the town of Stillwater, Oklahoma, taking with them to nearly developing lands their accumulated skills and a common desire to share their specialized talents....
>
> In presenting the Distinguished Service Award to Oklahoma State University, I.I.E. and the Reader's Digest Foundation heartily commend the university for demonstrating the diversity of international education programs and for proving firsthand the magnificent results of enabling others to help themselves.[3]

In 1969 the legislature of the State of Oklahoma passed a concurrent resolution "Applauding and Commending Oklahoma State University for its Continuing Programs of International Education and Service." This resolution of the Oklahoma legislature recognized OSU as a university "long heralded for the many excellent educational programs offered by its faculty and staff, and as a friendly campus for students of all races, colors, and creeds."[4]

Oklahoma State University's commitment to international education also included programs and activities on campus. The number of international students enrolled on the main campus at OSU increased from sixty-one in 1949 to 1002 in the fall of 1976. Including OSU's branch campuses at Okmulgee and Oklahoma City, there were more than 1000

international students from more than seventy countries attending classes at Oklahoma State. The International Student Advisement Office in the Division of Student Affairs helped advise international students in non-academic areas and helped "facilitate mutually satisfying relationships between foreign students and United States students and among various nationality groups of international students. This office has functioned since 1968 with at least one full-time professional staff member and in 1976 included one full-time professional staff person, two half-time graduate advisors, a secretary, and a part-time secretary.[5]

Another tangible sign of OSU's continuing commitment to international education was the establishment of an Office of International Programs on the Stillwater campus. This office was organized in 1952 under Vice President Randall Klemme and continued through 1976 with William S. Abbott serving as Director of International Programs. Hugh F. Rouk joined the staff as Director of International Education after his service in Ethiopia. In 1976 this office included three full-time professional staff members, two graduate assistants (qualified linguists), and four full-time secretaries. The Office of International Programs has helped initiate and support technical assistance projects abroad, but it also has helped develop programs on campus to increase international and intercultural awareness of the OSU faculty and staff and has helped to internationalize the content of curriculum taught at OSU.[6]

The emergence of Oklahoma State as a leader in international education had its origins in the cauldron of national politics. President Harry S. Truman, in his inaugural address delivered on January 20, 1949,

outlined a plan for exporting American technology and scientific knowledge on a major scale to emerging nations throughout the world. This fourth point in his inaugural speech dealt exclusively with that topic and, hence, the general appellation "Point Four" for his proposed program of international technical assistance. Truman insisted that the United States "must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas." He denounced the "old imperialism--exploitation for foreign profit," proposing instead a program based on the "concepts of democratic fair dealing." He also rejected the other extreme--a massive give-away program. Truman advocated, instead, the exporting of America's "imponderable resources in technical knowledge [which] are constantly growing and are inexhaustible" to help other countries of the world "realize their aspirations for a better life."[7]

Among the first to respond to President Truman's challenge were the land grant colleges. The ready response of these universities reflected the kindred spirit of the Point Four and land grant philosophies. The Morrill Act of 1862 had created land grant colleges, providing for the "endowment, support and maintenance of at least one college in each state where the leading object shall be...to teach such branches of learning as are related to agriculture and the mechanic arts...in order to promote the liberal and practical educations of the industrial classes." The Hatch Act of 1887 recognized and provided financial assistance for agricultural experiment stations at land grant institutions, while the Smith-Lever Act of 1914 provided Federal funding for extension programs. These legislative enactments had molded

the unique three-fold mission of land grant colleges: research, instruction, and public service through outreach programs.[8]

Foreign educators realized the potential of the land grant system to distribute the benefits of technology and scientific knowledge more equitably in their countries. K. A. P. Stevenson, Vice Chancellor of Uttar Pradesh Agricultural University in India, stressed that underdeveloped countries needed a "more dynamic approach [to higher education]--something nearer the aspirations of the bulk of our people--and it is this spirit of service to the community, a spirit introduced in your country by the Land Grant college, that we would like to foster in our country."[9]

Many land grant college presidents and executives recognized the unique educational resources that their institutions could provide for international technical assistance programs; one of these men was Henry C. Bennett, President of Oklahoma State University. For many years Bennett had advocated a more aggressive role by land grant colleges in helping emerging countries. He especially favored the establishment in other countries of agricultural schools with research and extension capabilities. Bennett spoke from a broad base of expertise and experience, for he had served as president of an agricultural and mechanical college for more than twenty years, and he had played an influential part in numerous national and international conferences dealing with food and agricultural production problems.

In the summer of 1949, Bennett traveled extensively in Europe on a mission for the Civilian Agricultural Department of the Army, compiling a report on food shortages in post-war Europe and proposing possible solutions. The following year he visited Ethiopia at the request of

Emperor Haile Selassie to explore the possibilities of establishing an agricultural college there. On his return to the United States in July of 1950, Bennett stopped in Washington, D.C., to visit his close personal friend and political ally, Senator Robert S. Kerr, who arranged for Bennett to meet President Truman. The two executives discussed Bennett's trip to Ethiopia and his philosophy of educational aid to developing countries. After their meeting Truman requested Kerr to "ask Dr. Bennett to write me a report of his trip to Ethiopia. I was very much impressed in what he had to say...and I would like to have a record of his conversation so I can give it more study." Truman was "impressed" enough to appoint Bennett the Administrator of the Technical Cooperation Administration in November of 1950; TCA had been created earlier that year to implement the President's Point Four program.[10]

Bennett's appointment surprised many Washington bureaucrats and professional politicians, but in many ways he was a natural choice for the position. Because of his experience as a land grant college president Bennett was deeply committed to educational service and the outreach concepts which were central to Truman's Point Four philosophy of exporting technical and practical knowledge to emerging nations. Bennett's background and grassroots philosophy also appealed to the President, for Bennett, like Truman, was a Midwesterner born in humble circumstances who had worked his way to success. Born in a log cabin, Bennett was the son of a blind itinerant Baptist minister, and he struggled throughout his early life to attain an education, eventually earning a Ph.D. at Yale University. His own experience had convinced him of the unlimited potential of education to improve the condition of the poor and needy of the world; more important, because of his strong

Christian convictions, he felt a moral obligation to help his fellowman. In Bennett, President Truman found an administrator with knowledge and experience, courage and conviction.[11]

Bennett was instrumental in developing a philosophy, as well as a practical program for Point Four. In his many speeches and talks, he stressed Point Four as a people-helping-people experience; on one occasion he expressed his belief bluntly:

> Our friends of the underdeveloped areas do not want charity. They want to become independent, by their own efforts, of our help and of all outside help. They are eternally right in asking us to share knowledge and skill--which cannot be given away--so that they may achieve self-reliance and the dignity that goes with it....There are as many paths to progress as there are nations. They want to choose their own.

But, more important, Bennett believed that the "Point 4 Program is education, from first to last. It is in fact the essence of education: an adventure in the sharing of knowledge; an adventure in which those who share their knowledge gain new insight and new experience....It is pioneer work."[12]

Bennett's brief career in international diplomacy ended on December 22, 1951, when he, his wife, and his three assistants died in an airplane crash near Teheran, Iran, while touring Point Four projects in Africa and the Middle East. Many mourned his death and eulogized his life and work. Eric Sevareid, a news commentator for the Columbia Broadcasting System in Washington, D. C., memorialized Bennett in a television editorial broadcast on Christmas Eve, 1951:

> It is a matter of some regret that so few Americans, even so few right here in the capital, were exposed to Dr. Bennett, for he was something rare among us here, something very earthy and strong and simple, representative somehow of the enduring simplicities, the natural, positive hopes that still prevail....His death is a great loss, for he had started something here, something fresh and wonderful, in a government where men and ideas had grown tired and worn.[13]

President Truman perhaps best expressed the meaning of Bennett's work:

> In the death of Henry Garland Bennett, administrator of the Point Four program, I have lost a friend and the American people have lost a great teacher of the simple ideas of cooperation and brotherhood. He was a good man and he believed in the goodness of human nature; he was an educated man in the best sense and he believed in the right of all to an education. Finally he understood how people can work miracles by sharing knowledge to help themselves and each other. That is the essence of the Point Four program for which Dr. Bennett lived and died.[14]

Because of Bennett's trip to Ethiopia in 1950 and because of his continuing friendship with Emperor Haile Selassie, Ethiopia was the first country to request technical assistance under the Point Four program; the United States and Ethiopia signed an agreement on June 16, 1951. Bennett had intended to award this contract to Oklahoma State University to provide technical and educational services in that country; after his death, that contract was signed. Inheriting the legacy left by its former president, Oklahoma State University began a great "adventure" in international education that would continue through the next quarter-century.[15]

CHAPTER II

ETHIOPIAN ADVENTURE: PART 1

> There are times when enthusiasm is preferable to experience and too much advance knowledge may be a liability.
>
> --Luther H. Brannon, Principal Representative of the Oklahoma State University Contract Program in Ethiopia

During the decade of the 1950s many African countries were emerging from a slumber of many hundreds of years. Suddenly their new leaders wanted to occupy a place alongside the educated, industrial nations of the world. Yet for most Americans the image of the "dark continent" persisted, conjuring fears of ferocious animals, foreboding jungles, and savage tribes. The mysteries and legends of ancient Ethiopia (Abyssinnia) blended with this image of "dark" Africa. The Bible had recorded the visit of the Queen of Sheba, ruler of ancient Ethiopia, to Israel and her stay at Solomon's court. Christianity later took root in Ethiopia, making that nation the oldest Christian country in the world. Another Ethiopian contribution to the world was coffee, which reputedly came from Kaffa Province. Early participants in the Ethiopian project, therefore doubtless saw a tour of duty in Africa as both an educational opportunity and an exciting adventure.

Ethiopia, land of rugged beauty, encompasses great contrasts of climate and terrain. Although it lies near the equator, much of it is

a high plateau several thousand feet above sea level. Rolling high plains in the north are broken by valleys and rivers and by lofty mountain peaks that tower several thousand feet into the sky. The northern highlands gradually fall away to the south toward regions of lower plains. This irregular topography produces a wide contrast in temperature and rainfall. Extreme southern Ethiopia enjoys a lush tropical climate with excessive rainfall, while much of southeast Ethiopia, adjoining Somaliland, is an arid plains occupied by nomadic herdsmen. The northern plateau has a cooler climate that is often chilly and damp. The three basic seasons in Ethiopia are determined by rainfall rather than temperature. Late winter and early spring is a period of light to moderate rainfall, followed almost daily in the summer by heavy rains. The dry season in the fall completes the cycle.

In June of 1951 when Henry G. Bennett drafted the initial agreement for technical assistance with Emperor Haile Selassie, he intended to award a contract to Oklahoma State University to establish an agricultural college in Ethiopia patterned after the American system of land grant colleges. Bennett obviously would choose Oklahoma State for the Ethiopian project, for in 1950 he had discussed with Haile Selassie and with officials of the United States government the possibilities of his university assisting Ethiopia; however, not wanting to give the appearance of favoring his own school, he delayed awarding the Ethiopian contract until other projects involving American universities had been initiated. Bennett's untimely death further delayed the inception of the Ethiopian program, but finally an "Agreement Between The Technical Cooperation Administration And Oklahoma Agricultural And Mechanical College" was signed on May 16, 1952.

Under the terms of this agreement Oklahoma State University pledged itself to:

1) Give assistance to the Government of Ethiopia in the establishment and operation of a college of agriculture;
2) Give assistance to the Government of Ethiopia in the establishment and operation of a country-wide system of agricultural extension services to the people of rural areas;
3) Give assistance to the Government of Ethiopia in the establishment and operation of agricultural research and experiment stations;
4) Administer such other specific projects and operations, and give such other assistance to the Government of Ethiopia in related fields pertaining to the economic development of Ethiopia, as the TCA may request and the College may accept.[1]

The selection of Oklahoma State for this project already had been announced with great publicity in April of 1952 at the National Conference of International Economic and Social Development held in Washington, D. C. This organization was composed of prominent agricultural, business, labor, educational, and religious leaders. Oklahoma State's selection to head the Ethiopian project was announced, after which Bennett was eulogized by John A. Hanna, President of Michigan State University, and by Dean Acheson, Secretary of State. Representing Oklahoma State University at this conference were President Oliver S. Willham, Robert T. Stuart, a university regent, and Edward L. Morrison.[2]

President Willham appointed Luther H. Brannon to head the Oklahoma State contract team in Ethiopia. His title was President of the Imperial Ethiopian College of Agriculture; in addition to his duties as president, he also was to serve as principal representative of the OSU contract in Ethiopia. Brannon, Assistant Director of Extension for Oklahoma State, had a broad background of experience in agriculture and in administration. After obtaining his bachelor's and master's degrees from Oklahoma State, he had served eleven years as a county agent

and then had joined the Oklahoma State extension staff, serving first as an agronomist and later as assistant director. In 1949 he had received a Ph.D. in public administration from Harvard University, after which he had spent the next two years in Paris, France, with the Economic Cooperation Administration (commonly referred to as the Marshall Plan), working in several European countries as an advisor in agriculture extension.[3]

Willham fully committed Oklahoma State to the Ethiopian project when he indicated to Brannon that he could fill available positions in Ethiopia with any member of the faculty or administration that he could persuade to go. The initial team selected by Brannon in the summer of 1952 included outstanding, nationally known agriculturalists and educators. Albert E. Darlow, Vice President for Agriculture and former head of the Department of Animal Sciences, consented to serve for a short time as a consultant. Other contract personnel agreed to serve a minimum of two years. Clarence A. "Dutch" Angerer, Head of the Department of Agriculture Education, was appointed Dean of the Ethiopian College of Agriculture. Hi W. Staten, soils expert in the Department of Agronomy at OSU, served in this capacity in Ethiopia. Dorse B. Jeffrey, farm management specialist in the Extension Division, volunteered to head extension services in Ethiopia, and Evert T. Little, an outstanding member of the College of Education, agreed to establish and direct the Jimma Agricultural Technical School. These six men were the survey team that would arrive in Ethiopia ahead of the other contract personnel.[4]

The hiring, orientation, and preparation of contract personnel continued feverishly during the summer of 1952. Especially helpful in

orienting the Ethiopian staff members was the report of Edward Morrison on his trip to Ethiopia just a few months before. In October of 1951 Morrison, Director of Auxiliary Enterprises for Oklahoma State University, received a letter from Haldore Hanson, Assistant Deputy Administrator for the Technical Cooperation Administration, asking him to consider an assignment with the Point Four program in Ethiopia. Although Morrison did not become involved in the project, he did accept an invitation to travel to Ethiopia to survey the country and gather information that would be helpful to early participants in that program.

Accompanying Morrison on the trip was Elmo Baumann, a faculty member at Oklahoma State who was a specialist in soil analysis. They arrived in Addis Ababa on December 28, 1952, and met with Ethiopian officials. They surveyed Ethiopia from the air and traveled extensively through the country by four-wheel-drive vehicles, carefully noting climate, topography, and plant and animal life. They also collected many soil samples. Morrison and Baumann departed Ethiopia on February 9, 1952, and flew to Washington, D. C., where they met with officials on February 19 and 20 before returning home. Information gathered on this trip helped administrators at Oklahoma State plan the initial stages of the Ethiopian project.[5]

Preparations for the overseas project were highlighted by an important meeting at the Stillwater campus on July 2, 1952. Attending were college officials, including the president, college deans, other administrators, and contract personnel. Also present were representatives of the Technical Cooperation Administration (TCA), including Marcus J. Gordon, director of TCA operations in Ethiopia. The purpose of the meeting was to determine the role of OSU representatives in

Ethiopia and establish priorities for important projects. The participants discussed the location of the proposed college of agriculture, the opening of an agricultural technical high school, surveys to determine agricultural and technical assistance programs, and research priorities. Also discussed was the need for administrative support on the Stillwater campus in architecture, engineering, and personnel services. Gordon stressed the urgency of sending technicians to Ethiopia immediately, as it had been more than a year since the first general agreement promising technical help to Ethiopia had been signed. Vice President Randall T. Klemme agreed with Gordon, suggesting that they first "get somebody on the job" and then develop programs recommend by staff members on location who could better determine project priorities.[6]

The original survey team, which included Brannon, Darlow, Angerer, Staten, Jeffrey, and Little, arrived in Addis Ababa on August 17, 1952, in the middle of the rainy season. These Point Four pioneers, who just a few days before left the intense heat and dry winds of an Oklahoma summer, were not prepared for the cool weather they encountered. The Ethiopian capital lies on a high plateau nearly 8,000 feet high; Staten later recalled that the group had left badly needed topcoats behind, for nearly every day "summer showers would come over Entoto mountains, and rain and sometimes hail would shower down on the city." Hugh F. Rouk, who arrived in early September, remembered his first impression of Addis Ababa as a "dripping, cold Sunday afternoon....I was dressed in summer clothing, and it was just plain cold."[7]

After initial meetings with key Ethiopian officials, the Oklahoma State representatives began work on several projects. Priority was

given to selecting a site for the college of agriculture and opening an agricultural preparatory school in Jimma. The obstacles facing these agricultural pioneers must have seemed insurmountable at times. There were no experts to whom to turn for information or advice. Many of the educated elite of Ethiopia had been purged by the Italians during their military occupation in the 1930s, and a survey taken by Americans revealed that there was not one Ethiopian "with the equivalent of a bachelor of science degree in any phase of agriculture. Only a few had technical training to the diploma level." Nor were there any systematic studies, surveys, or maps on topography, temperature, climate, or agriculture in Ethiopia.[8]

Staff members traveled more than 5,000 miles during the next four months to gather information on climate, topography, soil, and agricultural practices in the various provinces. Another important purpose of these extensive travels was to examine sites for the agricultural college and central experiment station. The survey parties traveled in four-wheel-drive vehicles loaded with tools, camping equipment, and cooking utensils. The roads were broken stone or trails, bridges often were impassable or washed out, and many streams and rivers had to be forded. The vehicles often got stuck while crossing streams or driving in heavy rain and had to be winched out.[9]

While the survey parties were collecting valuable information, additional contract personnel from Oklahoma State arrived to initiate other projects. Wives and families followed later. Nearly all the early participants in Ethiopia not only were employees but also graduates of Oklahoma State University. On Founder's Day, December 14, 1952, these alumni established Former Student Association chapters in

Addis Ababa and in Jimma.[10]

The first agricultural education program initiated in Ethiopia was the Jimma Agricultural Technical School. This institution, located 225 miles southwest of Addis Ababa, served as a preparatory school for the College of Agriculture and as a center for research until the college could be completed. The Imperial Government donated an eighty-acre site at Jimma in Kaffa province for the new school. The original buildings on the campus had been built by the Italians during their occupation to serve as barracks, church, and technical school. Instructors assigned teaching duties at Jimma arrived in Addis Ababa in early September and joined Little, who had flown in with the original survey team. Little, director of the school, also taught English and speech, Rouk taught agronomy and directed coffee research, and J. Dean McCrary was the farm shop instructor. Other instructors were Jack C. Herron, animal science; Robert H. Loomis, biological sciences; Willie D. Mitchell, science, mathematics, and shop; and James W. Murray, social science and audiovisual services.[11]

These first members of the staff of the Jimma School were shocked by the dilapidated condition of the buildings. The campus was a jungle of vines and weeds, and all but two of the buildings were hidden or partially obscured by tall corn growing on the campus. One of the men recalled that they "went wandering through this maze of growth and found houses that were not apparent from the street," and that it was several days before all the smaller out-buildings were discovered. Most of the doors and framing around the windows had been destroyed by termites or misuse. When a staff member gripped the door handle to enter a building, the "whole hardware arrangement would come off in our hands because the

termites had just completely destroyed the woodwork and left the door knobs hanging by hardened paint."[12]

Undaunted, the Americans cleared the jungle of growth from around the buildings, replaced doors, window framing, and windowpanes, and cleaned the interiors. Classes were scheduled to begin in October of 1952, and the wives would be arriving in November; these deadlines lent a sense of urgency to the early activities of the staff members. They slept in army cots and sleeping bags until buildings were available, and servants prepared their meals over open fires. The work was exhausting but rewarding.

Renovations, landscaping, and new construction in the following months produced a beautiful, well-designed campus and physical plant. The central complex included the administration building, classroom building, auditorium, recreational building, dormitory and cafeteria, coffee processing laboratory, storage buildings, and houses for the staff. Other buildings scattered across the eighty-acre campus were the shop building, barns, machine sheds, and various other structures. The Italian style two-story buildings were constructed of brick covered with stucco and tile roofs. The elegance of this classic architectural style was enhanced by verandas, breeze ways, balconies, and iron railings. Located on a hill overlooking Jimma, the campus gently sloped toward the valley and small stream below. Nearby was the two-hundred-acre Giran farm which the Imperial Ethiopian Government made available to the school for agricultural research.[13]

Selection of the first students for the Jimma School occurred in Addis Ababa in the offices of the Ministry of Education. Eighty students were to be admitted for the fall term in 1952 and divided equally among

the freshman through senior classes. The Ethiopian Government already had selected twenty-five students and announced throughout the Empire that the remainder would be chosen by the American staff. Little, Rouk, and Herron interviewed, over a three-day period, the other 500 students who showed up. To ensure consistency in the selection process, they initially interviewed together and then later interviewed separately to facilitate the process. The aspirants were understandably eager to make a good impression, and when the first applicants emerged from their interviews, they immediately were deluged by questions from the other prospective students. The interviewers were amazed and dismayed when subsequent applicants would immediately began answering questions, even before they were asked, in the order they had been asked during previous interviews.

Also making the process of selection difficult was the shortage of adequate records showing an applicant's previous educational background. Of the few records that were produced, it later was found that they were usually not those of the student interviewed. Thus most students were selected on the basis of first impressions and intuition and were assigned a grade-level without benefit of adequate educational records. Despite these handicaps, the success of the first eighty students enrolled was remarkable. A survey taken in 1968 showed that fifty, after graduating from the Jimma School, had completed requirements for the bachelor of arts degree at the Imperial Ethiopian College of Agriculture and Mechanical Arts. Twenty-six received master of science degrees at institutions in the United States, and another sixteen completed doctoral studies.[14]

When the students first arrived on campus in October of 1952, they

were housed in sheds and wherever other temporary shelter could be found. Later they moved into buildings on campus as these were restored, and finally in 1954 they moved into the new three-story dormitory and cafeteria complex. Houses for families of staff members were renovated by contractors just before the wives and children arrived in November of 1952. The houses, while adequate, could not be considered modern by American standards. In each the rooms were void of furniture and decorations, uncovered droplights hung from the ceiling, the roof leaked, and the only appliance was a woodburning cookstove with a water reservoir for hot water. The city of Jimma provided an unreliable source of electricity, and the water well at the school went dry as soon as the rainy season ended. However, the pioneering spirit of the Oklahomans overcame these obstacles, and eventually they installed an electric generator on campus, dug a new well, and erected a water tower.

Social activities were an important part of the lives of the students and American families. Entertainment and recreation centered around competitive and intramural sports. Also, families cooked out at home, attended picnics, camped out, hiked, and fished. A local cinema showed movies if electricity was available, and there was a restaurant in Jimma ran by an Italian family. Church services and activities were provided by a local mission.[15]

The heart of the Jimma program was the academic activities. Objectives were established for the Jimma School, and first on the list of ten objectives was "to prepare the student for further study in the field of agriculture." The curriculum therefore emphasized math, science, and agricultural courses, but included language arts and social studies. In the freshman year students took English, general

science, agriculture I, Amharic (the national Ethiopian language), practical math, and hygiene. Sophomore studies included English II, world history, Amharic II, biology, and agriculture II. Juniors took Ethiopian history, farm mechanics, chemistry, Algebra, and agriculture III. In their final year students studied agricultural economics, English IV, geometry, physics, and agriculture. English was stressed because it was the foreign language most often used in Ethiopia and because it was the scientific language used for research. This curriculum was carefully designed and developed in cooperation with the Ministry of Education and the Ministry of Agriculture.[16]

From the beginning a work-study philosophy of education was instilled in the students, for many came from wealthy families in which working with their hands was thought to be beneath their dignity. Faculty members tried to teach students, through lectures and by example, the dignity of honest labor. Academic programs included a balance of theory and practical application, and each student enrolled in a minimum of twelve hours a week of research and farm work. Students rotated on various on-going projects the first two years to get a broad background in agriculture; juniors and seniors participated in specialized research, and some of the outstanding students were given supervisory responsibilities. Work projects included repair of the physical plant, landscaping, work in the vegetable garden, care of livestock, construction of sheds and buildings, fencing, gardening, and repair and maintenance of equipment.

Because the Jimma Agricultural Technical School was a boarding school, extra-curricular activities were an important part of the total development of students. Physical education and organized team sports

were very popular among the students, especially soccer and track and field events. There were also many hobby clubs, including music, art, leather-craft, photography, radio, play writing and acting. Students often wrote, produced, and acted in their own plays and pageants.[17]

The Jimma Agricultural Technical School laid the foundation for a successful agriculture education program in Ethiopia. Brannon, Principal Representative of the Oklahoma State contract, felt that without the Jimma School the "College of Agriculture would have experienced difficulty in progressing beyond the brick and mortar stage." The school ensured an initial and continuing supply of students qualified to enter the College of Agriculture, and, in addition, it provided terminal training for young men interested in a career in farming or agriculture-related work. Many Jimma graduates later entered the extension service and played an important role in expanding agricultural education in Ethiopia. The Jimma School also provided interim facilities for agricultural research while the physical plant of the college was being constructed.[18]

The major objective of the Oklahoma State University contract team in Ethiopia, as defined in its agreement with the Technical Cooperation Administration, was the "establishment and operation of a college of agriculture." The agricultural concept envisioned by Bennett in his "Great Adventure" and subsequently established in Ethiopia was an agriculture college modeled after the American land grant college system in Ethiopia: "It was really a program that started completely from scratch. There were no precedents, guideposts...no mistakes made by someone previously that we had to live with." He concluded, "It was an opportunity to start with nothing,...to decide all the factors necessary

to initiate, develop and operate an educational program."[19]

The first step in establishing the land grant college system was to determine the site of the college. After four months of exhaustive travel and extensive study, the survey team presented its findings and recommendations to His Imperial Majesty Haile Selassie. The report recommended that the college "be located not more than eight kilometers [50 miles] distance from Addis Ababa "because of the need for easy access to the college from all parts of the empire. Another argument for locating the college near the capital was the economic, political, and cultural importance of extension and public service to the entire country. Brannon met with Haile Selassie on March 11, 1953, to discuss the report which had been submitted earlier. The Emperor concurred with most of the recommendations included in the report but indicated a preference for a college near Harar. At a follow-up meeting on March 27, the Emperor reiterated his request that the college be built near Harar, and Brannon acquiesced. The next day he met with the Duke of Harar, Governor-General of that province, and determined the exact site of the college. By imperial decree, approximately 1150 acres were granted to the college near the village of Haramaya, just off the main road between Dire Dawa and Harar, 210 miles east of Addis Ababa.[20]

The campus spilled over a long sloping hillside that fell from an altitude of 6500 feet to a broad valley below. The college site overlooked the sparkling blue water of a lake at the foot of the hill and a small river beyond. To the west the valley rose quickly to meet the Chercher Highlands in the distance, framed against a beautiful blue sky broken by billowy white clouds. The Emperor was so impressed with the location of the college when he first visited it that he renamed the

village and surrounding area "Alem Maya" or "Alemaya" which translated "place from which the world may be viewed." Perhaps Haile Selassie, who had such great aspirations for his people, intended a deeper meaning in the new name, for this educational outpost would become a window on the world, looking out to a better life for future generations of Ethiopians.[21]

Progress toward the realization of a land grant college on the proposed site was at times agonizingly slow. Difficulties, unavoidable delays, and a myriad of time-consuming details delayed the opening of the college four years, until 1957, and it was another two years before the main campus was actually completed. The first task was to remove local residents from the proposed site of the campus, and there was much concern by the Americans about the possible reaction of these people. The Emperor granted authority to local police and military units to oversee their removal, but fortunately force was not necessary, although there were some hard feelings.

Surveying and architectural planing proceeded simultaneously with the removal of local residents. Boundary lines were run, and fencing crews enclosed the campus. The campus was then laid out according to a master plan developed by the architectural staff at Oklahoma State University, headed by Phillip A. Wilber. This systematic, organized approach to the initial layout and subsequent development of the college physical plant contributed greatly to the orderly development of the college at Alemaya. It ensured that priority would be given to important buildings and prevented the construction of temporary structures at locations that might later impede the growth of the physical plant. Architects Chaplin E. Bills, Billy J. Blair, and Ralph M. Robertson, Jr.,

represented the university in Ethiopia during the early stages of construction at Alemaya. They also helped at the Jimma School and with other projects, especially in Addis Ababa.[22]

These architects helped implement the plans of Wilber and his staff in Stillwater and supervised construction of the physical plant at Alemaya. This responsibility occasionally brought them into conflict with Oklahoma State personnel on the site who were more concerned with immediate needs than with long range planning. Joe L. Searce, supervising architect for the College of Agriculture, 1954-1959, complained that whenever he tried to dissuade staff members from constructing buildings without consulting the architectural plans developed in Stillwater "it was like water off a duck's back." Bonnie Nicholson also pointed out the "slight tendency to depreciate advice from OSU on theory that they have not been here and do not know our problems." In Ethiopia all buildings belonged to the Emperor, and it was difficult to obtain permission to demolish any structure, even a temporary one, because of the acute shortage of buildings. Nicholson explained to President Willham the results of hasty, ill-conceived construction and asked permission to require that the "supervising architect approve in writing all construction, including plans, materials and location."[23]

The problems of building a college in Ethiopia were staggering. Finding competent contractors was difficult, and the few contractors available were Italian descendants living in Addis Ababa over two hundred miles away. Most of these were experienced only in building houses and other small structures; few knew the engineering principles required for building larger structures. Skilled laborers were also scarce, and the semi-skilled workers that were eventually hired came

from Addis Ababa and had to be housed in temporary quarters at the site. Architects were more fortunate in securing building materials. A cement plant at Dire Dawa, only a few miles away, mixed and hauled concrete to the campus. Reinforced concrete walls of the buildings were trimmed with white native limestone quarried nearby. Lumber for forming, scaffolds, and trim was available from local sources, but it was green because there were no kilns in the area to dry it. Thus, shrinking and warping of lumber was a problem. The Physical Plant Department had to purchase and operate earthmoving machines and other heavy equipment because contractors had none.

Ordering and receiving materials also was the responsibility of the Physical Plant Department, headed by Frank Kubicek, Jr. Normal problems of shipping and transportation were magnified in proportion to the great distances involved. Most shipments originated outside Africa, some from as far as 10,000 miles away. Minor mistakes in shipping orders became major errors because of the distances and time involved. Frequently orders did not arrive on time, and Kubicek would have to travel to Addis Ababa or to Djibouti, a port on the Red Sea over 200 miles away. The Suez Crisis of 1956 was another circumstance outside the control of the staff at Alemaya that slowed construction.[24]

The original bids for construction at Alemaya were received on May 3, 1954, for five buildings and ten staff houses, totaling 64,787 square feet. The winning bid by Domenico D. Alessandro totaled $1,169,801, and the contract was let in June of 1954. Kubicek deserved much credit for his role in preparing the site for construction. Loris A. Parcher, President of the College of Agriculture, pointed out the "great contribution Mr. Kubicek made during the period in getting the physical plant

ready." He did most of the dirt work on the site, using two D-4 Caterpillars. This included excavating, leveling, back-filling, grading, and terracing. Kubicek also fenced and prepared the experimental crop areas and the college farm generally. His roles of equipment operator and farm manager were, of course, in addition to his duties of ordering and receiving materials for construction.[25]

Earthmoving and early construction progressed under trying circumstances during the rainy season. Massive amounts of topsoil stripped from the hillside left the raw earth exposed, and, when the rainy season set in, the site turned into a sea of mud fed by the torrents of water falling from the sky and rushing down the slope. Not only was it virtually impossible to operate heavy equipment on the campus during the rainy season, but it also was difficult to haul supplies from the main road connecting Dire Dawa and Harar to the campus, a distance of one and a half miles. Parcher recalled that in the spring and early summer of 1957 "rains were so heavy that our access road to the main highway was flooded much of the time. No two-wheel-drive vehicle and few vehicles of any kind left the campus during these months." A staff member described the fate of those who unadvisedly risked the trip during the rainy season: "Many times it was necessary for vehicles to spend the night in a mud hole guarded by a 'Zebanya' native guard."[26]

The first contract let for the campus of the College of Agriculture, a telephone line from the college to the OSU/TCA contract office in Addis Ababa, was completed in May of 1956. That same spring Oklahoma State personnel bought the Butler building which had housed the American exhibit at the Silver Jubilee Exposition in Addis Ababa. This 70 x 140 foot building was disassembled, shipped to Alemaya, and erected on the

campus. For six months it was the only building on campus and housed students working during the summer, staff members, and tools and equipment. The Butler building served as a dormitory, kitchen, and dining hall through December of 1956. Construction projects completed in 1956 included employees' quarters, a power plant building, and installation of an electric generator.[27]

The greatest achievement in physical plant construction was the completion of the original group of buildings in January of 1957. This complex included the classroom building, administration building, clinic, cafeteria, dormitory, ten staff houses, a covered passageway, and retaining walls. Rapid progress continued through 1959, by which time major construction had been completed. A water and sewage system and an electric distribution system were completed in April of 1957. During the remainder of the year contractors surfaced roads and parking lots on campus, laid out walkways, and built an all-weather road out to the main road. In 1958 contractors finished the agriculture engineering building and campus telephone system, and in 1959 five staff houses, a dormitory, and a classroom building were added to the original group of buildings. During this period and in the 1960s additional staff housing, a library, shop buildings, barns, silos, storage sheds, and other outlying structures were built.[28]

College students arrived at Alemaya in July of 1956, to help prepare the physical plant for the beginning of classes in the fall. This group of students had graduated from the Jimma Agricultural Technical School in the spring of 1953, and had completed their first two years of college there, when the junior college curriculum was added. Because the College of Agriculture had not been completed by the fall of 1955,

students moved to Addis Ababa to join the college faculty and continue studies in their junior year. Staff members had "contacted President Matte of the University College of Addis Ababa and arranged for the University to house and feed students for $60.00 per month per student." Faculty and student were "assigned one classroom-laboratory combination and office space for two desks." Hugh K. Hedger, Ben R. Jackson, William J. Beck, Clifton N. Murphy, and Henry R. Murphy taught classes at Addis Ababa. Loris Parcher also taught in addition to serving as Acting President of the College of Agriculture.[29]

When the College of Agriculture at Alemaya opened in November of 1956, eleven senior students who had transferred from Addis Ababa and seventeen college juniors from Jimma enrolled. To relieve the crowded situation at the Jimma School, thirty-four ninth grade students and twenty-five tenth graders were enrolled at Alemaya for high school instruction. They transferred to the Jimma School the following year leaving only college-level students at the Alemaya campus during the 1957-1958 school year. By the fall of 1958 all college instruction, freshman through senior years, was conducted at the Imperial College of Agricultural and Mechanical at Alemaya, and the Jimma School continued only high school instruction.[30]

The curriculum at the College of Agriculture emphasized fundamental principles and concepts in the physical, biological, and social science fields. During the first two years the only degree program offered was General Agriculture, but later departments were added in agricultural economics, agricultural education, animal science, and plant science. As was true at the Jimma School, theory was balanced with research and practical work experience on the college farm.

In 1963 the library building was completed on campus, and John B.

Stratton, an administrator at the Oklahoma State University Library, arrived in Ethiopia to supervise supplying and staffing of the new facility. A Rockefeller Foundation grant of $50,000 helped pay for the initial expenses of establishing the library, and by 1968 the library housed over 18,000 volumes and subscribed to 240 professional journals and general periodicals.[31]

The college staff and their families moved from Addis Ababa to Alemaya and Dire Dawa in November of 1956. Parcher, Hedger, Kenneth K. Keathy, and James H. Champion moved with their families to Alemaya, joining Kubicek, who had been there since April. Because there was not enough staff housing available on campus, Jackson, Otis S. Adams, Delbert L. Whitenack, and their families moved to Dire Dawa, twenty-five miles away. As living space became available, most staff personnel at Dire returned to live at the campus, but because the number of students and faculty increased nearly every year a few families were always living at Dire Dawa.[32]

Residents at Dire Dawa referred to the twenty-five mile trip to the college as "going up the hill." From the outskirts of Dire Dawa a narrow road crept upward to a mountain pass, a journey that rose 4,000 feet in nine miles. On the other side of the mountain the road plunged several hundred feet to the valley below. A participant in the Ethiopian program described the perils of traveling between Dire Dawa and Alemaya:

> It was a very dangerous and exciting trip, of course: you would be hugging the mountainside most of the way and hoping you would not be crushed against the mountain by trucks or buses coming the other way....They were barreling down with very little control, and in many instances they simply would topple over the side of the mountain, and this was not an infrequent occurrence.

Rain in the mountains presented another problem to contract personnel "going up the hill." River beds along the route were normally dry sand, "but occasionally a wall of water would come washing down the mountain tops and cars would be washed away in this rush of headwater." Bandits also were a problem for people traveling at night.[33]

Early residents on the campus at Alemaya encountered different problems. Although staff members moved onto campus in November of 1956, sewage, water, and electrical systems were not completed until several months later. Water tanks were placed on towers near each home and filled twice a day. A small generator provided enough electricity for lights until about 10:00 p.m. each night. Declared one participant, "The time of the shutting down of the light plant depended upon how early the man in charge wanted to go to bed....Power failures were common, and candle light was often used." There were no roads or walkways on campus, and mud was a problem. During heavy rains only four-wheel-drive vehicles could get around campus, and even they often could not reach the main road because of flooding. Residents of the campus sometimes were cut off from the outside for days.[34]

Students in the first graduating class of the Imperial College of Agricultural and Mechanical Arts completed requirements for their degrees in July of 1957. President Willham scheduled a visit to Ethiopia to coincide with the graduation exercises and official dedication ceremonies had to be postponed at the last minute because Haile Selassie could not attend due to the death of Prince Makonnen, Duke of Harar. Nevertheless, Willham visited Ethiopia in the summer of 1957 and inspected projects run by Oklahoma State University personnel. While he was in Alemaya, he addressed the graduating class of the College of

Agricultural and Mechanical Arts were held on January 16, 1958. It was a proud moment for Ethiopians, especially for His Imperial Majesty Haile Selassie I. Nearly 500 people attended the dedication, including local and foreign dignitaries. Donald Bliss, Ambassador to Ethiopia, officially represented the United States.

In his dedicatory address the Emperor emphasized that a "country and a people that become self-sufficient by the development of agriculture can look forward with confidence to the future...," for agriculture "ranks first among the prerequisites to industrial and other development." Haile Selassie expressed confidence in the college as the "chief instrument for the attainment of this high goal" and pledged his government's continued support. In his concluding remarks the Emperor expressed "gratitude to our great friend, The United States of America, for the generous and significant assistance which they have given to this institution as part of their great effort for the development of the spirit of cooperation and understanding among the nations of the world." He also paid a special tribute to the memory of his former friend, Henry G. Bennett, "who laid the plans for this institution and whose great desire and tireless efforts to achieve the establishment of an Agricultural and Mechanical College in this country are well known to us."[36]

Haile Selassie next unveiled a plaque at the administration building which dedicated the College of Agriculture to the welfare of the Ethiopian people, and he cut a ribbon officially opening the doors of the college to the public. His Imperial Majesty then toured the campus and afterwards presented diplomas to the eleven students who had completed requirements for graduation in July of 1957. To show his special

appreciation to the American advisors, Haile Selassie invited the faculty and staff of the College of Agriculture to his palace in Dire Dawa. One staff member explained with pride that it was "an extremely interesting affair, and while many in addition to the staff were there, the Americans were the guests of honor."[37]

The dedication of the Imperial College of Agriculture marked a turning point in the "Great Adventure" in Ethiopia. The establishment of the Jimma School and the completion of the agricultural college laid a solid foundation for a nationwide program of agricultural education in Ethiopia. It had not been easy. Contract personnel from Oklahoma State University had experienced hardships, homesickness, and other discouragements, but they persevered until they reached their goals. In the years ahead the basic task would be to build on that foundation and train Ethiopian nationals to continue the program.

CHAPTER III

ETHIOPIAN ADVENTURE: PART 2

> I sincerely believe that the work in Ethiopia will go down in history as one of the greatest accomplishments of democracy in the world.
>
> --Oliver S. Willham, President of Oklahoma State University, 1952-1966

Projects and priorities of the Oklahoma State University contract team in Ethiopia shifted as the United States' technical assistance program in that country evolved and matured. Initially, OSU concentrated on developing an agricultural education program in Ethiopia similar to the American land grant college system; although Oklahoma State continued to emphasize this commitment, it was asked to assume additional responsibilities. Marcus Gordon, first director of the Point Four Mission in Ethiopia, and his staff arrived in Ethiopia about the same time as the survey team from Oklahoma State. Gordon was anxious to initiate technical assistance projects in addition to the agricultural education program. To get technicians on the job as quickly as possible, he asked OSU to recruit technicians through the civil service system or Federal agencies. Oklahoma State subsequently was asked to supervise and direct many of these projects.[1]

Gordon felt that Oklahoma State's expanded role was authorized by the TCA-OSU agreement, which allowed Oklahoma State to "Administer such other specific projects and operations, and give such other assistance

to the Government of Ethiopia in related fields pertaining to the economic development of Ethiopia...." In 1954 a supplement to the original agreement authorized Oklahoma State University to assist the Ethiopian government in the establishment and operation of "the Technical Secondary School at Addis Ababa, the Institute of Technology at Addis Ababa, the vocational training school at Asmara, the Arts and Crafts School in Addis Ababa...." Oklahoma State personnel also were to administer the "English instruction project, the geography textbook project, specified phases of the water resources project...."[2]

A long-term planning committee for Ethiopian education, which had been created by the Ethiopian Ministry of Education in 1953, requested a language education project for Ethiopia. The first report of that committee pointed out the need for improved methods and materials in teaching Amharic (the national language of Ethiopia) and English to primary and intermediate school students. Brent K. Ashabranner, a materials production specialist, Russell G. Davis, an education research specialist, and James B. Chandler and Owen R. Loveless, linguists, served in Ethiopia from 1952 to 1955 on the language education project. J. Andrew Holley, Dean of the College of Education at OSU, served in Ethiopia for a short time to help develop and initiate the project. Together these specialists prepared a series of alphabet books, primers, readers, four arithmetic books, and a handwriting manual in the Amharic language. Also, they published several issues of the Time to Read magazine in Amharic and English for students in lower and intermediate grades. In addition to preparing texts and audiovisual teaching aids, these specialists trained Ethiopian teachers to expand and carry on this important work in language arts.[3]

Other educational efforts included preparing Ethiopians for careers in technical fields by providing technical education programs. To help develop small, home industries, the Ethiopian government sponsored Her Majesty's Handicraft School in Addis Ababa. Mary L. Mitchell directed the school from 1952 to 1957, Anselmo E. Bernal served as arts and crafts supervisor, and John F. Dietrich was general handicraft specialist. The next level of technical education provided for trade schools in Addis Ababa, Asmara, and Eritrea. Harold N. Roberts was director of the school in Addis Ababa from 1953 to 1958, and Chester A. Pickel served in a similar capacity at Asmara. These two schools turned out skilled laborers in many vocational fields, while technicians and technologists were trained at the secondary and post secondary levels in the Technical School in Addis Ababa. Maurice W. Roney directed this school from 1953 to 1955.[4]

Sanitation and public health was a serious problem in Ethiopia. Early in the technical cooperation program, the Imperial Ethiopian Government requested help in the public health field. In 1954 and 1955, Roger L. Flanders, Professor and Head of the School of Civil Engineering at Oklahoma State University, served as chief engineer on a five-man survey team in Ethiopia, which included James K. Lindsey and Lance DeCory, sanitation engineers, Joe Scearce, architect, and James J. Thorne, engineer inspector. This team surveyed, made recommendations, and initiated projects in areas of water supply and treatment, distribution systems, sewage system design, sewage disposal, and finances and administration. In addition, they helped design and construct a public health center and a hospital in Addis Ababa.[5]

Oklahoma State personnel provided Ethiopians assistance in many

agricultural projects in addition to the basic agricultural education program. Food production in Ethiopia suffered from extensive crop damage caused by locust plagues from 1952 to 1957; entomologist Wilbert O. Ridgeway headed a locust control center to combat locusts and other insects. From 1954 to 1956 veterinarian Clifton N. Murphy helped establish and operate an Animal Disease Control Center. Another effort to help the Ethiopian farmer was the Agriculture Improvement Center under the direction of Bodie F. Wilson from 1953 to 1957. The center included a farm machinery pool, which loaned tractors, farm implements, and other equipment to farmers to help them produce more crops and to encourage them to use modern farm equipment.[6]

Another problem indigenous to Ethiopian agriculture was the scarcity of water during the dry period. OSU technicians conducted extensive surveys of water resources, above and below ground, and teams traveled through Ethiopia drilling water wells at selected sites. Irrigation studies and projects also were initiated. Coincidental to the water surveys was the geography program in Ethiopia, which included geographic surveys and mapping. Lawrence W. Delliquadri and Morris L. Lewis served as cartographers for the program, and Gordon B. Schilz was director of the Geography Institute in Addis Ababa from 1953 to 1957.[7]

Oklahoma State University representatives responded to Ethiopian requests for technical assistance and assumed responsibility for projects outside the field of agricultural education as a gesture of good will and humanitarian concern. But the greatest contributions by Oklahoma State to the social and economic development of Ethiopia were the agricultural research and extension programs of the Imperial Ethiopian College of Agriculture. The establishment of a nation-wide program of

agricultural research in Ethiopia was a monumental task that challenged the commitment and capabilities of Oklahoma State agriculturists; published information and records on crops, climate, geography, and farming methods in Ethiopia were nearly non-existent. The original survey team that arrived in Ethiopia in 1952 traveled more than 5,000 miles in four months to gather information on climate, soils, farming regions, and agricultural methods. Members of the team talked to government officials, educators, and farmers to determine the needs and priorities for agricultural research in Ethiopia.

They learned that the agricultural revolution had by-passed Ethiopia. Although Ethiopian farming methods were not primitive, no major technological improvements had occurred in centuries. Farm families lived in tukuls, small round huts with thatched roofs. Fields were cultivated manually or with wooden, ox-drawn implements; principles of scientific farming were seldom systematically applied. OSU personnel geared agricultural research to a level that immediately could be helpful to Ethiopian farmers and that easily could be adopted by them. Inventive research, farm technology, and scientific farming were the fundamental goals of early research efforts in Ethiopia.

OSU technicians therefore designed and constructed farm implements and facilities from materials readily available to Ethiopian farmers. Irwin E. Seigenthaler developed a simple box planter that could be mounted on a plow; by pulling on a cord that ran from the box up to the handle, the farmer could drop seed at regular intervals into a furrow dug by the plow. Agricultural technicians also helped develop a single-handled steel turning plow to be used by Ethiopian farmers. Inventive research at the Jimma School produced a spiked-tooth harrow that could

be built from eucalyptus poles and scrap iron, and researchers developed animal-powered thrashing machines and harvesters. W. Wesley Hobbs, Head of the Department of Agricultural Engineering Technology at Alemaya, was the genius behind many of the technological improvements in Ethiopian farming. One of his personal contributions was designing a poultry house built of bamboo with a thatched roof.[8]

Oklahoma State agriculturists demonstrated the benefits of scientific farming to Ethiopians and attempted to induce them to apply these principles in their own farming operations. Technicians demonstrated the increased yield of row-drilled seeding over broadcast seeding, which was used by most Ethiopians; they introduced improved irrigation techniques, drilled wells, built windmills, and constructed water-retaining structures to collect run-off. Researchers examined soils and experimented with the use of natural and chemical fertilizers on Ethiopian crops. Hi W. Staten and Henry F. "Pat" Murphy analyzed more than 2,500 soil samples, and the results of these tests were made available to the farmers to encourage them to fertilize properly and to select appropriate crops for their soil.[9]

Laboratory research and applied research in agronomy and animal science was conducted at three sites: the Jimma Agricultural Technical School, the College of Agriculture at Alemaya, and at the central experiment station at Debra Zeit (formerly Bishoftu) in Shoa province, thirty miles south of Addis Ababa. The original survey team recommended Debra Zeit as the site for the College of Agriculture and the central experiment station, but Emperor Haile Selassie insisted that the College be located near Harar.

The 200 acres donated by the Ethiopian government for the

experiment station lay on a high plateau near a beautiful crater lake. Nearby mountains towered above the rolling plains, touching an almost endless sky. In addition to its beauty, the location was important because of its economic implications; it lay in the heart of the central highland region, which was the most extensively cultivated area in Ethiopia. The heavy clay soil, of volcanic origin and the climate were ideally suited for grains, cereals, pulses, and oilseeds. The researchers at the station concentrated their efforts on grains common to the high plateau region--wheat, barley, teff, oats, and maize. More than 900 selections of wheat were tested at Debra Zeit and Alemaya.

Researchers at Debra Zeit also experimented with vegetables and fruits, exploring the possibilities of truck farming, and engaged in an extensive poultry demonstration and distribution project. There were more than 2,000 experimental plots at the station, and important research was conducted there. But the research program at the station never fully developed as originally intended because of its distance from the College (over 200 miles) and because of the shortage of trained personnel in Ethiopia. Billie B. Webb was farm manager at the Debra Zeit station from 1956 to 1961, and Siegbert A. Thies followed him in that position, serving from 1961 to 1963.[10]

Faculty and students at the Jimma School and at the College of Agriculture contributed greatly to agricultural research, especially in animal science fields. Research by Oklahoma State agriculturists eased the economic plight of farmers and increased the quality and production of beef and dairy products in Ethiopia. To improve the quality of dairy cattle, OSU technicians cross-bred Ethiopian milk cows with purebred Brown Swiss bulls, and Milton E. Wells and others studied milk

production and marketing practices, recommending many improvements. Research in the beef cattle industry convinced Delbert L. Whitenack and Kenneth K. Keahey that selective breeding of native cattle in Ethiopia was needed. Therefore they purchased cattle from Somali herdsmen and through selective breeding over a period of several years developed a herd of quality beef cattle at the Alemaya research station.

The economic usefulness of native sheep was limited because Ethiopian sheep were haired rather than wool-bearing. Crossbreeding of native sheep with imported rams produced wool-bearing sheep and increased the value of farmers' herds. The poultry industry was important to Ethiopian farmers as a source of food and income; unfortunately, their chickens often were scrawny and diseased, and produced eggs small in size and quantity. Poultry research at Jimma, Alemaya, and Debra Zeit emphasized crossbreeding of native hens with American and Danish roosters; improved diets and experimental feeding programs were an important phase of this research. Inventive research also was important to the development of the poultry industry in Ethiopia. Hobbs and others designed and constructed poultry houses, brooder houses, and incubators from materials available to native farmers.[11]

Another important contribution to Ethiopian agriculture was the development and organization of the Alemaya Farmers' Cooperative. This vegetable marketing cooperative was organized by the faculty and students in the Department of Agricultural Economics and Business at the College. The Cooperative encouraged farmers to adopt modern methods of farming to increase their yields; faculty and students distributed improved seeds, loaned farm equipment, and worked in the fields with farmers. The cooperative also helped farmers realize greater profits by

introducing them to processing and marketing techniques that improved the quality of their agricultural goods.

In the first nine months of operations, April to December of 1963, the cooperative marketed 250 metric tons of products for $32,890. On the local market this produce would have brought only $26,874; the cooperative had averaged an increased profit for its members by twenty-three percent. Most of this produce had been contracted to merchants in Djibouti, a port city in Somaliland, and to the French army in Somaliland. The Alemaya Farmers' Cooperative was important because it taught farmers the benefits of cooperative marketing, but it also was important as the first cooperative officially recognized by the Ministry of Commerce and Industry in Ethiopia. As such it set a precedent and an example of free enterprise for Ethiopian farmers.[12]

Oklahoma State's greatest contribution to the economy of Ethiopia was the development of the coffee industry. More than fifty percent of Ethiopia's annual export dollars were derived from the sale of coffee. Moreover, it was an important part of the culture and heritage of the country, for coffee had originated in the Kaffa province of Ethiopia several hundreds of years earlier. After Brannon and members of the survey party arrived in Ethiopia in August of 1952, they learned of the importance of coffee to the economy of Ethiopia and the potential for coffee research. Brannon wired Hugh Rouk, who had not yet departed from Stillwater, explaining that his major teaching and research efforts at the Jimma School would be related to coffee. Rouk, who received the message only three days before he was scheduled to leave for Ethiopia, recalled that "the only resource material I had at my disposal under these conditions was the Folger's Coffee can in the kitchen cabinet."[13]

Rouk rescheduled his Ethiopian itinerary to include stops at Kansas City, Kansas, to meet with representatives of the Folgers Coffee Company and at New York City to talk to coffee exporters. He remembered that "It was on the fifth floor of 120 Wall Street that I saw my first coffee tree." Soon after he arrived at Jimma, the capital of Kaffa province, Rouk began his research program, dividing his efforts into two broad areas. First, he worked directly with coffee plants, studying different varieties of trees, experimenting with selection of seeds, preparing seed beds, and handling and planting seedlings. He also conducted experimental plantings, testing results of controlled variables of young plants, including sunlight, spacing, mulching, and fertilizing. This phase of coffee research was long-range, for it took coffee seedlings years to mature and hence years to determine the results.[14]

The most dramatic and rewarding phase of Rouk's coffee research was the study of processing and marketing of coffee in Ethiopia. It was in the processing and marketing of coffee that Oklahoma State researchers accomplished immediate and spectacular results. Rouk noted that the "coffee industry project was one that had a built-in success," for it was "apparent from the beginning that coffee was the key to the quick economic development of Ethiopia." Rouk and his students thoroughly researched processing and marketing techniques and made some startling discoveries. Ethiopian coffee had one of the lowest ratings of any coffee sold on the world market, despite the fact that the quality of coffee grown there was equal to that of most other coffee-producing countries.

Rouk's research indicated that improper picking, processing, and marketing methods caused Ethiopian coffee to be down-graded on the world

market. Because there were few coffee plantations in Ethiopia, most coffee cherries were picked from wild trees in the forest. These coffee forests included many varieties of coffee trees, and pickers indiscriminately mixed cherries of different varieties. Neither did they attempt to separate green, ripe, and over-ripe cherries; even worse, they collected cherries that had fallen on the ground and had absorbed orders that had affected their flavor.

Cherries were gathered, ungraded, into old bags that were polluted with materials and odors that adversely affected the quality of the coffee. From central marketing places, coffee was hauled to Addis Ababa on trucks carrying mixed cargoes of hides, meat, fruit, and other material. Odors from these likewise were absorbed by the coffee. Coffee processors in Addis Ababa also were negligent. They did not attempt to sort or grade the coffee beans, and they frequently overroasted the beans, which destroyed the flavor of the coffee.[15] Point Four administrators in Washington were so impressed with Rouk's research and the economic possibilities of coffee production in Ethiopia that they hired two specialists to work directly with Ethiopian farmers and the Ethiopian government. One of these men was Don Shuhart, who formerly had been a faculty member in the horticulture department at Oklahoma State. Work by these men led to the establishment by the Ethiopian government of a coffee research center near Jimma and a National Coffee Board. This board was a regulatory agency which established and enforced standards of quality in coffee processing and marketing that were based on research and recommendations developed at the Jimma School.[16]

As the quality of Ethiopian coffee improved, foreign buyers became

increasingly more aware of Ethiopia. Several companies in the United States became big buyers of Ethiopian coffee, including Folgers Coffee Company in Kansas City, Kansas, and Cains Coffee Company in Oklahoma City, Oklahoma. When Cains first started experimenting with Ethiopian coffee, it employed an Ethiopian graduate student studying at Oklahoma State to work on a special training program. OSU personnel who served in Ethiopia watched Ethiopian coffee develop from "an almost unknown commodity, which was accepted with some hesitation, to a commodity which can be bought [on the world market] like Brazilian coffee, on the basis of a stated grade."[17]

Rouk returned to the United States in 1958 for advanced graduate study; he had completed six years of extensive research in coffee and had served four years as director of the Jimma School. His record was impressive, and before he departed he was honored for his scientific contributions to Ethiopia. Emperor Haile Selassie personally presented Rouk the "Order of the Ethiopian Star," an honor seldom accorded foreigners. Rouk returned to Ethiopia a year later as director of research for the College of Agriculture.[18]

Outreach and extension projects were an important phase of OSU's agricultural education program in Ethiopia. Beginning in the spring of 1954, the Jimma School held an annual field day to acquaint neighboring farmers with the activities of the school, and in 1960 the College of Agriculture at Alemaya initiated an annual field day patterned after the successful program at Jimma. Field day combined many of the activities of a county fair with those of a science fair. Students and faculty set up special demonstrations, booths, and exhibits to entertain and enlighten local farmers and citizens. For students it was an opportunity

to show off their newly acquired knowledge of agriculture; for faculty and staff it was a chance to acquaint local citizens with the physical plant and academic activities of the institution; and for both it was an excellent opportunity to demonstrate to Ethiopians the practical benefits of applied agriculture and scientific farming. Farmers were encouraged to exhibit their poultry, livestock, and vegetables and to compete for prizes. These annual events became very popular with local residents and with Ethiopian dignitaries, including Emperor Haile Selassie, who was a regular visitor.[19]

Oklahoma State University personnel initiated a nation-wide program of agricultural extension in Ethiopia patterned after the American land grant college system. The extension program was an extremely important contribution by OSU to Ethiopia, for it directly influenced the lives of Ethiopian farmers, bringing to them valuable knowledge of scientific farming and benefits derived from inventive and applied research. The extension service was notable for the expertise of its staff. Dorse B. Jeffrey, who served as director of extension from 1952 to 1954, helped with the initial planning and developing of extension. He had served in the extension service at Oklahoma State as a farm management specialist. Luther Brannon played a major role in developing and administering extension activities. His professional career had been devoted to agricultural extension work, and before he left OSU for Ethiopia he had been serving as assistant director of extension for the university. William D. Davis, Lee C. Craig, James H. Champion, and William J. Beck also played important roles in the development of agricultural extension in Ethiopia.

In October of 1954 two Ethiopian nationals, Meteke Alemu and

Tefferah Belinah, were hired as the first extension agents. Because of the close working relationship between agents and farmers, it was necessary to employ native Ethiopians who understood the customs, culture, and language of the many tribes. Initially, this slowed the extension program until adequate numbers of nationals could be trained for extension positions. Many of these agents were graduates of the Jimma Agricultural Technical School who did not wish to continue their academic education. By 1963 seventy-seven extension posts had been established with 132 nationals serving in eight supervisory districts. Each agent resided in the district that he served, similar to county extension agents in the United States.[20]

The extension service provided extensive pre-service and in-service training for its agents. New agents were carefully instructed in the service concept and basic philosophy of extension and then sent to the American University in Lebanon for one year of training. In-service training consisted of sessions, conferences, and short courses taught at Debra Zeit and Alemaya. An annual two-week extension conference on the College campus was the highlight of the year for extension agents.

Extension activities accelerated rapidly after the initial misunderstanding and distrust of farmers was overcome. In 1960 extension agents visited 20,000 farms, and more than 65,000 farmers observed demonstrations or field day activities. Extension agents worked through village leaders and teachers to help explain their programs and goals. Projects were varied and numerous. Agents helped make the benefits of research in animal science available to farmers by distributing new crossbreeds of cattle and sheep to them. Agents also initiated poultry improvement projects: they gave away baby chicks, helped farmers build

poultry facilities, and demonstrated the importance of balanced diets to the development of healthy chickens.[21]

An important project sponsored by extension workers was the promotion of vegetable gardens. The diets of most Ethiopians did not include enough vegetables; therefore gardens were stressed as a health measure. But the economic implications of vegetable farming and marketing were also important reasons for the program. Agents secured the cooperation of personnel at army bases and church missions, and together they planted and cultivated large plots to serve as demonstration gardens. Agents loaned plows, harrows, and other agricultural implements to farmers, encouraging them to enlarge their gardens and fields.

J. Travis Pyron used a unique method for disseminating agricultural information to farmers in Ethiopia. He was a specialist in planning fairs, exhibits, and special displays, and had supervised the American exhibit at the Silver Jubilee Exposition in Addis Ababa that commemorated the twenty-five-year reign of Haile Selassie. Pyron worked with extension agents to promote and publicize extension projects throughout Ethiopia and was successful in setting up exhibits and displays at village markets, which were important meeting places for agricultural and social exchange. One of the most successful phases of extension work in Ethiopia was the development of 4 T clubs, patterned after the American 4 H program. By 1963 there were 140 4 T clubs numbering over 7,000 members, and in that year an annual nationwide 4 T conference was initiated on the college campus at Alemaya. Extension activities continued under the direction of the College of Agriculture until 1963 when the Ministry of Agriculture assumed direct responsibility for the extension program. However, Oklahoma State University representatives continued

to work closely with the program and were responsible for training extension agents.[22]

Oklahoma State University also played a major role in the success of the American technical assistance program in Ethiopia, and its administrative record there was excellent. Of course, during the sixteen years that OSU personnel served in Ethiopia there were misunderstandings and disagreements between OSU and Point Four administrators over project priorities, administrative policies, and management philosophies. But only once did a conflict arise that threatened the progress of the Ethiopian program.

In 1953 President Dwight D. Eisenhower combined the Technical Cooperation Administration and other technical assistance programs into a new organization called the Foreign Operations Administration. A change in philosophy accompanied the change in title. Harold B. Stassen, director of the FOA, greatly increased the number of university contracts abroad and at the same time imposed stricter organizational control on the contract groups by FOA field missions. Although Stassen's policies were necessary in order to centralize and administer the many missions and growing number of university contracts, they adversely affected many contractual programs that had been initiated by TCA.[23]

Marcus Gordon, mission director in Ethiopia, warned President Willham of the "impact of the changes in Washington," explaining that "Most of the top TCA people with whom I worked...have been laid off." Gordon noted that they had been dismissed without regard for "training, length of experience, competence, or quality of performance." Jonathan B. Bingham, a former top administrator in TCA and friend of Henry Bennett, observed that "most of the key members of the former T.C.A. staff in

Washington--a remarkably able and selfless group--have been summarily dismissed."[24]

Problems presented by this new development were two-fold. The first was the change in management policies and philosophy at the mission level. Stassen's administration called for stricter control of university contract projects and for more rigid coordination and subordination of university staff activities to the overall objectives and programs of the operations mission. Previously in Ethiopia, Oklahoma State contract personnel had managed projects assigned them with little interference from administrators at the local mission. They often worked directly with officials of the Ethiopian government, forming close personal relationships.

Another problem was the influx of new administrators into mission offices. Gordon, who had been director of the Ethiopian mission since its inception, left Ethiopia in 1955. Many of the FOA administrators who replaced Gordon and his staff were less experienced and qualified than their predecessors, and some were career bureaucrats with little international experience or expertise. One in depth study of Point Four-university contract relations succinctly described the conflict between FOA administrators and university personnel during this period:

> FOA mission officials who came in contact with this kind of [TCA initiated] project tended to feel that the informal relationships which had been established violated the [new] concept of country programming under mission direction and the official chain of command. University representatives felt that the FOA officials were inexperienced, did not understand the field situation, and were interfering with their legitimate responsibilities.[25]

The impasse that emerged in Ethiopia in 1955 and 1956 contrasted with the personal friendships and close working relationships that OSU

representatives had enjoyed earlier with Marcus Gordon and his staff.

Brannon, Principal Representative of the OSU contract in Ethiopia, began to recognize the vulnerability of OSU projects to direct control by Point Four administrators. In August of 1955 he wrote President Willham advising him that it was time "to take a 'new look' to determine the extent to which the College should spread its efforts in the future...." From 1952 through 1955 Oklahoma State had expanded its efforts to include many projects in fields outside agriculture. Brannon suggested to Willham that OSU "concentrate its efforts upon the development of a national program of agricultural improvement...," wisely pointing out the "possibility of conflict when people are recruited, employed and serviced by one party but are responsible to another for program supervision and direction."[26]

Another source of conflict was the dual administrative role of Brannon. He had been hired for the Ethiopian program in a different way than other OSU personnel, who worked directly for the University. Brannon had been granted a leave of absence from Oklahoma State and then had been hired by TCA to serve as president of the Imperial Ethiopian College of Agriculture; TCA also had allowed him to serve as Principal Representative for the OSU contract program. Later Brannon was asked by the Ethiopian mission to serve as Chief of Agriculture. This additional duty was compatible with his other responsibilities, for OSU had recruited most of the agricultural technicians in Ethiopia and had assumed responsibility for many of the agricultural projects.

Brannon agreed to accept the new position after consulting with President Willham in order to "keep the entire agricultural program coordinated and to prevent the education and action phases of the program

from possibly going in opposite directions." Later he began to have doubts about the advisability of maintaining his dual responsibilities to TCA and OSU, and he wrote Willham confiding that he was "now questioning if the present arrangement is the proper one." Brannon noted that during his tenure as Chief of Agriculture "no real conflicts of interest" had arisen, but conceded that "certain positions which have appeared desirable to take may have created some doubts in the minds of the Point 4 administrative staff."[27]

The inevitable conflict between OSU representatives and Point Four officials over administrative policies and management philosophies was triggered by an incident at the Jimma School in December of 1955. Twenty-five ninth grade students were expelled for disrupting classes and inciting a general student uprising. Hugh Rouk, director of the school, recommended that none of the students be reinstated for the remainder of the school year but emphasized that they could reapply for admission the next fall on an individual basis.[28]

The Minister of Agriculture was besieged by parents of the expelled students, some of whom were influential governmental officials, asking him to readmit their sons. The minister contacted Point Four officials and the American ambassador expressing his strong desire that the students be allowed to return to Jimma. Edward L. Eichholzer, Director of the Point Four Mission in Ethiopia, asked Brannon for an explanation. Brannon supported the action taken by Rouk and other members of the Jimma staff. He explained to Eichholzer that "Incident[s] of this nature are not uncommon in Ethiopian schools. The most successful schools today are those in which the Administration maintains strict discipline and deals summarily with infractions such as these." (It was later

found that the leader of the student revolt at Jimma had been dismissed from every school that he had attended for insubordination or similar reasons.) Brannon emphasized that to "readmit any or all of these students to the Jimma School at this particular time would indicate that the teachers had no real authority over them."[29]

Brannon's letter to Eichholzer was intended to show support for the staff of the Jimma School, but there was another motive for Brannon's writing Eichholzer. He expressed what he felt to be the crux of the Jimma incident and of the contractual responsibilities of OSU in Ethiopia:

> Basic to all this is a clear understanding of the degree of authority which the staff can exercise in the internal administration of the school. Unless the Director can feel free to take such disciplinary action as, in his good judgment, the situation required there is a grave doubt in my mind as to the advisability of [OSU's] assuming operating responsibility for any school.[30]

When officials of the Ethiopian government identified the leaders of the student revolt, Point Four officials intervened and agreed to return the remaining students to the Jimma School. The Jimma incident was resolved, but it pointed to a growing disenchantment between Point Four officials and OSU representatives in Ethiopia. Oklahoma State personnel felt that the mission people had interfered in the internal management of their agricultural education program, while Eichholzer insinuated that Brannon and other OSU administrators had favored Oklahoma State's interests over those of the total program in Ethiopia. He criticized OSU for going directly to the Ethiopian government with the Jimma problem before involving the mission, and cited the Jimma problem as an example of why all university contract projects should be subordinate to the local mission on all matters.[31]

The Jimma controversy seemed to accelerate the process of centralizing management decisions and policy-making into the hands of Point Four officials. In February of 1956 Dutch Angerer, president of the College of Agriculture, wrote Willham expressing his concern for the future of the OSU project in Ethiopia. He explained that in the past, when administrative policies were initiated, "we have either been consulted about the management of our particular phase, the agriculture program, or have been informed that we were in complete charge...." Angerer contrasted this earlier relationship with what was happening in Ethiopia in 1956:

> A radical change in the administrative policies has taken place during the past month. More directives have been issued than in the past three years; individuals have been called in from our staff and ordered to take new responsibilities without the consent or knowledge of Dr. Brannon or myself. Some have been taken from one program and placed in others, complete segments have been shifted and a statement has been made that ICA [International Cooperation Administration] is directing all activities.

Angerer concluded that OSU "cannot continue under the present conditions unless a frank discussion of policies leads to complete understanding of responsibilities...," and declared that if the "local ICA administration is permitted to make changes at will, without consulting the heads of the different programs, then in my opinion there should be a withdrawal of Oklahoma A & M personnel."[32]

Brannon concurred with Angerer's assessment of the situation and explained to Willham how low the morale of the OSU personnel in Ethiopia had sunk, exclaiming that the "incredible thing is that it could happen so rapidly." He warned that "Unless there is a change for the better soon, the present program will disintegrate and someone will have the impossible task of trying to pick up the scattered bits and pieces in

an attempt to salvage something with which to reconstitute a program."[33]

President Willham attempted to restore the morale of the OSU representatives and to assure them of the continued confidence and support of the University administration for the Ethiopian program. In February of 1956 he wrote Brannon assuring him that "we have the utmost confidence in you and your staff. We are proud of the progress that you have made in the development of Agricultural Education and Agricultural Development in Ethiopia." On the other hand Willham expressed his concern over the "divergence of views between ourselves and the Point Four administration in Ethiopia...," stressing that it was "absolutely vital that our responsible contract people in Ethiopia be given sufficient delegated authority to effectively operate our program in its every aspect...." It was characteristic of Willham's personal philosophy to look for the best in people and to expect positive results even under trying circumstances. Accordingly, he assured Brannon that the "Jimma incident will be only one of the passing unpleasant happenings in our work there and it will be overshadowed by the many pleasant things in a few seasons...."[34]

Throughout the remainder of 1956 Willham attempted to resolve the Ethiopian problems and restore harmony to the program. He conferred with members of the OSU Board of Regents, John Monk, legal advisor for the University, Al Darlow, Vice President for Agriculture, and Bill Abbott, Coordinator of International Programs. Next, he set up appointments with John B. Hollister, Director of the International Cooperation Administration, and other top Washington officials. In the spring and summer of 1956, Willham, Abbott, Monk, and others traveled to Washington on four different occasions to iron out difficulties in the Ethiopian

program. Congressional representatives from Oklahoma, especially Carl Albert, helped resolve problems with government agencies, and meetings in Washington were helpful in identifying problems, examining management policies and priorities, and generally restoring momentum to the United States technical assistance program in Ethiopia.[35]

Major changes in the Ethiopian program included personnel changes and clear definition of policies and management responsibilities. Brannon terminated his dual role of Principal Representative and Chief of Agriculture in Ethiopia to resolve any conflict of interest. In July of 1956 he departed for Saigon, South Viet Nam, to serve as Chief of Agriculture to complete his contractual obligation with Point Four. This was a move which he not only endorsed but also recommended. A year later he returned to Oklahoma State University to serve as Director of Extension. Brannon's contributions to the technical assistance program in Ethiopia were invaluable and his administrative record excellent; it was unfortunate that his effectiveness in the last months of his four-year term was limited due to circumstances beyond his control.[36]

Another major accomplishment of the Washington conferences was the reordering of OSU's priorities in Ethiopia. Willham expressed his understanding of these new objectives in a letter to Julius J. Kessler, Assistant Director, Office of Contract Relations for ICA. Willham told Kessler, "In accordance with conversations between representatives of the College and of ICA in Washington recently, it was agreed that future activities under the contract with the College will consist of those originally proposed under the contract." Willham then specified these "activities": operation of the Jimma School and the College of Agriculture, "establishment and operation of agricultural research experiment

stations," and "organization and operation of a National Extension Service under the Imperial Ethiopian College of Agriculture." But Willham emphasized that "activities presently carried on in the fields of education, handicraft, well drilling, etc., which are not strictly related to agricultural education will be phased out in an orderly manner...."[37]

Willham successfully resolved most of the differences between OSU representatives and ICA administrators in Ethiopia and was eager to restore momentum to the Ethiopian project. But it first was necessary to fill the leadership positions vacated by Brannon and Angerer in 1956. Loris A. Parcher, dean of the College of Agriculture, was promoted to acting president, but replacing an administrator of Brannon's caliber was no easy task, and Willham delayed his decision until he could find the right person. He was looking for an administrator who would make a long-term commitment to the program in order to build personal relationships with ICA officials and OSU personnel and to provide continuity and stability to the Ethiopian project.

Meanwhile, Willham needed to place a competent administrator in Ethiopia as quickly as possible to represent OSU's interests. Randall K. Jones, Dean of Resident Instruction for the College of Agriculture, agreed to serve six months in Ethiopia as Principal Representative and president of the College of Agriculture. Jones was an able administrator with an outstanding background in agricultural education. He arrived in Ethiopia in February of 1957 and, as one Point Four administrator pointed out, "made a fine impression on the people whom he has met here." But more important, he accomplished much in the short time that he was in Ethiopia.[38]

Jones discussed future plans for the operations for the Jimma

School with Hugh Rouk and submitted a set of proposals to Eichholzer, director of the local mission. These proposals called for co-directors to run the Jimma School; Ato Tesfa Bushen would be Director of Administration, and Rouk would be Director of Instruction in charge of all instructional and academic activities. Also, it called for the phase-out of American instructors beginning in the 1958-1959 school year, but the 100-acre research farm at Giran would be transferred to the College of Agriculture after the phase-out at Jimma.

The concluding remarks of the memorandum to Eichholzer emphasized the new direction of OSU's efforts in Ethiopia:

> Oklahoma A & M College has looked upon the Jimma School as a means of preparing for the college program at Harrar [Alemaya]. We feel that our greatest contribution in agricultural education can be made at the college level rather than in the secondary school work. In thinking about the expanded program at the college in the future, it is obvious that we will need to concentrate our personnel and resources to do the best possible job there.[39]

Another major contribution by Jones was his efforts to establish clearly defined lines of authority between OSU administrators and ICA officials and to streamline management responsibilities. He suggested to Eichholzer that it would be more appropriate for the president of the College of Agriculture to report directly to the mission director than to the Chief of Agriculture. Jones explained that the "Agricultural Education Program carried on under contract by the Oklahoma A & M College could function more effectively and efficiently as a separate program division...reporting directly to the office of the Director." At the same time that Jones was working out OSU-ICA administrative relationships, he was overseeing construction of the college campus at Alemaya and lending administrative support to that project.[40]

When Jones left Ethiopia in July of 1957, the dual role of

president of the college and Principal Representative again was divided. Parcher was promoted to president of the College, and Bonnie Nicholson arrived in Ethiopia to assume the duties of Principal Representative. Nicholson's appointment was a fortunate one, for he had the experience and personality necessary to revitalize the Ethiopian project. Nicholson had received his B.S. and M.S. degrees from Oklahoma State with academic emphasis in agricultural education and administration. He had taught vocational agriculture in Oklahoma from 1923 to 1931, also serving as a superintendent of schools three of those years. From 1931 to 1946 Nicholson had been Assistant State Supervisor of Vocational Agriculture in Oklahoma, and after 1946 had served as State Supervisor of the Veterans Agricultural Training Program.[41]

Nicholson's personality was probably as great an asset to his efforts in Ethiopia as was his administrative experience. He was about 5'9" tall with a powerfully built frame that hinted at his athletic background. He had lettered in football, basketball, and baseball at OSU in the early 1920's, earning nine letters in three varsity seasons. This enthusiasm and competitiveness carried over into his administrative philosophy; he had a natural gift for winning and holding people's confidence and supported his staff 100 percent, but in return he demanded loyalty and team effort. Nicholson had a keen sense of humor and was congenial, even folksy at times, but beneath these unassuming country mannerisms was a well-educated, articulate individual. The new Principal Representative was an effective, if sometimes unorthodox, administrator. He could shoot "scratch golf" and often cemented personal relationships and solved management problems on the golf course. His letters and memorandums to OSU personnel and to Point Four administrators

included quips, adages, and athletic expressions like "calling signals" and "a lost ball in the high weeds."[42]

Nicholson's first administrative efforts were directed toward restoring harmonious relations with ICA administrators and with officials of the Imperial Ethiopian Government, while at the same time boosting the morale of the OSU contract personnel. Nicholson had a clear understanding of the situation in Ethiopia, for in July of 1957 he and Dr. Willham had met with Charles S. Stokes, Acting Director of the Ethiopian Mission, and Albin D. Molohon, Chief of Agriculture who had replaced Brannon. Later, Nicholson pointed out to Bill Abbott that a "get tough problem will not work here," indicating that a "tactful, diplomatic and fair but firm approach is the only one that has any chance of success." Nicholson initiated a "public relations program designed to gain support by everyone on a number of principles...in our operations." Failing this, Nicholson felt that it would useless for OSU to remain in Ethiopia, and in jest thanked Abbott for his "foresight and thoughtfulness in providing me with a round-trip ticket."[43]

Nicholson drew up a list of ten policies and procedures that he felt would enable OSU to "maintain our entity and prerogatives under the contract." OSU personnel enthusiastically supported the proposals, and Molohon, Chief of Agriculture, also endorsed them. The first three statements were calculated to reassure Point Four administrators. OSU promised to "Develop an understanding of the responsibilities of OSU personnel with respect to the over-all aims and objectives of the USOM in Ethiopia" and to recognize that "their segment of responsibility is only a part of the ICA/Ethiopian program." On the otherhand, points four, five, and six offered guarantees to Oklahoma State. These points

declared that "OSU personnel shall receive instructions from and report to, directly, designated individuals appointed by Oklahoma State University." These technicians reported to the Principal Representative and "shall not be supervised by or be under administration of any other National."[44]

Within a few months Nicholson was able to report that OSU-ICA relations were harmonious and that he had been invited to "attend Staff Conferences of Chiefs of Program and all meetings and conferences with ICA and Ethiopian Government officials that even remotely affect the Agricultural Program...." And, more important, Nicholson felt "certain our people have an improved morale and possibly feel they have someone in charge that will look after prerogatives and interests." He attributed this to the fact that "No one is going directly to our people with orders and our people are religiously coming through me...."[45]

By the spring of 1958, Nicholson felt that the Ethiopian program was operating smoothly enough to justify the drafting of long-range goals. He first discussed these plans with Rouk, Parcher, and Kenneth K. Keahy, dean of the College of Agriculture. The purpose was to establish priorities for the "development, expansion and operation of the Agricultural Education, Research and Extension Programs under the Contract with target dates on phasing-in and phasing-out." Nicholson felt that long-range planning would help mission people and the OSU staff get a better understanding and agreement on "operations, philosophy, and objectives" and help their successors carry on the program with less difficulty. Through 1958 Nicholson and his staff worked with TCA officials to develop a long-range plan, and in February of 1959, they submitted their plan to local TCA administrators who indicated their

concurrence and forwarded it to ICA in Washington, D. C.[46]

In just two years, with the help and support of administrators at Oklahoma State, Nicholson had turned the Ethiopian program around. Administrative guidelines had been worked out, effective lines of communication had been reestablished, and the morale of OSU personnel had been raised to its former high level. Nicholson continued the progress of the OSU program in Ethiopia and initiated the process of phasing-out before he returned to Oklahoma in 1964; he could look back with pride and satisfaction on a job well done. Luther Brannon returned to Ethiopia, replacing Nicholson as Principal Representative, and again served ably, until 1968 when OSU terminated its contract program in Ethiopia.[47]

Training Ethiopians to participate in and eventually carry on the agricultural education program in their country was the primary objective of OSU personnel in Ethiopia. The training of Ethiopian nationals began at the Jimma School and continued at the College of Agriculture in academic pursuits, research projects, and farm work. Beginning in 1957 outstanding graduates of the College were selected to continue their education and training at graduate schools in the United States. Many students received masters and doctors degrees at Oklahoma State University and at other institutions with outstanding agricultural programs, including Cornell, Purdue, Ohio State, Wisconsin, Minnesota, Rutgers, Michigan State, and Pennsylvania.

Scholarships awarded to these Ethiopian students were paid for by grants from the Point Four administration and from the Rockefeller Foundation, which financed doctoral studies. These young men were selected with the understanding that they would accept administrative, teaching, and research positions in agricultural education on their

return to Ethiopia. Final training for these Ethiopian academicians consisted of their work with American faculty and staff members. Nationals gained positions on the staffs at Jimma and at Alemaya and shared responsibility for directing the agricultural education program with their American counterparts.[48]

At the Jimma School the original contract staff of seven increased to fourteen and then dropped to two in 1965; a year later those two were phased out. Through the 1960s students returning to Ethiopia assumed more responsibility for instruction and administration at the College. In 1963 the College of Agriculture was incorporated into the Ethiopian higher education system of Haile Selassie I University, and that same year the Minister of Agriculture assumed direct responsibility for the extension program. On March 25, 1966, Oklahoma State University amended the Ethiopian contract to change its role at the College of Agriculture from operational to advisory. Leonard F. Miller served two terms as dean and advisor to the College until 1968, when Oklahoma State terminated its technical assistance program in Ethiopia.[49]

In less than two decades Oklahoma State University had developed an agricultural education program in Ethiopia that took the United States a century to develop. OSU agriculturists built a College of Agriculture and organized nationwide programs of agricultural research and extension that contributed immeasurably to the economic growth and development of the Ethiopian nation. But, more important, OSU personnel trained Ethiopians to carry on these programs. From 1957 to 1968 the College of Agriculture graduated 384 students, many of whom received scholarships to continue their education and training in the United States. It was a tribute to the curriculum and quality of

instruction at the Jimma School and at the College of Agriculture that these students competed successfully for graduate degrees at some of the most prestigious universities in the United States.

The "Ethiopian Adventure" was a story of commitment and dedication --the commitment of a university to a worthy idea and the dedication of its people in achieving that goal. President Willham and the Board of Regents for Oklahoma State University committed to the Ethiopian project the human and technical resources of the University. Willham acknowledged that OSU had sent to Ethiopia many of its "top teachers and administrators. We have sent over our very best for the key positions and other positions as well." During the sixteen years that OSU was involved in Ethiopia, Willham and the regents released vice presidents, deans, department heads, administrative heads, and other outstanding faculty and administrators to serve in Ethiopia. President Willham worked directly with the Coordinator of International Programs, corresponded regularly with Principal Representatives of the OSU contract, and personally toured Ethiopia on five occasions.[50]

The dedication of OSU representatives in Ethiopia was another important reason for the success of the Ethiopian project. These men and women and their families often endured hardships, homesickness, and other difficulties to ensure the success of the program. This dedication was partially explained by the fact that most of the representatives and many of their wives were graduates of Oklahoma State University. To these graduates it was an additional source of pride that they were helping their alma mater develop a reputation for excellence in international education. Alumni who served in key positions in Ethiopia were Brannon, Nicholson, Jones, Angerer, Parcher, Kindell, and Rouk.

Three of these served as Principal Representative for the OSU contract during the sixteen years that OSU was in Ethiopia; Brannon and Nicholson together served fifteen of those years. The Ethiopian project was blessed with a continuity of committed and dedicated leadership.

The "Ethiopian Adventure" was a launching pad for other successful international projects sponsored by Oklahoma State. It was an important technical assistance program in terms of man-years of service by university personnel, but it also was important because it was the first international program. Later projects learned from the management mistakes and successes of the Ethiopian project. University administrators accumulated valuable experience in dealing with Point Four officials, developed a logistical and bookkeeping system for international projects, and established administrative policies and procedures in working with overseas personnel. Because of its Ethiopian experience Oklahoma State was prepared to move on to other "Adventures."

CHAPTER IV

TECHNICAL EDUCATION PROGRAM IN PAKISTAN

> A Ford Foundation official told me frankly that the University's programs in Pakistan were 'the best example of technical assistance overseas the foundation has ever experienced.'
>
> --Oliver S. Willham, President of Oklahoma State University, 1952-1966

In the quarter-century from 1951 to 1976, faculty and staff of the Division of Engineering, Technology, and Architecture at Oklahoma State University contributed greatly to OSU's international technical assistance programs.[1] Faculty and administrators served in eight projects, spanning three continents, in Algeria, Ethiopia, Egypt, Pakistan, Brazil, and Peru; the first major involvement was in Pakistan.

Pakistan and India had long been a source of fantasy and romance for the Western world. British writers of the nineteenth century portrayed exotic and romantic images of the people and culture of these lands that persisted into the middle of the twentieth century. English readers vividly recalled military engagements in the famous Kyber Pass, stirring cavalry charges by British Bengal Lancers, simple-minded natives depicted in Rudyard Kipling's poetry, fierce exotic animals, such as tigers, elephants, hooded cobras, and teeming Muslim and Hindu populations with their strange customs, mosques, turbans, and beautiful, veiled ladies. The myths and imagery lingered, but Pakistan and India

leaped into the modern world, propelled by their independence granted by Great Britain following World War II.

On August 14, 1947, the partition of Pakistan and India established Pakistan as an independent country. The dreams of a homeland for Muslims in the Indian sub-continent was realized with the creation of East and West Pakistan along the northern boundaries of India. But the Pakistani people knew that there could be no hope of lasting political freedom without economic independence, shored by a strong, modern industrial base, and one of the early priorities of the Pakistan government was the industrial development of the country. In 1948 the Council of Technical Education for Pakistan appointed the Technical Education Committee to establish manpower goals for engineers, technicians, and skilled laborers and to propose schemes for developing a national system of technical training.

In 1950 the Technical Education Committee reported its findings and recommendations to the government. The report pointed out the need to train and educate technical personnel in four categories: factory executives, technical specialists, supervisory technical personnel, skilled technicians, and semi-skilled workers. Members of the committee felt that the role of supervisory technical personnel was very important to industrial development in Pakistan because "the speed and quality of production entirely depends upon them," and because "they form the link between the workers and the management." The committee report emphasized that in order to train these technical supervisors it was "essential and urgent that three Polytechnics should be established, one in Karachi, one in the rest of Western Pakistan and the third in East Bengal East Pakistan."[2]

In the early 1950s the Ford Foundation and other philanthropic organizations accepted the challenge issued by President Harry S. Truman in his inaugural address and in his subsequent Point Four program to provide technical assistance to developing countries around the world. In 1951 a Ford Foundation survey team headed by Paul Hoffman toured Pakistan and talked with officials of the Government of Pakistan. In December of 1951 the Ford Foundation approved a grant of $1,100,000 to the Government of Pakistan for the development of polytechnical institutes. Doug Ensminger, the Ford Foundation Representative for India and Pakistan employed Frederick E. Dobbs, Director of the Wentworth Institute in Boston, Massachusetts, to serve in Pakistan as an advisor on technical education programs. Later, Donald W. Brown and Marshall Arlin, both formerly of Wentworth Institute, joined Dobbs' staff. On April 7, 1952, Dobbs submitted a report to the Ford Foundation entitled "Suggestions and Recommendations Pertaining to the Establishment of a Polytechnic Institute" in Karachi. This report pointed out the importance of well-trained, qualified instructors to the success of the polytechnic institutes and recommended that staff members of these schools be sent to America for training in the techniques and philosophies of technical education.[3]

Ensminger authorized Dobbs to approach Wentworth Institute about setting up a training program for Pakistani teachers. The new director who had replaced Dobbs was not interested in the program, nor did Wentworth have the necessary facilities or capabilities to assume this responsibility. In January of 1953 the Ford Foundation established a separate office for Pakistan; before that time Ensminger had been the Ford Foundation representative for India and Pakistan. Ensminger

retained Dobbs on his personal staff to work with technical education problems in India. Randall T. Klemme then assumed the duties of Ford Foundation representative in Pakistan and retained Brown on his staff. Klemme had just recently served as Vice President of Oklahoma State University and knew of OSU's strong interest in international education and its excellence in all fields of technical education. He suggested that Oklahoma State be asked to conduct the Pakistani teacher education program, and Brown concurred.[4]

Ford Foundation officials contacted the Foreign Operations Administration and secured its support in financing and planning the teacher training program. In December of 1953 Henry P. Adams, Director of the School of Engineering Technology at Oklahoma State University, met in Washington, D. C., with Marshall Arlin and with representatives of the FOA to plan a technical institute training program based on Dobbs' earlier recommendations. The two-fold purpose of the training program was to provide specialized training for Pakistani instructors and administrators of technical institutes, and to develop a curriculum guide for the three polytechnic institutes in Pakistan financed by the Ford Foundation.[5]

The Pakistani technical teacher education program was conducted during the spring and summer semesters of 1954. A director (principal) of one of the polytechnic schools and eight senior instructors then attended a specialized session at Oklahoma State in the spring and summer. Seven shop teachers also attended the William H. Dunwoody Institute at Minneapolis, Minnesota, in the spring, completed a special trade program there, and joined the other Pakistani teachers at OSU for the summer session.

The plan of study for the Pakistani students included five courses for seventeen credit hours in the spring and two courses for four credit hours in the summer. These courses were taught by the faculty and staff of the School of Engineering Technology and the Department of Industrial Arts Education. In addition to Adams, who taught four classes, other instructors were R. J. Douglas, E. M. Barnes, M. J. Konechy, H. K. Brobst, Glenn Smith, and E. P. Chandler. These classes were similar in content to courses offered on a regular basis at the University, but they had been revised in order to be relevant to the special problems of technical institutes in Pakistan. Courses included the Philosophy of Technical Institute Education, Methods of Teaching Technical Institute Education, Observation and Practice Teaching, Instructional Planning, Conference Leading, Organization, Operation, and Administration of Technical Institute Programs, and an Advance Course in the Development of Teaching Content.[5]

The process of developing a curriculum for polytechnic institutes in Pakistan was painstakingly thorough. First, students familiarized themselves with the Dobbs report which outlined technical programs needed in Pakistani polytechnics. Next they read and analyzed all curricula in their specialty fields that had been approved by the Engineering Council for Professional Development (a national professional accrediting agency), examined important literature in the field of technical institute education, and noted current trends in engineering, trade, and industrial education. Finally, they examined job descriptions for graduates of the OSU School of Engineering Technology to understand the types of jobs that graduates of technical institutes would likely be assuming in industry.

After the students had acquired a thorough background in the philosophy and techniques of technical institute education, they met in group sessions with Adams and department heads to design curricula for the specialty areas to be offered in the Pakistani polytechnics. Course sequences were determined on a semester basis for specialized technology courses. To these were added practical courses, drawings and drafting courses, mathematics and science courses, and management and personal development courses. The curricula were checked to ensure that they conformed with principles recommended by the Subcommittees on Technical Institutes for the Engineers' Council for Professional Development. Then students were assigned an advisor (usually a department head) from the School of Engineering Technology to help them outline all courses included in their curriculum. After each student had become thoroughly acquainted with the courses and curriculum in his technology area, he was required to defend his curriculum and the content of all courses to experts who had been invited to OSU. The final stage of preparation was an oral presentation given to Dobbs, who had been invited to OSU to review the progress of the training program. The student had to answer a wide range of questions on curriculum and technical institute education.

The staff of the School of Engineering Technology compiled a summary of the program into a 334-page book entitled "Philosophy and Techniques of Technical Institute Education: A Full-Time Residence Training Program Offered at the Oklahoma A. & M. College, Stillwater, Oklahoma, February 10, 1954 to August 6, 1954." Included in the booklet were the curricula and course outlines for the one-year preparatory program and for the two-year advanced technology programs in the

mechanical, civil, power, radio and electronics, and electrical fields. Also included in the book were a description of the training program, a list of facilities and equipment needed to support the technical programs, the numbers and types of instructors and administrators necessary to operate technical schools, and a list of suggested texts and references. This book was widely read by technical educators and government officials in Pakistan and became known there as "The Black Book."[6]

In 1953, when Klemme assumed his duties in Pakistan, he discovered that there still was uncertainty among government officials, industrial leaders, and educators about which level of technical education should be emphasized and supported most in Pakistan. The Ford Foundation agreed to finance a survey of technical education and industry in Pakistan by a group of American experts. Because Oklahoma State had already been selected to train Pakistani teachers and had some knowledge of the situation in Pakistan, Ford Foundation officials asked OSU to undertake the survey.

The Oklahoma State University survey team that arrived in Pakistan on April 11, 1954, represented three levels of competency in technical education. Edward R. Stapley, Dean of the College of Engineering, was a professional engineer; Adams, Director of the School of Engineering Technology, had a broad background in training engineering technicians; and Paul S. Wheeler, Head of the Industrial Division of Oklahoma State Tech at Okmulgee (a branch school of Oklahoma State University), represented trade school education. They were joined in Pakistan by Brown and Arlin, technical advisors for the Ford Foundation. These five men traveled extensively throughout West and East Pakistan, touring

technical education facilities and industrial sites. Members of the team visited with industrialists, labor leaders, and government officials. After a month of exhaustive travel and intensive research, they concluded their survey, conferring with Ford Foundation officials in Karachi before departing on May 12, 1954.

Members of the survey party summarized their recommendations in a report submitted to the Government of Pakistan and to the Ford Foundation on July 16, 1954. Their report, "A Survey of Technical Education In Pakistan With Particular Reference To The Establishment of Technical Institutes," was important to the industrial development of Pakistan, for many of the recommendations included in this survey were adopted by the Government of Pakistan. These recommendations, the Dobbs report, and the report of the Technical Education Committee in 1950 laid the cornerstone for the development of technical education in Pakistan.[7]

The Stapley report, as it was commonly referred to in honor of the senior member of the survey team, recommended a balanced system of technical education which included support for engineering colleges, technical institutes, and trade schools. However, survey members noted that "industrial leaders indicated that the greatest need is for trained technicians, rather than for engineers or tradesmen." Therefore the Stapley report recommended that "at least three technical institutes be organized and placed in operation at the earliest possible date." The two-fold purpose of these institutes was to "provide trained technicians and junior executives" and to "serve as teacher training centers, to train and upgrade trade and technical teachers." Members of the survey felt that it would be necessary for the new administrators and instructors at the technical schools to study abroad and to participate in

a "well-planned teacher training program, similar to the one presented at the Oklahoma A. & M. College...titled 'The Philosophy and Techniques of Technical Institute Education.'"[8]

The Stapley report pointed out that these three polytechnics should be models, serving as "examples of a distinct type of institution that can...meet the needs of industry by furnishing well-trained technicians ...who can assist with the solutions of any planning, production, maintenance, and distribution problems connected with the full development of industry." Furthermore, these institutes were to train technical education teachers who could "serve as leaders in the planning and development of other technical schools as needed."[9]

To ensure that the technical education program in Pakistan would be properly supervised, the survey party recommended placing "all technical education, including engineering, technical institute, and trade training, under a new Directorate of Technical and Industrial Education, operated under the supervisor of the Director of Public Instruction for the Minister of Education in such province." To promote industrial and technical education in Pakistan and to ensure uniformity of programs in the provinces, the Stapley report suggested the forming of a Central Board of Technical and Industrial Education. This board was to consist of "at least five persons made up of the Directors of Technical and Industrial Education of each province."[10]

The activities of the Oklahoma State survey team in Pakistan and the training program for Pakistani teachers completed at OSU laid the groundwork for a long-range technical assistance project in Pakistan. Government officials in Pakistan had been favorably impressed with the recommendations of the Stapley report and with the curriculum developed

for technical institutes in the "Black Book." They committed themselves to developing a nationwide program of technical education along the lines suggested in the 1950 report of the Technical Education Commission, the Dobbs report, and the Stapley report. In October of 1954 S. M. Sharif wrote Klemme requesting assistance in this ambitious undertaking. Ford Foundation officials met with representatives of the Ministry of Economic affairs and the Ministry of Education in Karachi on February 21, 1955, and "reached a decision on the program." On March 25, 1955, M. A. Hasan wrote Klemme to confirm his government's decision to go ahead with the project.[11]

The scope of the technical assistance program was too broad for the Ford Foundation to handle directly, and officials of that organization and the Government of Pakistan agreed that Oklahoma State was the logical choice to backstop the program. Oklahoma State University agreed to accept the project in Pakistan, and on April 7, 1955, Adams met with officials of the Ford Foundation in New York to work out an agreement. On May 4, 1955, Joseph M. McDaniel, Jr., Secretary of the Ford Foundation, sent letters to the Government of Pakistan and to Oklahoma State University, notifying them of a grant by the Ford Foundation to finance technical education programs in Pakistan. The letter to Adams explained that the "purpose of the grant, and of the proposed contract is to provide assistance in the planning, development, and operation of up to three Technical Institutes in Pakistan." The letter further stipulated that the "Field Director under this project will also serve in the position of an advisor on Technical Education to the Central Ministry of Education of the Government of Pakistan."[12]

The "Memorandum of Agreement," which had been worked out earlier

by Adams and Ford Foundation officials, was signed by President Willham on May 10, 1955, and it became official on May 17, 1955, when McDaniel also signed it. The "Memorandum of Agreement" confirmed that OSU's role in Pakistan would be "to provide technical advice and assistance" to three technical institutes and "to provide a consultant to work in the Ministry of Education as Advisor on Technical Education." The Memorandum stipulated that the American advisors would be divided into an "Oklahoma staff" and an "Overseas staff." The Oklahoma staff would "provide general administrative and technical services at Stillwater, Oklahoma, for the general direction and conduct of the program." The Overseas staff was to consist of a Field Director, and an advisor to the Principal of each institute, and a teacher trainer for each institute.[13]

Adams, who had been designated project director for the Pakistan program by Dean Stapley and President Willham, followed up the "Memorandum of Agreement" with a detailed "Administration Plan for the Oklahoma A. & M. College-Pakistan Technical Education Program." This administrative plan defined the duties and indicated the "relationship of all key personnel engaged in assisting with the project." It also clearly stated the administrative policies and procedures that would govern the Oklahoma State contract program in Pakistan. The "Administration Plan" was signed by Adams and Willham in November of 1955 and by a representative of the Ford Foundation on December 12, 1955. Careful planning of the Pakistan project and precise administrative guidelines helped establish a close working relationship among Oklahoma State representatives, Ford Foundation personnel, and officials of the Government of Pakistan, and helped ensure the success of the technical education program in Pakistan.[14]

The major priority for OSU advisors in Pakistan was to organize and develop three technical institutes, referred to in that country as polytechnical institutes or polytechnics. The Karachi Polytechnic Institute in Karachi, West Pakistan, had already been built and staffed before Oklahoma State had concluded its agreement with the Ford Foundation, but OSU advisors directed the development of the school after the opening of classes on July 4, 1955. In December of 1951 the Ford Foundation authorized a $1,100,000 grant to Pakistan to develop polytechnics at Karachi, Dacca, and a third location, then undetermined. Dobbs' report in April of 1952 included a detailed proposal for developing the technical institute in Karachi, including design and location of the campus, curriculum, and requirements for equipment.[15]

Preliminary planning, including designing layouts and preparing lists of needed equipment for the Karachi school, was subcontracted to the Wentworth Institute, and Oklahoma State trained twelve of the original nineteen instructors assigned to the polytechnic at Karachi. Construction of the school began in August of 1953 and was completed in time to begin classes in July of 1955. Don Brown had supervised the early stages of the construction and development of the institute while he was serving as consultant to the Ford Foundation, but when Oklahoma State assumed responsibility for backstopping the technical education program in Pakistan his employment with the Foundation terminated, as had been agreed earlier. However, Adams asked Brown to stay on as advisor to the principal at the Karachi Polytechnical Institute; Brown then became an employee of Oklahoma State and served in Pakistan and at OSU in different capacities throughout the project, including project director from 1966 to 1971. One hundred and two students enrolled for

the first semester of classes, and in November of 1955 Brown reported that the "Karachi Polytechnic is well established and seems to be recognized as a necessary educational institution, and as such is receiving the 'green light' from all associated government agencies."[16]

From 1957 to 1960 Adams resided in Karachi and assumed the duties of field director for the project. While in Pakistan he observed weaknesses in the original plan for the operation of the technical institute in Karachi, and in 1958 he submitted to the Government of Pakistan a forty-eight page document detailing changes which he felt were necessary to eliminate some of the problems which were retarding the full development of the institution. The plan presented a "detailed report on the total scope of service to be rendered, including the technological diploma programs, full-time certificate programs, part-time trade extension program, and the technical teacher education program." In August of 1959 government officials accepted Adams' "Revised Plan for the Operation and Administration of the Karachi Polytechnic Institute," and the format of that institute remained basically the same through the remainder of the Pakistani project.[17]

The East Bengal Polytechnic Institute at Dacca, East Pakistan, was housed in a facility that had originally been intended for the East Bengal Textile Research Institute. Government officials, eager to begin a second polytechnic institute in 1955, converted an E-shaped, three-story building and three large factory-type buildings into a facility for the institute, and classes began on November 9, 1955, though little equipment or instructional facilities had been installed. That fall 120 students enrolled, and the instructional staff included M. A. Azam, Principal of the school, and four other instructors who had completed

their technical institute training at Oklahoma State the previous summer. Brown helped advise the Principal on a temporary basis through June of 1956 until another advisor could be recruited to assume that responsibility. In December of 1955, H. E. Degler, field director at that time, reported that "despite the many involved problems at the Karachi and Dacca Polytechnics, both schools are showing improvement daily. There is good 'esprit de corps' of staff and students." Degler acknowledged that "well-trained staff and adequately equipped shops and laboratories have been contributing factors, and the guidance of Adviser Brown of Karachi and Dacca has been invaluable." Degler also pointed out that the "success of these two new schools reflects good basic planning."[18]

The planning of the Dacca facility was completed in October of 1955 by Adams, E. M. Barnes, and Maurice Roney; their recommendations were included in "The Report on the Planning and Development of the East Bengal Polytechnic Institute at Dacca, Pakistan." The purpose of this eighty-page document was to "present the graphic layouts of all of the shops and laboratories; and to fully explain the method of planning the instructional facilities, and to emphasize the techniques used in laying out and arranging equipment." Lists of needed equipment to be purchased were included in a separate proposal.[19]

Preparatory work on the planning of the Dacca Polytechnic Institute had begun earlier at the Wentworth Institute. Marshall Arlin, consultant to the Ford Foundation, made recommendations for equipment and layout and instructed technicians at the Wentworth Institute to prepare lists of equipment. These recommendations and lists were turned over to the Oklahoma State staff when the OSU-Ford Foundation agreement was

signed. E. M. Barnes, assistant project director, and the staff of the OSU School of Engineering Technology immediately began revising, updating, and completing class, shop, and laboratory plans. Department heads were responsible for laying out designs and compiling lists of needed equipment in their specialty areas. H. J. Gerber, C. K. Bainum, L. H. Bengtson, E. D. Soderstrom, L. C. Ehlers, W. E. Luck, Barnes, N. D. Griffin, and Charles H. Thompson were department heads who rendered valuable service. Their recommendations were included in the "Report on the Planning and Development of the East Bengal Polytechnic Institute at Dacca, Pakistan."[20]

The establishment and development of the Rawalpindi Polytechnic Institute in the Punjab province of West Pakistan was supervised by Oklahoma State advisors from its inception. The original proposal for the Rawalpindi school was prepared by M. A. Hoque, Deputy Director of Training in the Ministry of Industries; he forwarded the proposal to Adams, asking him to prepare a detailed plan. Adams and Roney submitted a "Preliminary Proposal for Planning and Development of the Rawalpindi Polytechnic Institute" to the Government of Pakistan and the Ford Foundation in February of 1956. This proposal was similar to previous plans for the Karachi and Dacca polytechnics. Adams met with government officials of West Pakistan and with George Gant, Ford Foundation representative in Pakistan, to present his plan for the Rawalpindi Institute. Government officials approved the scheme, and the Ford Foundation provided a grant for instructional facilities and advisory services necessary to establish and develop the school.[21]

The site selected for the Rawalpindi Polytechnic was a seventy-six acre tract five miles northwest of Rawalpindi along the historic Grand

Trunk Road. Rawalpindi lay at the foot of the majestic Himalayan Mountains; a few miles to the northwest was Peshawar near the famous Kyber Pass. Adams was asked to employ an architect to design the new facilities, and in September of 1957 Doxiadis Associates of Athens, Greece, was awarded a contract to lay out the campus and buildings, conforming to the requirements presented in the Oklahoma State plan. On February 8, 1958, high-ranking Pakistani officials, Ford Foundation representatives, and 200 other distinguished guests attended a cornerstone-laying ceremony on the site of the new polytechnic. Construction of the facilty continued through 1959 and 1960.[22]

In November of 1958, the Rawalpindi Polytechnic Institute opened temporary quarters in army barracks adjoining the Army Apprentice School on Assaye Road, Rawalpindi. G. Ahmed, Acting Principal for the polytechnic, and his staff of six instructors began classes with big expectations and little else. Classrooms were equipped with borrowed furniture that was not delivered until the first day of classes, makeshift laboratories were nearly devoid of equipment, and textbooks and instructional material were yet to be delivered. The new school survived the shakey start; badly-needed equipment soon arrived, and Brown worked closely with administrators and faculty in those first months. Construction on the permanent campus progressed rapidly, and in May and June of 1960 equipment was transferred from the army barracks to four workshop buildings which had been readied for occupancy. In September of 1960 classes opened in the new facilities.[23]

As the industrialization of Pakistan expanded, the need for trained technicians increased. In 1957 the Pakistan government began the first of its five-year plans for industrial growth; this plan and

subsequent plans included manpower goals. The first five-year plan indicated a need for 5,000 technical supervisors, in 1962 the second five-year plan called for 7,000 trained technicians, and the third five-year plan in 1967 showed a need for yet more technicians. To meet these growing demands for engineering technicians, the government of Pakistan built more technical institutions, and by 1970 thirty-three institutes were offering diplomas in engineering technology fields.[24]

This proliferation of technical institutes in Pakistan underscored the importance of the three polytechnic institutes that had been created and developed by Oklahoma State University advisors, for they served as models for the new technical institutes in curriculum, operation, design, and philosophy of technical institute education. Another important impact on newer government polytechnics was the technical teacher education programs in the three model schools. Two OSU advisors served in each of the model institutes; one advised the Principal on administration and operation of the school, and the other helped develop and manage the teacher training program. Many administrators and instructors in the government polytechnical institutes were trained in the teacher education programs offered at the model institutes or in scholarship programs abroad administered by Oklahoma State advisors.

The first technical teacher-training program in Pakistan was established at the Karachi Polytechnic Institute. "The Revised Plan for the Operation and Administration of the Karachi Polytechnic Institute," submitted by Adams to the government of Pakistan in 1958, included a proposal for "Technical Teacher Education Programs." Adams contended that the "success of all technical education programs in Pakistan depends on the availability of a continued supply of qualified teachers."

The administration of this program was the duty of a head teacher trainer and other teacher trainers who were assisted by an OSU advisor. Adams established two teacher education programs: in-service training and pre-service training. Pre-service training included a one-year program of thirty-two credit hours, and was "planned to serve those who desire to qualify for and be employed as full-time teachers of industrial arts, vocational and technical subjects in the secondary schools, technical high schools, and polytechnic institutes." The in-service training, designed to "upgrade personnel who are currently employed as technical or shop teachers and who require additional training," consisted of a seventeen-credit-hour curriculum. A technical teaching diploma was awarded to students completing the pre-service training, and a technical teaching certificate was given for successful completion of the in-service program.[25]

H. L. Helton arrived in Karachi in February of 1958 to initiate the teacher education program. Twenty-one students enrolled in teacher-training courses offered at Karachi Polytechnic Institute in the summer of 1958. Seven were staff members who had been selected to teach at the Rawalpindi Polytechnic; others were from the Karachi institute, government technical high schools, and Iranian secondary schools. Teacher-training programs patterned after the one in Karachi were established at the Dacca and Rawalpindi polytechnics. Helton served at Karachi through January of 1960; then in September of 1961 he was re-employed to establish a teacher education program at Rawalpindi, serving there until August of 1963.

All enrollees in the teacher education classes at Rawalpindi in October of 1961 were instructors at that institute, but a full-time

program began in November of 1962 when thirty-five instructors from new government polytechnic institutes enrolled at Rawalpindi. Seventy-seven students attended teacher training classes during the 1961-62 and 1962-63 school years. K. O. Anderson replaced Helton in October of 1963 and served as coordinator of the technical teacher education program through September of 1965. He had help from M. E. Malik, who had been appointed head teacher trainer, and his two part-time assistants. During the four years that OSU advisors served in the teacher education program at Rawalpindi, 258 students enrolled in teacher education courses, and the successful program was continued by Pakistani counterparts.[26]

OSU also established a teacher education program in the Dacca Polytechnic Institute in September of 1961. M. A. Bari was appointed head teacher trainer, and Sam O. Webster served as American advisor to the teacher-training program. Erwin C. Hamm took over advising duties from Webster in August of 1963 and served through August of 1966. Twelve students enrolled in the in-service program in September of 1961, and ten students participated in pre-service training. During the three years Hamm served at Dacca, 114 students enrolled in the one-year diploma program, and 100 industrial art students completed a special program there in cooperation with the Dacca Education Extension Center.

The teacher education program was separated from the Dacca Polytechnic Institute in 1964 and became a part of the Technical Teacher's Training College. The College continued to offer the one-year diploma program that had been administered at the polytechnic and also added a two-year course. Teachers holding a teacher education diploma who completed the two year course were conferred a Bachelor of Education

(Technology) Degree. This bachelor degree program was offered in cooperation with Dacca University, but most of the staff of the teacher's college had been recruited from the staff and graduates of the polytechnic. The technical institute and the college were housed in adjoining facilities and collaborated on many projects.[27]

In the early stages of the Pakistan project Adams felt that development of the model technical institutes was being "seriously hampered because of the inability to recruit and employ sufficient well-qualified staff members to fill the various instructional and administrative positions." Therefore, he recommended that a scholarship incentive program be inaugurated to encourage qualified technicians and engineers to enroll in teacher education programs that had been established in the model polytechnics, and the Ford Foundation authorized use of $15,000 of grant money for these scholarship programs. Scholarship bonuses were also offered to teachers in the technical institutes who enrolled in in-service training programs. Beginning in March of 1960, forty-five scholarships were awarded to students at the Karachi Polytechnic, and forty scholarships were authorized for the 1960-61 school year. Encouraged by the success of the scholarship program at Karachi, OSU advisors established similar programs at Dacca and at Rawalpindi.[28]

Scholarships were also important in financing teacher training abroad for outstanding Pakistani students. The first scholarship program had been the technical teacher education program held at Oklahoma State in the spring and summer of 1954. The sixteen educators who participated in the program returned to Pakistan and rendered valuable service in the polytechnics at Karachi and Dacca. Ford Foundation

officials, impressed with the training received by the Pakistani students at OSU, included money for scholarships abroad in all subsequent grants to the Pakistani project. This money provided scholarships for thirty-three students, and all but three of them received their training at Oklahoma State University.[29]

Another important scholarship program for the training of Pakistani students abroad was financed by a World Bank loan. In the early 1960s the World Bank approved a loan to Pakistan to finance the Indus River Canal Replacement Project, which was an important water irrigation project; the loan also included a request for money to train engineers and technicians. Pakistan used this money to continue development of teacher education programs at the Karachi, Dacca and Rawalpindi polytechnics to turn out more technicians. In August of 1964 the Secretaries of Education for East and West Pakistan entered into an agreement with Oklahoma State University; money was provided to recruit and train twelve American technician specialists to serve in the model polytechnics for two years. They were not to be advisors but rather to work with the instructors and shop teachers, providing badly needed technical expertise at the polytechnics. Twenty-four teacher training counterparts, who would be replacing OSU advisers, studied abroad in specially designed programs for one year.

Three scholarship programs financed study abroad for Pakistani students: the Foreign Operations Administration funded sixteen scholarships, Ford Foundation grants provided for thirty-three scholarships, and the World Bank loan financed twenty-four scholarships. Of the seventy-three students who studied in the United States under these scholarship grants, all but nine attended Oklahoma State University.[30]

Scholarship recipients were selected by Pakistani administrators, but OSU advisors and field directors usually were asked to help choose the students. The field directors then helped the scholarship winners secure I-20 forms, application admission forms, and airline tickets. Because so many of the students attended Oklahoma State, the Ford Foundation endowed a Technical Education Chair to help administer the scholarship program in Stillwater. Lloyd Wiggins occupied the chair beginning in 1968 and assumed responsibility for professional education and advisory services to the Pakistani scholarship students. Wiggins advised students and helped with their enrollment; in conjunction with Maurice Roney, he designed special courses for the Pakistani students that were additions to the regular curriculum for the Masters Degree in Technical Education. From 1956 through 1970 Edward M. Barnes served in Stillwater on a half-time or quarter-time basis as assistant director for the Pakistan project. Barnes, who had earlier served twenty-six months in Pakistan, was responsible for financial administration of the scholarship money. He helped process the payment of scholarship allowances to Pakistani students, including room and board, tuition, books, insurance, and other items.[31]

In addition to providing advisors for the polytechnic institutes, Oklahoma State offered important advisory services to the government of Pakistan. Approximately thirty-eight percent of all advisory services rendered in the Pakistan project--326 man-months--was spent on advising government officials and administrators. Adams felt that "from the long-range point of view these advisory services were probably the most effective services provided by the OSU-Pakistan Technical Education Program." The field director, who coordinated the activities of all

OSU personnel in Pakistan, also served as an advisor in the technical education section of the Central Ministry of Education. H. E. Degler, Adams, A. E. French, and D. A. Dyke occupied this position at different times during the project. These men worked closely with S. M. Sharif, who served in important positions with the provincial government of West Pakistan and the Central Ministry of the national government. The field director "had an opportunity to advise on all schemes dealing with the establishment and development of technical education in both East and West Pakistan."[32]

The second and third Ford Foundation grants to the Pakistan project provided funds for two advisors to the Secretaries of Education for East and West Pakistan. The primary responsibility of each advisor was to help the Secretary establish a Directorate of Education, which was to develop and supervise all technical education programs in the province, including engineering colleges, polytechnic institutes, trade schools, and technical high schools. In addition to these duties, the advisor assisted the Secretary on all other phases of technical education.

These advisors were successful in helping government officials establish a Directorate of Education in each of the two provinces. The Director of Technical Education in each of the two provisional governments was given equal power and prestige with the Director of Public Instruction. The establishment of Directorates was an important development in the administration of technical education in Pakistan and represented achievement of an important goal set in the Stapley Report of 1954. After these Directorates had been established, the Ford Foundation provided funds for advisors to the Directors of Technical Education. H. W. Porter, E. R. Billings, and A. L. Pratt served as

advisors to the Director in West Pakistan; Billings and Pratt also helped plan and implement a chemical technology program at Multan, West Pakistan. E. C. Comstock, R. E. Woolridge, French, and some of the advisors and teacher trainers served as advisors to the Director in East Pakistan.[33]

C. J. Freund served as advisor to the Secretary of Education in West Pakistan from April of 1958 to March of 1960, and during this period he also acted as consultant to an unofficial member of the Commission on National Education. Recommendations of this commission influenced the development of technical education in Pakistan. Sharif, chairman of the commission, created a Reforms Implementation Unit to carry out the recommendations of the commission, and French, field director of the Pakistan project, served as advisor to the technical education section of that unit. The technical education section was responsible for "planning, establishing, and developing the various types of technical education institutions required to meet the ten-year goals set by the Commission on National Education." The "Technical Education Standardization Committee," established through the initiative of French and other members of the Implementation Unit, drew up a "Manual of Standards" for polytechnic institutes. This manual contained a section on the history and philosophy of polytechnic institute education and included sections on curriculum, layout, administration, instruction, and operation of these institutes. French explained that "in preparing this manual, material was drawn from many documents and manuals prepared by the Oklahoma State University-Pakistan Technical Education Project." The Education Reforms Implementation Unit of the National Commission on Education revised the "Manual of Standards" and issued it as a set of recommendations

to serve as a guideline for developing and governing polytechnical institutes.[34]

Another valuable advisory service provided by Oklahoma State in Pakistan was the use of short-term consultants. In 1966 the sixth grant by the Ford Foundation to the Pakistan project provided funds to phase out the program over a four-year period. This grant authorized twenty-four man-months of advisory services to Pakistani officials and educators by short-term consultants. From February to April of 1967, Maurice Roney visited eleven polytechnic institutes in Pakistan and evaluated their teacher education programs. M. R. Lohmann, Dean of the Division of Engineering at Oklahoma State University, traveled to Pakistan on three separate occasions in 1967, 1968, and 1969 to advise government officials and educators in technical fields and to evaluate OSU's advisory services in Pakistan.[35]

Oklahoma State University's technical education project in Pakistan was an outstanding success. During the sixteen years of the project, close cooperation and harmonious working relationships existed among OSU advisors, Ford Foundation representatives, and officials of the Government of Pakistan. Detailed study and careful pre-planning by the government of Pakistan and by OSU consultants helped determine the support and advisory services necessary for developing a technical education program that would meet the needs of Pakistani industry. The "Memorandum of Agreement" and the "Administration Plan," which evolved from this early planning, established administrative guidelines that ensured the efficient, coordinated management of the project.

These agreements stipulated that OSU personnel in Pakistan would serve as advisors, not as technicians. Pakistani administrators and

instructors operated the polytechnic institutes; OSU advisors provided professional expertise and advice. This arrangement made it easier for OSU to phase out of the program and for Pakistani counterparts to assume full responsibility for polytechnics.

A contributing factor to the success of the project was excellent administrative support given OSU personnel in Pakistan. The "Oklahoma staff" of the Pakistani project, residing in Stillwater, provided important administrative and support services, and at the same time were able to continue serving the University in other capacities. Key administrators, department heads, and teaching faculty who could not be spared for overseas duty were still able to work on the project on a part-time basis and make invaluable contributions. The best example was H. P. Adams who concurrently served as Project Director for the Pakistani program and Director of the School of Engineering Technology. Another effective administrative technique employed to involve important OSU personnel in the Pakistani project was the use of short-term consultants. M. R. Lohmann, Dean of the Division of Engineering and nationally recognized educator and professional engineer, was able to lend his experience to the program during his three trips to Pakistan.

The technical education project in Pakistan enhanced Oklahoma State's tradition of excellence in international education. The Pakistani project produced innovative approaches to the development and management of international technical assistance projects which were utilized in future international programs. Also, this project was indirectly responsible for OSU's involvement in two other technical education projects--in Brazil and Thailand--and a Home Economics project in Pakistan. The Pakistan project was a link in the chain which began

with the Ethiopian project. Lohmann, Roney, and Klemme (Ford Foundation Representative and former Vice President at Oklahoma State) had participated in the planning and development of the Ethiopian project and had borrowed on the experiences, good and bad, of that project. To these they added new philosophies and techniques, passing them on to future projects in an unbroken chain.

CHAPTER V

TECHNICAL EDUCATION PROJECTS IN AFRICA AND SOUTH AMERICA

> Here on the International Mall of the Oklahoma State University are displayed the flags of many nations of the world, symbolizing the dedication of the University to the principal of international cooperation....In accordance with the objective of Point Four this mall is dedicated to a world better tomorrow than today.
>
> --Inscription on the dedicatory marker on the International Mall at Oklahoma State University

American tourists who had visited Brazil fondly recalled warm winter months, the idyllic beauty of sparkling blue waters washing on sandy beaches, magnificent harbors overlooking the Atlantic Ocean, and the unforgettable Mardi Gras atmosphere of the annual Carnival. Many Americans with only a geography book knowledge of Brazil wondered at the mysteries of the Amazon River basin with its inpenetrable forests, strange plants, deadly snakes, and ferocious man-eating fish. Brazil was an exotic, sunny, sleepy land that had slumbered for more than a century, but in the mid-1960s it was an awakening industrial giant. Brazil was the largest country in South America and fifth largest country in the world, containing more than 3,286,488 square miles with a population of some 100,000,000. And the Ford Foundation was helping that colossus of the south achieve its economic potential.

The Ford Foundation had developed a close working relationship with

Oklahoma State on the technical education project in Pakistan, and in 1964 that organization asked H. P. Adams, Director of the School of Engineering Technology at Oklahoma State University, to head a survey team in Brazil to analyze technical training programs and to recommend technical education programs necessary for the continued industrial and economic growth of that country. An earlier survey had indicated a critical shortage of trained technicians in Brazil.[1]

Adams, A. E. French, and Ernest Simon, members of the survey party, agreed that there was a shortage of engineering technicians in Brazil; however, they did find an excellent system of government financed vocational-technical high schools which were producing tradesmen and skilled laborers. Members of the survey group recommended that three-year, post high school programs be established at these technical high schools to train engineering technicians. The cost of initiating the new program could be minimized by utilizing laboratories and classrooms of the existing facilities, but faculty and curriculum for technician-training programs were to be separate from the high school.[2]

Brazilian officials generally agreed with the recommendations of the OSU consultants, and in January of 1965 the Director of Superior Education asked the Ford Foundation to provide a consultant to help them design curricula for the new technical programs. The Ford Foundation requested Adams to provide this advisory service to the government of Brazil, and in February of 1965 he submitted curricula guides for ten engineering technologies to the Planning Commission on Engineering Education. Then on March 29 Adams submitted a report to the Ministry of Education and Culture, outlining the basic academic format and curricula for a model three-year program to be established at one of the Federal

technical high schools.[3]

The Ministry of Education approved the Federal Technical School at Rio de Janeiro for the first experimental program. The government selected this school because it was the largest Federal technical high school in Brazil and because it had the best facilities. Celso Suckow da Fonseca, Director of the school, submitted a grant proposal to the Ford Foundation, requesting $800,000 for a "Center for the Development of Technical Education in Brazil." This proposal, largely based on the report submitted earlier by Adams, was approved by the Ford Foundation on August 17, 1965. The purpose of the grant was "to develop a center to serve as a model institute for extending the basic philosophy, curricula...[and] to assist in promoting and developing similar programs in other areas of Brazil."[4] Specific objectives of the new program were:

1. To provide high level technicians for industry;
2. To provide an opportunity for young people from all economic backgrounds to pursue technical education without facing the long and expensive five-year course in university engineering;
3. To serve as a model for other schools in Brazil, demonstrating the philosophy, curricula and operation of high level technician education.
4. To prepare teachers not only for other schools for engineering technicians, but also for technical secondary schools;
5. To develop and disseminate textbooks and other teaching materials for technical education, secondary and post-secondary.[5]

Fonseca asked in his grant proposal that Oklahoma State University be given responsibility for "laying out laboratories and workshops, advising on equipment to be purchased...and advising Brazilian professors engaged in the teaching and operating of the programs and also those students at Stillwater, Oklahoma." To pay for the cost of these services, the proposal "authorized the Ford Foundation to pay $428,500

directly to Oklahoma State University."[6]

After his survey and consultancy work, Adams returned to Stillwater to initiate plans for the Brazilian project. He resigned as director of the Pakistani project, a position he had held since 1955. Adams established administrative guidelines and support services from the School of Engineering Technology and then returned to Brazil in December of 1965. He worked with Brazilian administrators at the Federal Technical School in Rio de Janeiro to establish guidelines for administering the new engineering technician programs. (In Brazil engineering technicians were called "operational engineers.") Mario Celso Suarez, Coordinator of the operational engineering programs, reported to Celso Suckow da Fonseca, Director of the Technical School, and his administrative assistant, Edmar Goncalves. Adams advised and worked closely with these men and with department heads and instructors.

Lloyd Briggs arrived from Oklahoma State in February of 1966 to help set up the equipment, lay out the classrooms and laboratories, and work with the department heads and instructors in order to get ready for the opening of classes in March. Fonseca's original proposal had called for the establishing of five three-year technology programs: electrical, electronics, mechanical, refrigeration and air conditioning, and drafting and design, but the last two were not initially incorporated into the program. Briggs' specialty was in electrical technology and electronics, and he was helpful in developing these areas of the program. When Adams reached mandatory retirement age from Oklahoma State University in June of 1967, he was hired directly by the Ford Foundation as "Project Specialist" and continued serving in Brazil. Briggs assumed the duties of Senior Advisor until he completed his tour

in July of 1968.[7]

Perry R. McNeill from Oklahoma State University replaced Briggs as Senior Advisor of the Pakistani project and served until June of 1970. McNeill contributed greatly to the overall progress of the project, in addition to his specialty areas of electrical technology and electronics. William J. Dow was hired in July of 1967 to lend expertise in mechanical technology to the OSU advisory staff; Doe had a B. S. degree in mechanical engineering and had several years of work experience. He supervised the development of the metallurgy, metallography, heat treating, and materials testing laboratories in addition to helping develop curriculum in mechanical technology.[8]

Faculty of the School of Engineering Technology gave important and valuable support to the Brazilian project, and Adams felt that "considering the amount of money spent, this is probably the most effective service provided by this project." These faculty members prepared laboratory manuals and operating manuals for highly specialized equipment and compiled complete reports for each of the fifteen instructional departments of the operational engineering program. These reports included an explanatory introduction, curriculum guides, course descriptions, layouts for laboratories, design of laboratory equipment and furniture, and lists of instruments and equipment. These reports were reviewed carefully by OSU advisors in Brazil to see that they met the special needs of the Brazilian program, especially the curricula and lists of equipment. Principal authors of these manuals and reports were Norman Abell, John Bayless, Donald Brown, Ralph Brumfield, Glen Bryant, Earl Cameron, Richard Castellucis, Ed Darby, L. C. Ehlers, R. B. Faber, John Harvey, Perry McNeill, A. C. O'Bryan, C. P. Prejean, John Scheihing,

C. H. Thompson, and Dewey Yeager.[9]

OSU advisors in Brazil had these manuals and reports translated into Portuguese and typed on multilith masters; several copies of each were run off and distributed to instructors and students. McNeill proposed that these copies "be printed and bound into a booklet with a copy of the course outline and sold to the students in the school bookstore." In his final report McNeill explained that Suarez, coordinator of the technology programs at the Federal Technical School, "stated on many occasions that the preparation of this course material has been one of the most important contributions of the Oklahoma group," and McNeill concluded that this material provided "ready made courses for this program in its initial development stages. Without this material each of the professors hired from so many different sources would have been teaching many different philosophies in the program."[10]

The original Ford Foundation grant provided $72,000 to finance nine scholarships for Brazilian students; these students were to spend two years in the United States working on degrees in Technical Education and then return to Brazil to teach in the Federal Technical School in Rio de Janeiro. Brazilian administrators initially were slow in recruiting and recommending qualified students for teacher training, and therefore only seven students received scholarship training in the United States. Adams and the OSU advisors arranged "study tours" to supplement the scholarship program. These two-month tours to selected technical institutes in Canada and the United States were designed to give administrators and department heads in the operational engineering program a better understanding of the philosophy and techniques of technical institute education. Eight administrators joined these tours,

including Edmar Goncalves, Mario Celso Suarez, Nazir Fragoso, Regina Castro, Orlando de Maria, Jayme Maschkvich, and Antonio Kubrusly. Adams felt that the "study tours have proved to be the most effective part of the scholarship program." One unfortunate aspect of the tours was the death of Celso Suckow da Fonseca, Director of the Technical School, in Oklahoma on one of the tours. The National Technical School in Rio de Janeiro was renamed Federal Technical School "Celso Suckow da Fonseca" in his honor.[11]

During the five years of the OSU-Ford Foundation project in Brazil, OSU advisors and Brazilian educators developed a successful model for other operational engineering centers. During this period 431 students enrolled in engineering technology programs, and 323 graduated. Operational engineering was legally recognized by decrees and enactments of Federal government agencies, and it received professional accreditation and recognition from the Federal Council of Engineering. However, much remained to be accomplished. A critical shortage of full-time teachers continued to plague the development of the operational engineering program. Scholarship students returning from the United States were working only part-time or were accepting better paying jobs in industry, and the teacher training program at the school which had been included in the original grant proposal had not been implemented.[12]

On April 18, 1969, a decree of the Federal government authorized the establishment of operational engineering centers at other Federal Technical Schools. On August 1 the Minister of Education and Culture appointed a special commission to work with the Ford Foundation to establish operational engineering programs in the Federal Technical Schools at Sao Paulo, Belo Horizonte, Curitiba, Salvador, and Recife.

Members of the Working Group on Operational Engineering included Goncalves, Suarez, Jose R. Ortigao, Helio A. Avellar, and Adelaide; Adams and McNeill were asked by that commission to join the Working Group. The Ford Foundation granted $74,000 to that group for consulting services, salaries, and fellowships.[13]

From November of 1969 to April of 1970 the Working Group visited the five technical schools which had been selected to initiate operational engineering programs, helping them draw up preliminary plans. After determining the needs of the five schools, the Working Group met with representatives of the World Bank and the United States Agency for International Development to discuss financing of the new programs. In addition to helping with the visits, Adams and McNeill provided other important services for the Working Group. They submitted ten reports on topics dealing with technical education and teacher training to the Working Group which were discussed, modified, and then compiled into a 110-page document entitled "Policies for Offering Operational Engineering Programs in the Federal Technical Schools of Brazil." Adams and McNeill hoped that this document, which was endorsed by the Working Group, would "be an overall standard to guide these new schools in this early development phase." This document also was important because it formed the basis of grant and loan proposals by the government of Brazil to the World Bank and USAID.[14]

To ensure uniformity in the quality and development of the five new operational engineering programs, the Working Group designated the Federal Technical School at Rio de Janeiro as the Operational Engineering Center for all the schools. In addition to its administrative responsibilities, the Center was to conduct a teacher training program.

The Center and the teacher education program were especially important, for the World Bank had indicated that the establishment of these were primary considerations in the granting of a loan to develop technical education programs at the five other schools. Adams completed his consulting assignment in January of 1971, and in his report to the Ford Foundation, he recommended that the "services of an experienced teacher educator...be provided to serve as an advisor to assist with conducting the [teacher training] program offered at the Center." The OSU-Ford Foundation agreement had terminated in June of 1970, but McNeill was asked to return to Brazil as a special consultant "to assist with the establishment of the 'Curso de Didatica' [degree program] in the new Teacher Training Center." He served in Brazil from May 24 to August 19, 1971.[16]

In February of 1971 World Bank approved the long-awaited loan to Brazil. The loan provided $8,320,000 for the development of agricultural and technical schools in Brazil; $480,200 of this money was allocated for advisory services to the Operational Engineering Center and the five new operational engineering programs at the Technical Schools. The loan agreement stipulated that for two years an advisor would be provided for each of the five new programs, and one Chief Advisor would work closely with the administrators of the loan program, help coordinate the activities of all operational engineering programs, and ensure the proper development of the teacher training program.[17]

An administrative unit under the Ministry of Education and Culture, referred to as PRODEM, was officially responsible for administering the loan. Most of the executives appointed to this unit had also been members of the Working Group--Goncalves, Suarez, Ortiagao, and others.

When McNeill was in Brazil in the summer of 1971, he visited with these individuals about the possibility of OSU providing technical assistance under the provisions of the loan. Goncalves, Director of PRODEM, seemed agreeable, and McNeill advised Donald Brown, Director of the School of Engineering Technology and Melvin R. Lohmann, Dean of the Division of Engineering, Technology, and Architecture. These administrators discussed the proposed project with Robert B. Kamm, President of Oklahoma State University, and all seemed favorable to undertaking such a project in Brazil.[18]

In the summer of 1972 officials of PRODEM contacted OSU, seeking assistance in developing the new operational engineering programs in Brazil; however, the number of advisors needed had been reduced from six, suggested in the World Bank loan, to only one. Officials of PRODEM had decided to employ returning fellowship students who had earned Master's degrees in Technical Education as coordinators of the five new operational engineering programs, but they asked OSU to provide an advisor to assist PRODEM and to work with the five coordinators. PRODEM also asked OSU to train forty Brazilian students in the Master's degree program in Technical Education. Representatives of PRODEM traveled to Stillwater in August of 1972 to discuss the scholarship program, help select an advisor, and to draw up plans for an agreement. OSU administrators meeting with these representatives were President Kamm, Bill Abbott, Don Phillips, Donald Robinson, Norman Durham, Lloyd Briggs, H. P. Adams, Hugh Rouk, Perry McNeill, and Ed Darby.[19]

An agreement between Oklahoma State University and PRODEM, representing the Government of Brazil, was signed on November 1, 1972 and continued until December 31, 1975. Because the emphasis of this new project

was on teacher education, responsibility for directing the program was given to the Department of Technical Education and the College of Education and to Lloyd Briggs and Don Phillips. From 1973 to 1975 forty Brazilian students enrolled in the standard two-year Master's degree program offered through the Department of Technical Education and the Graduate College. However, these students received special training in an English Language Institute that was provided under the terms of the agreement. The first eleven students arrived on campus in January of 1973; the others came in August of that year and in January of 1974.[20]

Barry Ballard served eighteen months as an advisor in Brazil, beginning in January of 1973. He was followed in that position by Paul Robertson. Both were "responsible for advising the Staff of PRODEM and the administrators of the five (5) operational engineering institutions." In many ways their duties were similar to those of Adams, Briggs, McNeill, and others before them. They advised Brazilians on "curriculum development, course planning, financial planning, establishing policies and procedures..., determining criteria for faculty selection and training, [and] developing a teacher education program."[21]

The College of Engineering at Oklahoma State University also participated in two international technical assistance programs through its membership in the Mid-America State Universities Association (MASUA). From 1964 to 1968 the engineering colleges of these universities, acting as a consortium, provided assistance to the National Engineering University at Lima, Peru, and to the University of Assuit at Assuit, Egypt. On March 26, 1964, the MASUA consortium, with Iowa State University serving as prime contractor, entered into an agreement with the Ford Foundation to help develop educational programs at the

National Engineering University. The Ford Foundation grant funded eleven fellowships for faculty members of the National Engineering University to obtain graduate engineering degrees in the United States. Also, five visiting professors from MASUA schools taught at the University and advised administrators on curriculum development and teaching techniques. A supplement to the original grant provided money to purchase laboratory and instructional equipment and books for the university library. Oklahoma State University rendered valuable service to this project, working with the other MASUA schools to develop the basic philosophy and format of the program. And in the summers of 1966 and 1967, Melvin R. Lohmann, Dean of the Division of Engineering, Technology, and Architecture, served in Peru as a consultant to the National Engineering University.[22]

On April 1, 1964, the engineering colleges of MASUA, acting through Kansas State University, signed an agreement with the United States Agency for International Development (USAID) to "render technical advice and assistance to the government of the United Arab Republic." Then on July 15, 1964, OSU signed an agreement with Kansas State University to provide assistance in that Egyptian project. (This contract was superseded by another similar agreement on May 25, 1967.) OSU agreed to participate in the Assuit University Advisory Council, to train Egyptian students at OSU, and to provide an engineering professor to teach at the University of Assuit in Assuit, Egypt.[23]

Charles F. Cameron, Professor of Electrical Engineering at Oklahoma State, served in Egypt from August of 1965 to June of 1967, teaching electrical engineering and advising instructors and administrators at the University. He and his wife lived in an apartment complex near the

university and visited regularly with the families of the eight other MASUA professors teaching at the University. These professors and their families were unexpectedly relieved of their responsibilities at the University of Assuit and returned to the United States due to the events surrounding the "Six-Day War" between the Arab countries and Israel in May and June of 1967.[24]

Cameron vividly recalled the bizarre events of those hectic days. On May 26 the American families were told to go to Cairo to evacuate their wives and dependents to Athens, Greece, but the professors had to return to Assuit because administrators at the university felt that it was "absolutely necessary to grade final examination papers." Cameron hurriedly graded papers between attempts to "pack air freight and sea freight." Then on June 3 a blackout of Egyptian cities began, and Cameron was told not to leave his apartment. He finished packing with only "one candle in the apartment," and on June 6 the American instructors departed for Cairo with a military escort. After arriving at the American Embassy, they learned that the United Arab Republic had severed diplomatic relations with the United States, and during the next three days they endured blackouts and bomb scares in Cairo and Alexandria, finally departing Alexandria on June 10 for Athens to join their families.[25]

Faculty members of the College of Engineering at Oklahoma State University participated in two other projects in Egypt. Through the 1960s and early 1970s the College of Engineering received national recognition for research and studies on non-conventional energy sources. These studies included research on solar energy, liquefaction of coal, a hydrogen-burning engine, conversion of wind energy into electrical

energy, and other projects. In the early 1970s the Arabic Republic of Egypt, also conducting research on alternate sources of energy, learned about Oklahoma State's activities.[26]

In 1971 the Egyptian government invited William L. Hughes, Head of the School of Electrical Engineering, to serve in Egypt as a consultant to the Ministry of Electricity. From 1971 to 1973 Hughes made three trips to Egypt "meeting with their research council, discussing with them our [OSU's] ideas on how alternate energy sources might be pursued," and "assisting them in planning the expansion of their conventional electrical system." The Ministry of Electricity assigned Hughes a car, driver, and liaison engineer to help facilitate his work those services, travel expenses and personal expenses were paid by the Egyptian government out of United States' counterpart funds. While in Egypt, Hughes developed many professional and personal friendships which he described as being "very smooth, very cordial, and very friendly."[27]

An Oklahoma State project in Egypt evolved from Hughes' work in Egypt and from his research at OSU. For several years Hughes and his associates in the School of Electrical Engineering had conducted extensive research on the conversion of wind energy into electrical energy and on related technological developments including wind turbines, electrolysis storage systems, fuel cell storage systems, field modulated generator systems, and rectifier systems. Egyptian officials were especially interested in the potential of wind energy for generating electricity, and in 1973 Hughes and officials of the Ministry of Electricity submitted a proposal to the National Science Foundation to study wind energy resources in Egypt. NSF funded the project in 1973,

but the "October War" between Arabic countries and Israel delayed the beginning of the project until 1974.[28]

In March of 1974 M. Kamal Hamed, Undersecretary of State representing the Ministry of Electricity in Egypt, visited Oklahoma State for two weeks. Hamed and OSU faculty and staff members worked out a revised set of objectives for the project and submitted them to the National Science Foundation. NSF accepted the new proposal and funded it at the original amount specified in 1973. OSU tested wind turbines and developed a prototype for a wind-generated electrical system. This work had begun earlier, before the Egyptian project, under a separate NSF grant, and in July of 1975 OSU reported its findings to the National Science Foundation. Results of these tests indicated that a wind turbine developed by the American Wind Turbine Company of Lyman, Nebraska, would be best suited for the Egyptian project.[29]

In February of 1975 Hughes, H. Jack Allison, and R. G. Ramakumar spent two weeks in Egypt helping establish a solid state power switching technology group there. These men prepared three sets of textual material for a series of lectures on power solid state switching and related subjects which they donated to the Engineering Society Library, University of Cairo, and Ministry of Electricity. They also presented solid state devices to the University of Cairo for use in experimental activities. Hughes, Allison, and Ramakumar presented a series of extensive lectures to engineers and technicians in the Ministry of Electricity and in industry and to faculty and students of two engineering universities in Cairo.[30]

Under the terms of the NSF grant, the Egyptian government had agreed to conduct extensive surveys of wind energy and of industry

currently available to produce component parts for the wind energy system. Both reports were encouraging for the continuation of the program, and Hughes commented that "very significant amounts of energy are available on the North African Mediterranean coast and on the Red Sea coast." Egypt did not publish a list of available industries for a "simple but sensitive reason. Most of the industry available for manufacturers of wind turbines, generators, and associated equipment is associated with military factories." However, Hughes was invited to tour these facilities, and he concluded that Egypt's industrial capabilities were "quite complete." Beginning in September of 1974 two engineers from Egypt studied at OSU to get hands-on experience with the wind turbine and generator systems developed at OSU. The training of these Egyptian engineers completed the objectives of the NSF grant and prepared the way for the second phase in the development of wind energy resources in Egypt.[31]

In May of 1975 Hughes was invited to Egypt to address the annual Ministry of Electricity Energy Conference; during this visit Hughes and officials in the Ministry drew up plans for the second phase of the wind energy program. Later that year this proposal was forwarded to the National Science Foundation and to the United States Agency for International Development, calling for the establishing of five continuous recording anemometer stations in Egypt--three along the Mediterranean Sea and two on the coast of the Red Sea. These stations would help determine sites for wind turbines. The proposal also called for building a wind turbine and field modulated generator system in Egypt similar to the one developed at the "windmill station" in Stillwater, thus giving Egyptian scientists and technicians experience in

operating such a facility. This second phase was intended only as a step toward the final phase of building operational wind-generated electrical units at selected sites in Egypt to tie into the hydro-electric system in that country. These futuristic plans presented exciting expectations for the scientists involved as well as practical benefit for the people of Egypt.[32]

From 1972 to 1975 Oklahoma State University and Egypt collaborated on another important scientific project. M. Abdel-Hady, Professor of Civil Engineering at OSU, and a team of approximately sixty Egyptian scientists, engineers, and technicians conducted extensive studies and surveys of geological, agricultural, and engineering problems in Egypt, employing sophisticated remote sensing equipment. This research team studied selected areas of Egypt by analyzing remote sensing images obtained from the United States' Earth Resources Technology Satellite (ERTS-1) launched in 1972. Project researchers supplemented this information with data collected from remote sensing equipment installed on two single-engine airplanes and from "ground truth" information collected at the sites. Aerial surveying included the use of magnetic, radiometric, thermal infrared, and multispectral photography.

Abdel-Hady, Principal Investigator for the Egyptian project, was a native of Egypt and received his undergraduate training at Ein Sham University in Cairo, Egypt. Afterwards he studied and worked in the United States in Civil Engineering, and at Oklahoma State he received national and international recognition in geological engineering and especially in advanced techniques and application of remote sensing. Abdel-Hady foresaw the economic potential that the ERTS program would have for Egypt and contacted friends and officials in that country to

secure their cooperation and support in initiating a survey of natural resources in Egypt utilizing remote sensing techniques. The National Science Foundation (NSF) agreed to help fund the project for three years beginning in 1972.[33]

Nearly all scientists and technicians involved in the project were representatives of the government and industry. These workshops emphasized "basic principles of remote-sensing techniques and interpretations of different sensor records in various applications." For use in these workshops and later training, Abdel-Hady compiled a two-volume review of all important literature on remote sensing technology in geology, agriculture, and earth sciences. Some of the key participants in the program traveled to England, Canada, and the United States for further training. After initial training had been completed, Abdel-Hady divided the researchers into four teams; each team was assigned specific projects, and each team included specialists in the fields of agriculture, geology, geophysics, soil science, photogrammetry, plant pathology, engineering, and physics.[34]

During the next three years these teams of specialists, utilizing remote sensing equipment and satellite images, surveyed large areas of Egypt, collecting important data on ground and surface water, mineral deposits, and geological structures. Areas carefully surveyed and studied were the Aswan Dam Reservoir, Eastern Delta Region of the Nile River, Sinai Peninsula, desert area of the East Qatrani, Red Sea, and Suez Canal and waterway. Surveys using remote sensing equipment were also important in estimating crop yields and in early detection of crop diseases. In 1975 Abdel-Hady and Egyptian officials sought an extension of National Science Foundation funding to continue the remote

sensing project and to extent it to include study of regional problems involving Egypt and adjoining countries Libya and Sudan. Project leaders envisioned the eventual development of a regional remote sensing center in Egypt to help other developing countries in Africa and the Middle East.[35]

An important outgrowth of the remote sensing surveys in Egypt was a growing awareness by project officials of the regional and international implications of their work. In September of 1974 the United Nations' Committee on the Peaceful Uses of Outer Space and the Food and Agricultural Organization sponsored a regional seminar in Cairo, Egypt, on "Remote Sensing of Earth Resources and Environment." This seminar was conceived, planned, and organized by members of the remote sensing project in cooperation with the Arab Republic of Egypt, the National Science Foundation, and Oklahoma State University. The purpose of the seminar was "to discuss, as a training programme, the basic principles and applications of remote sensing techniques from aircraft and from satellites for surveying the natural resources of the earth." Abdel-Hady was elected Chairman of the seminar, and President Robert B. Kamm, officially representing Oklahoma State University, addressed the opening session. President Kamm and Abdel-Hady also co-chaired the first two technical meetings of the seminar. Representing the United States was Herman Eilts, Ambassador to Egypt.[36]

The Division of Engineering, Technology, and Architecture contributed significantly to OSU's growing heritage of international service. Faculty and administrators in this Division provided technical know-how and training to six emerging countries, struggling to develop their industrial capabilities. Technical assistance rendered was

sometimes only short-term consulting, and at other times involved planning, leadership, and participation over a period of many years. The best example of the latter was the Pakistan project, requiring 854 man-months of service during a sixteen-year period.

International projects organized by the Division of Engineering, Technology, and Architecture served as models for other international programs at the University. Administration and implementation of these projects was efficient and effective; all were notable for the harmonious relationships established between OSU advisors and government officials and educators in the host country. And in the projects in Pakistan and Brazil, close ties were established and maintained with officials of the Ford Foundation that continued to the present.

Much of the success of OSU's technical education projects was due to the effective leadership of Melvin R. Lohmann, Dean of the Division of Engineering, Technology, and Architecture, and to Henry P. Adams, Emeritus Professor and former Director of the School of Engineering Technology. Adams surveyed industrial problems and technical education programs in Pakistan, Brazil, and, after his mandatory retirement from OSU, he served directly with the Ford Foundation. During his twenty-two years as Director at OSU, Adams received much national and international recognition and many professional honors, including the American Society of Engineering Education's James H. McGraw Award in 1968 as the outstanding technical institute educator in the United States.[37]

Lohmann traveled in sixty-five countries around the world and served abroad as a consultant to OSU technical assistance projects in Ethiopia, Egypt, Pakistan, and Peru. As Dean, he provided encouragement, professional guidance, and valuable administrative support to

international projects sponsored by administrative units under his Division. Lohmann's contributions were valuable because of his outstanding administrative ability and his professional experience. He came to Oklahoma State in 1941 as Assistant Professor of Industrial Engineering, moved through the professional ranks to Vice Dean of the College of Engineering in 1948 and became Dean in 1955. Like Adams before him, Lohmann received the James H. McGraw Award as the outstanding engineering educator in the United States; he served as President of the Engineers' Council for Professional Development and the American Society for Engineering Education, Vice President of the American Institute of Industrial Engineers, and Chairman and Executive Committee member of the Engineering Division of the National Association of State Universities and Land Grant Colleges. This high standard of leadership passed on by Lohmann, Adams, and others left a valuable legacy for other international educators to follow.[38]

CHAPTER VI

THE "INTERCULTURAL-INTERNATIONAL DIMENSION": HOME ECONOMICS PROJECTS IN PAKISTAN AND LATIN AMERICA

> Oklahoma State University has the obligation of clarifying its role in international and world affairs with respect to instruction about international relations, programs of research bearing on this level, utilization of campus life and of the interchange of students and scholars as educative experience for developing a world outlook.
>
> --Lela O'Toole, Dean, Division of Home Economics, Oklahoma State University, 1951-1975

Under the leadership of Dean Lela O'Toole, the Division of Home Economics at Oklahoma State University emerged as a leader in international education among home economics colleges in the United States. The Division of Home Economics was the first home economics unit of an American college to affiliate with the International Federation of Home Economics (IFHE), which has its headquarters in Paris, France. In 1963 Oklahoma State hosted the first work conference on international education sponsored by the home economics division of the National Association of State Universities and Land Grant Colleges. Faculty and staff members of the Division of Home Economics served in Pakistan from 1957 to 1972, funded by grants from the Ford Foundation totaling more than $3,000,000. And from 1961 to 1973 OSU home economics educators visited and served as consultants in Mexico, Columbia, Peru, Ecuador, Costa

Rica, and Panama.

Oklahoma State University's international leadership in home economics was a tribute to the influence of Lela O'Toole during the quarter-century that she served as Dean of the Division of Home Economics. O'Toole, a native Oklahoman, graduated from high school in Thomas, Oklahoma, where she was an All-American basketball player. She received two bachelor's degrees and a Master's degree in home economics at Oklahoma State and in 1949 completed a doctor's degree in higher education administration at Ohio State University. O'Toole served as State Supervisor of Vocational Home Economics in Oklahoma from 1945 to 1947, and in 1950 she was a home economics program specialist for the central region in the United States Office of Education, Washington, D.C.

O'Toole was best known in her profession for her international service. After serving as Vice President and President of the American Home Economics Association (AHEA), she was elected Chairman of the AHEA International Committee and was Chief of the United States Delegation at the IFHE Executive Council meetings from 1965 to 1972; she served as Senior Vice President of IFHE from 1968 to 1972. O'Toole first became interested in international education while she was completing her doctorate at Ohio State University. She worked closely with many international students, serving as an advisor to undergraduate students, and developed personal relationships with international graduate students. O'Toole's interest in international education was heightened by her association with President Henry G. Bennett when she returned to Stillwater. As an administrator at OSU she shared Bennett's interest in international education, but she was more deeply influenced by the

strong religious convictions and Christian service espoused by Bennett, who was her Sunday School teacher.[1]

From O'Toole's professional experiences and association with Bennett emerged a philosophy of international service which she established as an integral part of the home economics program at Oklahoma State University. She referred to this program as the "Intercultural-International Dimension of Home Economics in Higher Education." O'Toole observed that "Universities have a heavy stake in the conduct of international and world affairs" and that the "material prosperity and even the survival of free institutions of higher education are dependent upon the successful handling of international questions."[2]

The first opportunity for international service by the Division of Home Economics came in 1956 when the Ford Foundation asked Oklahoma State to assist in Pakistan with a nationwide program of home economics education. After achieving independence in 1947, the newly created state of Pakistan struggled to ensure its economic autonomy. Studies initiated by the government of Pakistan indicated an urgent need for educational programs to support the economic development of the nation; the education of women was not overlooked. In 1952 Pakistan requested assistance from the Ford Foundation to help the All Pakistan Women's Association found two home economics colleges in Karachi and Lahore. The Ford Foundation provided a grant to establish the two colleges and hired American consultants to advise the College of Home Economics at Karachi; the United States Agency for International Development funded a project with Washington State University to help the College of Home and Social Science in Lahore.[3]

Through the 1950's the government of Pakistan continued to place

even greater emphasis on the role of women, especially on their education. The Commission of National Education concluded, "Unless a mother is educated, there will never be an educated home or an educated community." This commission pointed out the need for more women teachers in Pakistan, especially at the primary and secondary levels, and recommended that the study of home economics be made compulsory in secondary schools. Government officials knew that to achieve these ambitious educational goals for women would require an increase in the number of home economics colleges, and they worked to establish a coordinated, nationwide system of home economics education in Pakistan. Leaders in the Pakistani government asked George Gant, Principal Representative of the Ford Foundation in Pakistan, for assistance in initiating a study to determine the long-range needs of home economics in Pakistan.[4]

In 1956 the Ford Foundation requested that Oklahoma State University "provide a team of specialists in home economics to collaborate with representatives in Pakistan in (1) preparing a plan for the establishment of a home economics college in East Pakistan; and (2) preparing plans for the future programs of the colleges of home economics at Karachi and Lahore." Lela O'Toole agreed to head a survey team, which included June Cozine, Head of the Home Economics Education Department at OSU, and Muriel Brown, Home Economist for the United States Agency for International Development and formerly with the United States Children's Bureau.[5]

O'Toole and Cozine left Stillwater on December 23, 1956, meeting Brown in Rome, Italy, on December 29. In Rome they conferred with officials of the Food and Agriculture Organization of the United Nations and received briefings about the Middle East and the Pakistan-India

subcontinent. Afterwards they visited home economics projects in Ankara and Istanbul, Turkey, and Bagdad, Iraq, before arriving in Karachi, Pakistan, on January 13, 1957. In the next ten weeks members of the survey party visited all sections of East and West Pakistan, gathering as much information as possible on family life, the status of women, educational opportunities for women, nutrition and health problems, and other related areas in home economics.

After extensive travel and exhaustive study, O'Toole, Cozine, and Brown met with government officials, representatives of the Ford Foundation, and outstanding women educators and leaders to devise plans for the establishment of a college of home economics in Dacca and for the further development of the home economics colleges at Karachi and Lahore. From these conferences evolved elaborate five-year schemes for home economics education in Pakistan.[6]

Impressed with the leadership and expertise of the OSU survey team, Ford Foundation administrators offered Oklahoma State University a contract in 1958 to help implement the five-year schemes in Pakistan. In its agreement with the Ford Foundation, OSU agreed to "Assist with the further development of colleges of home economics at Karachi and at Lahore in West Pakistan" and to "Assist with the establishment of a new college of home economics in Dacca in East Pakistan."[7]

The faculty and staff of the Division of Home Economics at Oklahoma State provided administrative support for the Pakistani project, and it administered the fellowship trainee program for Pakistani students. Co-directors were responsible for overall supervision of the project; Lela O'Toole served continuously as one of the directors during the fourteen years of the project. June Cozine, Elizabeth Hillier, Florence

McKinney, Martha Merrifield, and Eva Wright served as the other director at various times during the project. Home economics faculty members served on committees assisting the Pakistani project, including an advisory committee, a trainee committee, a trainee advisory group, and a business management coordination committee.[8]

The Co-directors delegated authority to the Chief Advisor serving in Pakistan to supervise the home economics programs. The Chief Advisor was responsible for carrying out the objectives of the project, coordinating the activities of the three colleges of home economics, working with Ford Foundation representatives, and advising Pakistani officials. Resident Advisors at the colleges helped the Principal and faculty with curriculum development and other academic programs. They were particularly helpful to the Principal, who had been trained in administration but who had little background or experience in home economics. Resident advisors did not teach classes except when necessary, and the principle was firmly established that the "Pakistani staff in administration, teaching, research, and extension were in charge and that the advisors served only in an advisory capacity."[9]

Important to the success of the Pakistani project were the short-term consultants who served from one to six months in Pakistan on special assignment. Pauline Cunningham was a building consultant for the Dacca college, Martha Merrifield served as a business management and clothing and textiles consultant, and Florence McKinney worked in Pakistan on home management and textbook projects. June Cozine and Elizabeth Hillier served as administrative representatives and reviewed the progress of the project and of the colleges. O'Toole served in Pakistan on four occasions. In 1957 she was leader of the survey team that

helped develop the original schemes for the development of the home economics colleges, and in 1964 she returned to Pakistan to help government officials and representatives of the Ford Foundation develop a second five-year plan for home economics education in Pakistan. O'Toole was also in Pakistan in 1965 and 1968 to evaluate and help the program. Using OSU faculty as consultants in Pakistan strengthened the scholarship training program at Oklahoma State. McKinney explained that she had returned from Pakistan with a greater "appreciation of Pakistani programs in our three home economics universities there," and had gained a "better understanding of their home and family life so that I could work more effectively with the young women who came over to this country to study."[10]

Elizabeth Hillier served six years in Pakistan as an advisor. She was Resident Advisor at the Karachi college from 1958 to 1961, and was at Dacca from 1963 to 1966. During her last year at Dacca she also served as Chief Advisor for the Pakistan project. Hillier remembered that in East Pakistan "teachers were very much revered....I have seen students, when a former teacher came back to visit, get down at their feet." When the teacher came into the classroom the "students would rise. The teacher always left the classroom first, and the students rose while the teacher walked out." Classes at Dacca college continued from in the morning until 2:30 in the afternoon through the week and on Saturdays. There were no classes in the evenings, for it was not "safe for the students to be out...in the evenings."[11]

Consultants and advisors serving in Pakistan had to learn to adjust to the conditions and customs of that country. Hillier discovered that "all of East Pakistan is densely populated. I remember one of the

advisors saying the first time she went to West Pakistan, having been in Dacca, 'Where are all the people?' You just can't imagine--people, people, people." Because of crowded conditions and some remaining colonial resentment toward "white faces," the Ford Foundation provided drivers for the women advisors.

OSU advisors lived in separate housing away from the college, and local custom required that they employ servants. Hillier explained that "to have two or three servants sounded as though you were living it up, but this was really an obligation. You didn't just pay them their wages and forget it. You bought their clothes, you paid their doctor bills, and if their wife was sick, you paid for that." Americans entertained in their homes and participated in the custom of having tea in the afternoon in their homes, something borrowed from the British. Occasionally the advisors went to the movies with Pakistani teachers or attended social events with them in the afternoon.[12]

Development of the College of Home Economics at Dacca followed the five-year scheme drawn up in March of 1957. The Pakistani government provided seventeen acres for the campus; construction was completed in 1963. The campus complex included buildings for classrooms and laboratories, an administration building, library, assembly hall, dormitory, cafeteria, home management house, and housing for the Principal and other staff members. In 1958 Pauline Cunningham served six months in Pakistan as a building consultant for the Dacca college. She worked with architects, contractors, and government officials to ensure that the new facilities would be designed and laid out to meet the needs of the new school. While the campus facilities were being completed, classes began in July of 1961 on the campus of nearby Eden Girl's

College; however, by February of 1963 all classes were housed in facilities on the new campus.[13]

An important goal of OSU advisors in Pakistan was to help develop degree programs and plan curricula for the home economics colleges. In Pakistan, secondary schooling ended after the tenth grade; the eleventh and twelfth grades were part of the intermediate program and counted toward the first two years of a bachelor's degree. In the colleges of home economics, advisors helped plan curricula for intermediate study and for a two-year Bachelor of Science degree. Options emphasized in the Bachelor's degree program were clothing and textiles, family relations and child development, food and nutrition, home management and housing, and related art. Two other degrees were added later to help train home economics teachers for secondary schools and colleges. The curriculum for a Bachelor of Education degree included one year of study beyond the Bachelor of Science degree, and the Master of Science required two years of course work past the Bachelor's degree.

Advisors and staffs of the home economics colleges initiated Tri-College Conferences, which met two or three times a year, to develop goals and a common philosophy for academic programs in the home economics colleges. Members of the conferences wrote curriculum guides and course syllabi for the home economics college programs, secondary schools, and university courses to help achieve nationwide uniformity and continuity in home economics disciplines. The academic activities and professional growth of the home economics colleges helped each achieve academic recognition and affiliation with a major university as a "Constituent College." The prestige of the home economics college was enhanced and the Principal of that college was recognized as a

Department Head within the university. Universities granting this recognition were the University of Karachi, the University of Dacca, and the University of Punjab, for the Lahore college.[14]

Florence McKinney served as a consultant in Pakistan to develop textbooks for home economics disciplines in secondary schools and the colleges. English was the medium of instruction in the home economics colleges, and therefore Pakistani instructors were able to use American texts in their courses. However, there were definite drawbacks to using textbooks written for American students, for they incorporated traditions, attitudes, and philosophies that often differed from cultural values in Pakistan. McKinney noted that the Pakistani "teachers were really pretty ingenious in making adaptations from our textbooks to their own culture, but we thought that maybe they would be ready to develop some of their own materials, that they would prepare for their classes, into a form that could be used as textbooks."[15]

McKinney worked with faculty members of the home economics colleges, explaining the need for new textbooks and encouraging them to author works in their speciality areas. However, other than professional pride and dedication to the teaching profession, there were few incentives for Pakistani educators to write, for they received no royalties from publications which they wrote. A Textbook Board Committee for East Pakistan and one in West Pakistan published all texts used in public schools, and McKinney found that there was "a lot of red tape involved in getting authors and contents of books approved for publication."[16] She worked diligently to initiate a closer working relationship between the staffs of the home economics colleges and members of the textbook boards, and to encourage faculty to write textbooks. Advisors published texts for use in secondary and intermediate

curricula first, followed by college textbooks, especially in the fields of food and nutrition and family relations and child development.

An important phase of the home economics project in Pakistan was extension and public service. This included the goal of developing an understanding of the philosophy and purpose of home economics among staff and others in interpreting the meaning of home economics to the public in Pakistan. Each of the schools promoted and helped found a Home Economics Association in its metropolitan area; these were successful in promoting an understanding and awareness of the role of women and of home economics related fields in society.[17]

Outreach activities included helping secondary schools develop home economics curricula and teaching materials and providing in-service training for secondary teachers. The home economics colleges at Karachi and Lahore initiated projects in outlying villages, advising residents about nutrition, child care, and family relations, and Dacca students conducted extensive surveys of families in East Pakistan to determine problems and needs in home economics related fields. The three colleges of home economics worked closely with government extension centers, helping them counsel and train welfare workers. They also sponsored short courses, seminars, conferences, and workshops on campus and at the centers for teachers in rural programs and for trainees in special government programs, including maternity and child welfare, family planning, and nursing.[18]

Ford Foundation grants for the home economics project in Pakistan included money to train Pakistani students in the United States. These students, selected by committees in East Pakistan and West Pakistan, had to agree to teach in one of the home economics colleges when they

returned to Pakistan. Fifty-one Pakistani students studied in the United States, most completing a Master's degree in Home Economics Education or a Ph.D. Thirty-three teacher trainees studied at Oklahoma State; the rest completed graduate studies at Colorado State, Wisconsin, Minnesota, Georgia, Nebraska, Tennessee, Kansas State, and Cornell universities. The fellowship trainee program administered by Oklahoma State produced competent teachers well-trained in the philosophy of home economics education, who were essential to the successful operation of the home economics colleges in Pakistan.[19]

By 1969 the home economics program in Pakistan had developed and matured to the point that little assistance was needed from American advisors. In September Robert Bunnel, from the Ford Foundation in Pakistan, met in Stillwater with Oklahoma State representatives to plan the phase-out of OSU advisors in Pakistan and the termination of the fellowship training program. Bonny Waye, the last OSU advisor in Pakistan, returned to the United States in January of 1970, and the program was terminated officially in 1972.[20]

During the fourteen years of the Pakistani project, the Division of Home Economics and the Ford Foundation had developed a close working relationship. In 1964 Oklahoma State secured a special grant of $84,000 from the Ford Foundation to support the "Intercultural-International Dimension of Home Economics" at Oklahoma State. The money was to be used to develop curricula for international studies in home economics, to finance the research and writing of doctoral dissertations in this field, and to support study abroad for OSU faculty. O'Toole and her staff focused on Latin America as the target of their international outreach and faculty training. Latin American countries were closer to

Oklahoma, and faculty and staff representatives could travel there more quickly and less expensively than to other areas of the world. Another factor was the former students, friends, and professional acquaintances residing in Latin American countries who could help OSU faculty traveling in Latin America.[21]

In 1961 Mary E. Leidigh and Hazel Ingersoll visited Peru, Ecuador, and Columbia to explore the possibilities of establishing a summer study project for members of the home economics faculty in these or other Latin American countries. Their investigation suggested Mexico as the most feasible country because of financial considerations. Six faculty members were chosen to initiate the Latin American project in Mexico. They committed themselves to studying the culture and language of Latin America, to learning as much as possible about the status of home economics and women in Latin American countries, and to studying in Mexico for five summers beginning in 1965. These obligations were not assumed lightly, for they entailed hours of individual study, group meetings, language study, and giving up summer vacations.[22]

These seven faculty members referred to themselves as The Committed Group (TCG). Chairman of TCG was Mary Leidigh, professor and Head of the Department of Food, Nutrition, and Institutional Administration. Leidigh recalled, "We agreed on this and agreed that death or anything like this would be considered, but [other than that] we said that we would do this for five years." O'Toole helped members of the group formulate seventeen goals that "The Group is Committed To," reminding them, before they departed for Mexico in 1965, that the "overall goal ...is to have the faculty grow into world citizens, in their very persons--not merely to accept this intellectually." She also expressed

hope that faculty members "will eventually think and feel interculturally. They won't talk of the need for 'tolerance'; they will find tolerance meager and even insulting."[23]

Mary Sue Herndon studied in Mexico each summer from 1965 to 1969; Mary Leidigh, Lora Belle Cacy, and Leevera Pepin went to Mexico each summer during the five-year project, except in 1968 when they attended the IFHE meeting in Bristol, England. Kathy Greenwood was with the group in Mexico during the summers of 1965 through 1967; Molly Keith joined the group in the summers of 1966 and 1967; and Sara Meador, Ellen Flottmann, and Mary Miller attended one summer session each in Mexico in 1966, 1968, and 1969, respectively. The emphasis of the group in the summer of 1965 and throughout the five years of the project was to learn Spanish and to gain a greater understanding of the culture of Latin America. Therefore each summer in Mexico included study at a language institute in or near Mexico City. Other activities included visits to historical sites, museums, cultural centers, arts and crafts shops, and other sites of cultural value.

After 1966 the summer trips included more efforts to see Mexican families in rural and village settings and to visit with extension workers, home economists, and other government officials to determine family conditions, the status of women, and other areas of Mexican life that touched on the disciplines of home economics. Members of TCG also began an organized effort to make contacts and develop relationships with government officials, home economists, and educators in Mexico and with Americans living in Mexico.[24]

In addition to the cultural development of members of TCG, O'Toole envisioned international service in Latin America as a natural outgrowth

of the Latin American project. She visited Peru in July of 1967 at the request of the President of La Universidad Agraria, National University of Peru, "to explore the possibilities of a cooperative agreement between...the University and Oklahoma State University to assist with the further development of the new Department of Home Economics." O'Toole conferred with the president and other personnel at the University and with officials of the Ministry of Agriculture, finding "a strong desire to have the assistance of Oklahoma State University." Unfortunately, changing political conditions in Peru and lack of available funds prevented a cooperative program from being established there.[25]

In 1970 the President of the Universidad de Costa Rica and Maria de Vargas, Dean of the School of Education at the University, invited Oklahoma State to send a team of home economists to Costa Rica to advise them on the home economics program at the University and to study the culture of Costa Rica. The original contact had been made through Maria Luisa Lindo, who taught home economics there and who earlier had received a Master's degree at OSU. Frances Stromberg and Mary Miller, representing the Department of Family Relations and Child Development, and Mary Leidigh and Bernice Kopel of the Department of Food, Nutrition, and Institutional Administration worked and visited in San Jose, Costa Rica, in July of 1970.

These women lived in private homes during their stay in Costa Rica, giving them an opportunity to observe family life there. They divided their time between meetings with the home economics faculty of the Universidad de Costa Rica, their Spanish studies, and excursions to historical and cultural sites around San Jose. Mary Miller remembered the people were "warm, friendly, and accepting"; Mary Leidigh remembered

Costa Rica too--"Rain. Everyday!" And on the second week, "we still have rain, and the noise on the roof is something. All roofs are corrugated tin...evidently the result of earthquakes. Tile, normally used, is too dangerous." But for all members of the group, Costa Rica was a rewarding experience.[26]

The next Latin American project was in Panama in the summers of 1971, 1972, and 1973. Maria Villarreal, Director of Home Economics at the Universidad de Panama, asked OSU to help with the initiation of a new four-year program in home economics. Villarreal knew of O'Toole's reputation and international work, and had learned much about Oklahoma State's home economics program from Delia Moreno, a retired home economics extension worker in Panama who had studied at OSU. Villarreal had received her Master's degree at Southwestern Louisiana State University, and as part of her graduate work there she had developed a model home economics program for Panama. The administration of the Universidad de Panama had approved the proposed program, and it was scheduled to begin in 1971.

Oklahoma State sent four faculty members to Panama in July of 1971; Bernice Kopel taught a short course in nutrition, and Frances Stromberg and Mary Miller team-taught a class in child development. June Cozine, Head of the Department of Home Economics Education at OSU, advised Villarreal on the development of a home economics curricula which included options in teaching and extension. Forty students enrolled in the child development course, sixty-eight in the nutrition class, and twenty-three enrolled in both. One class met two hours in the morning and the other two hours in the afternoon; both met five days a week for three weeks. Students earned no credit but did receive a certificate for completing

the course. Most students were primary and secondary teachers, extension workers or university students.[27]

Because the home economics program was new, there were no special facilities at the university for teaching home economics. Kopel's class met in the library, and Miller and Stromberg lectured in the science laboratory. Miller described the classroom situation for the child development course.

> Dr. Stromberg and I were in one of the science labs where they were doing some experiments right in the middle of our series of lessons. We had people coming back and forth using the stationary equipment in the room. They were back and forth behind us, and if they needed to use an oven or drying rack, they did. There were not enough chairs to seat everybody in the class, and they were standing around the edges of the room. Of course, there was no air conditioning, and it was pretty hot. I really don't know what the temperatures were, but it was warm and humid. It rained everyday right outside your window and on the tin roof in the middle of your lecture. It was very difficult to speak above it and for the students to hear.

Adding to the difficulties of the OSU teachers was the language barrier. Lectures and questions and answers were communicated through translators.[28]

During this three-week period Cozine conferenced with Villarreal about the home economics curriculum which had been approved by the administration of the University. They reviewed required courses for the two home economics options, course content, and instructional materials. Cozine talked with graduate students, attended class sessions, gave special presentations, and visited informally with students. She also traveled in Panama and met with extension people and with government officials who worked in home economics related fields.[29]

Maria Villarreal requested continued assistance and asked OSU to follow up on the two courses that had been initiated in 1971. Cozine

agreed that OSU would offer classes in child development and nutrition the next summer as follow-up courses; students who enrolled in either sequence both summers would be given three hours credit at the University. O'Toole approved the plan, and Kopel and Miller returned to Panama in June of 1972. Preparations and facilities were better the second summer; lectures had been translated and sent to Villarreal in advance, and classes were held in the air-conditioned auditorium of the medical building. Miller acknowledged, "It was more comfortable, quieter, a little easier to work in that environment than it had been the year before."[30]

In June and July of 1973, Florence McKinney, Head of the Department of Housing, Design, and Consumer Resources, served as a consultant in Panama and in Costa Rica. She arrived in Panama just in time to attend the second anniversary party of the Home Economics Program at the Universidad de Panama. That program seemed to be doing well; McKinney reported, "Home Economics has 150-200 students, about 70 in 3rd year. Expect to graduate 40-50 in 1st class in 1975." McKinney met almost daily with Marilu Tarte, a former graduate student at OSU, during her stay in Panama to discuss the development of Home Management courses and lesson plans. McKinney also visited with Rosa de Alcedo to discuss Housing and Design ideas relative to course content. Afterwards she conferenced with these two home economics instructors and reviewed objectives and content of a new Household Equipment course that was to be offered by the department.[31]

McKinney consulted Maria Villarreal on the general direction and development of the home economics program in the University, and discussed courses, programs, and facilities available to promote home

economics. They also discussed the possibility of further assistance from Oklahoma State. Before McKinney departed, she presented Villarreal with eighteen dollars which had been raised by the Home Economics Students Council for the Panamanian home economics students at the University. Villarreal purchased a set of three aluminum kettles, a frypan, three long-handled metal spoons, and a long-handled two-prong fork with this money and gave them to Tarte's Home Management class as a present from the OSU students. The Panamanian students asked McKinney to "take their thanks and greetings to the OSU home economics students."[32]

McKinney visited historical and cultural sites in Panama to complete her trip there and then departed for Costa Rica. Her stay in Costa Rica was brief but productive. McKinney met twice with the President of the Nacional Universidad in Heredia, which was eight miles outside San Jose, the capital of Costa Rica. Maria Luisa Lindo, a graduate of OSU who taught home economics at the Nacional Universidad, had requested advise from McKinney on curriculum development and other areas of the home economics program at the University. The program, only three years old, specialized in training high school home economics teachers. McKinney met with Lindo and Ana Diaz, who also taught home economics at the Nacional Universidad; they reviewed the curriculum and discussed enrollment, admission policies, and other matters affecting the future development of the home economics program. Later McKinney met with the rest of the home economics faculty before returning to Oklahoma.[33]

The Latin American project was an enriching and rewarding experience for members of The Committed Group. Mary Miller expressed her feelings about her involvement in that project:

> I really feel that I received more than I gave. I came away with a much broader perspective of people, of humanity as a whole, and I feel I have been able to contribute some things to my classes in child development and human relations... that I could not have given them...had I not had these experiences. I just can't put into words the kind of growth that has come to me because of these experiences.

Certainly, she spoke for other members of The Committed Group.[34]

Oklahoma State University's relationship with the Ford Foundation in Pakistan and in Brazil was enriching and rewarding, and the Division of Home Economics at OSU was a part of this proud heritage of international service. But Lela O'Toole and the faculty and staff of that college made a unique and special contribution to OSU's international technical assistance programs with their philosophy and academic emphasis on the "Intercultural-International Dimension" in higher education. This philosophy was interpreted to include not only service abroad but also special academic programs aimed at helping international students, training faculty and students in international education, and leadership in national and international organizations. But perhaps the greatest contribution of this "Intercultural-International Dimension" was, as Lela O'Toole said, "to <u>grow</u> into world citizens, in their very persons--not merely to accept this intellectually," but to "think and feel interculturally." This kind of commitment to international service brought national and worldwide acclaim to the Division of Home Economics and to Oklahoma State University.[35]

CHAPTER VII

INTERNATIONAL EDUCATION AND THE COLLEGE OF EDUCATION

> At the close of the project, Thailand's LIVE project schools comprised what could be the finest vocational education system of national scope to be found anywhere in the world.
>
> --Final Report of the Thailand LIVE Project

In 1968 Oklahoma State University entered into an agreement with the United States' Agency for International Development (AID) to provide technical advisors for vocational education programs in Thailand. Through 1973 OSU and Oklahoma State Tech (a branch campus of OSU at Okmulgee, Oklahoma) provided personnel and important services for the project in Thailand.[1]

Formerly known as Siam, Thailand was "discovered," like Malaysia and Indonesia to the south, by European adventurers and navigators seeking the "spice islands." Westerners were intrigued by the mild climate, the happy, fun-loving Thai people, and the exotic plants and animals of the tropical rain forests. Animal life in Thailand included tigers, leopards, elephants, and crocodiles, as well as strange domestic animals: water buffalo, Siamese cats, and talking Myna birds. In the centuries since the first voyages of discovery, Thailand had become an important exporter to the West of tropical fruits and vegetables and valuable raw materials: copra, rubber, tin, gold, and tungsten.

After World War II the political significance of Thailand to the United States and to the West overshadowed its economic importance. Thailand occupied nearly 200,000 square acres of land in Southeast Asia and bordered on or lay near Burma, Laos, Cambodia, and Viet Nam. Ruled by a constitutional monarchy, this country was a strong Western ally, a charter member of the Southeast Asian Treaty Organization, and a bulwark against further Communist expansion in Southeast Asia. For these reasons the economic stability of Thailand was important to the democratic countries of the West.

In 1964 the Royal Thai Government began formulating plans for the long-range development of agricultural and vocational education in the Kingdom. The first phase of this ambitious program called for developing fourteen trade and industrial schools and nine agricultural schools scattered throughout the country, an agricultural college, and the Thewes Vocational Teacher Training College in Bangkok. To finance these educational improvements, government officials committed large sums of money to the Ministry of Education and arranged loans from the Bank of Thailand and the World Bank. The project derived its name from this loan program--"Loans for the Improvement of Vocational Education" (LIVE). The Thai Government also asked the United States' Operations Mission of AID in Thailand to participate in the LIVE program, help with the initial planning, provide technical specialists, serve as advisors to the project, and help finance training for Thai nationals in the United States.[2]

AID selected California State Polytechnic College to backstop the agricultural program and Oklahoma State University to assist the vocational education program. OSU was selected at the urging of officials

of the Royal Thai Government who had visited Oklahoma State and who had toured training facilities on the Oklahoma State Tech campus. They were equally impressed with the Master's degree program in Trade and Industrial Education at Stillwater and the quality of instruction and training facilities at Okmulgee.

Clyde B. Knight, Chief of Party, was the first OSU advisor to arrive in Thailand. In June and July of 1968 he toured that country, observing and studying thirteen of the fourteen LIVE project vocational schools, the Thewes Vocational Teacher Training School, and five other trade and industrial schools. In the up-country (a Thai term for territory outside greater Bangkok) schools, Knight noted the lack of textbooks and instructional material, inadequate shops, few tools, cluttered shops, and lack of skilled, experienced teachers, observing that these schools "ranged from very poor to good in training." Although some "teaching techniques could be classified as excellent," other instructors "were just holding class with little or no teaching and learning taking place."[3]

From his early observations, Knight developed a "Mutually Acceptable Work Program with the Ministry of Education in USOM." He recommended workshops to train instructors in the organization of shops and on installation of new equipment, soon to be arriving at the schools. He encouraged the development of a master curriculum and a common class schedule for all up-country schools and pointed out the need for additional instructional materials for those schools. For the Thewes School, Knight urged the development of a curriculum emphasizing trade skills, shop maintenance courses, and methods of instruction courses. He also stressed development of instructional materials, use of audio-

visual equipment, shop safety, and shop organization and management.[4]

OSU advisors for the Thailand project were chosen from the College of Education and the School of Engineering Technology at OSU, from the faculty and staff at Oklahoma State Tech, and from high schools and area vocational-technical schools. In 1968 four individuals, in addition to Knight, arrived in Thailand. These advisors and their specialty fields were Cecil W. Dugger, electricity; Jimmy V. Wilson, welding-sheet metal; Neal I. Vest, automotive; and John R. Bayless, machine tool. The following year Richard L. Castellucis assumed responsibility for radio-telecommunications, and in 1970 M. Doyle Butler helped establish the building construction program. These men served two years and then were replaced by other OSU staff members who completed the project. New advisors and their fields were Ralph J. Johnson, welding-sheet metal; Warren L. White, diesel mechanics; Bobby R. Hunter, electrical, air conditioning, and refrigeration; Jimmy R. Sloan, building construction; and Robert W. Vogt, radio-telecommunications. Richard W. Tinnell replaced Knight in 1971 and served as Chief of Party through 1973.[5]

The Thai government provided apartments in Bangkok for OSU advisors and their families. These apartment complexes afforded American families privacy, security, and recreational facilities such as swimming pools and tennis courts, and the apartments were modern, spacious three-bedroom units. Although the American advisors had cars, a government official picked-up each advisor at his home each day, drove him to work, and returned him in the evening. OSU families were a close-knit group and engaged in many social activities; they entertained in their homes, met in larger groups at one of the apartment complexes, or had picnics

and parties on the beach fifty miles away. For the wives, entertaining, cleaning, and shopping were made easier by employing a maid, which was the custom there and was especially expected of Americans.[6]

OSU advisors lived in Bangkok because their offices were at the Thewes Vocational Teacher Training College in that city. Each advisor was assigned a Thai counterpart who taught at the college to work with him; these men were usually department heads or outstanding instructors. The Thai counterpart worked closely with his advisor, learning from him and lending him valuable support. OSU advisors and their counterparts visited each up-country vocational school at least once every three months and worked as a team in advising and helping project schools.

The Thewes College was important to the success of the LIVE Project not only because it was the only government trade and industrial teacher-training college in Thailand, but also because it served as a model for up-country schools. At Thewes OSU advisors remodeled the buildings, planned more efficient shop layouts, and ordered new equipment. Then, in cooperation with their Thai counterparts, they developed comprehensive curricula for each of the six trade and industrial teacher-training programs and taught many of the methods courses. A seminar on curriculum development was held for teachers at the Thewes School from October 27 to October 30, 1969. OSU advisors lectured on the different aspects of course and curriculum development, and Thai instructors contributed their ideas and experiences to the sessions. Presentations and discussions at this seminar led to the writing of an official catalog for the Thewes College, which included curricula for the teacher-training areas and descriptions of all courses offered. A year later the catalog was revised to include curricula and other requirements for

a four-year Bachelor of Science degree program. A second in-service training seminar for Thewes teachers, held in December of 1970, emphasized grading systems and student evaluation.[7]

Oklahoma State advisors provided valuable support to the up-country schools in the development of curricula and in the production of teaching aids and instructional materials. The 225 items of instructional material produced for the trade and industrial programs included course outlines, assignment sheets, transparencies, instructors' guides, and job sheets. In addition to these materials, OSU advisors compiled more than 100 different texts, manuals, syllabi, and other instructional books which were translated into Thai and distributed to the project schools. Thai teachers eventually assumed responsibility for the production of instructional material, and by the end of the project they had published more than thirty books and manuals. The OSU staff felt that this publication and distribution of teaching and training material by Thai instructors was "one of the very brightest parts of the project."[8]

Another important contribution of OSU advisors to the up-country schools was the installation and maintenance of equipment. First, the equipment had to be ordered; this was a complex task requiring an enormous amount of effort and preparation on the part of OSU advisors. LIVE Project officials established a Maintenance Supply Division (MSD) under the Department of Vocational Education, and OSU advisors worked closely with MSD personnel, writing specifications and submitting lists of equipment needed for the project schools. Advisors participated in bid openings and bid reviews for equipment totaling more than $6,000,000 and helped MSD develop inventory and stockroom control systems for equipment and parts in the central warehouse and in the schools.[9]

Oklahoma State technicians organized and conducted six installation workshops for equipment in the different trades areas. The purpose of these workshops was to install equipment in the project schools and teach Thai instructors and technicians how to assemble, install, adjust, lubricate, operate, and maintain shop equipment in each of the trade and industrial programs. Individuals invited to participate in the installation workshops included a shop instructor and an electrical teacher from each of the different project schools, a maintenance man from the MDS, and the Thai counterparts to the OSU advisors. John Bayless and Cecil Dugger planned and organized the first workshop at Korat in August and September of 1969; it was so effective that other OSU advisors "used the same technique...in all installation workshops during this project." After the equipment was installed at the school which had been selected for the workshop, the other shop instructors and electrical teachers returned to their respective schools and began installation of similar equipment that had been shipped previously. If they encountered problems, a Thai-OSU team would travel to their school and assist them. At the workshops instructors explained procedures and standards for the proper maintenance of equipment to be implemented at all schools after the equipment had been installed.[10]

In-service training for trade and industrial teachers, shop instructors, and headmasters in the project schools was accomplished through seminars and workshops and through visits to the schools by OSU advisors and Thai counterparts. OSU-Thai teams representing each of the six trade and industrial programs visited the up-country project schools at least once each quarter, offering advise and assistance to the headmaster, teachers, and shop instructors. They worked closely with the

staff, assisting them individually and helping them in classroom situations. Also from 1968 to 1972, OSU advisors planned and organized eleven training seminars in addition to the six equipment installation workships; seven of these were in-service training seminars for staff and instructors at the up-country LIVE Project schools. Seminar topics included curriculum development, grading and evaluation, recording systems, construction problems, shop safety, class scheduling, school management, and other related subjects.[11]

Oklahoma State advisors rendered important service outside their normal responsibilities when asked to do so by officials of the Royal Thai Government and by AID administrators. One advisor commented, "Many of these were small things and some were extensive projects; but taken collectively, they formed a large contribution to the development of Vocational Education in Thailand." OSU involvement in the National Skill Contest and Career Exhibition was an excellent sample of this help. In cooperation with the Department of Vocational Education and the Bangkok South Rotary Club, OSU advisors helped organize contests for trade and industrial skills. Begun in 1970, the contests and exhibitions became an annual event in Bangkok. Members of the Royal Family and high-ranking government officials presided over the opening ceremonies, and winners represented Thailand in the Asian and International Skill Olympics.[12]

Training of Thai students on the campuses of Oklahoma State University and Oklahoma State Tech contributed significantly to the success of the LIVE Project in Thailand. Financed by AID and the Royal Thai Government, more than 150 students studied and trained in the United States. Participants in the program pursued either one-year certificate

programs for skilled training or two-year Master of Science degree programs in Trade and Industrial Education or related technical fields. Participants were selected by a scholarship committee composed of Thai government officials and educators; Clyde Knight and, later, Dick Tinnell also served on the committee.

In 1968 the committee sent ninety-nine Thai shop instructors to the United States for skill training. Forty-eight instructors specializing in welding, machine shop, and building trades trained for one year at the Dunwoody Institute in Minneapolis, Minnesota. The Philco-Ford Corporation had originally contracted to train the Thai shop instructors in electricity, electronics, and automobile and diesel mechanics; however, Thai officials who had toured facilities at Oklahoma State Tech had been impressed with the quality and type of training provided there, and they asked the Philco-Ford Company to subcontract part of the training responsibility to Oklahoma State Tech. Consequently, thirty-four students received skill training at Oklahoma State Tech. From 1967 through 1973 fifty-six Thai students pursued Master's degrees at Oklahoma State, preparing themselves for teaching and administrative positions in Thailand's vocational education system. However, students in these training programs had to agree to teach or work three years in the vocational education system for each year of training received abroad, and all participants honored this obligation, making that participant training program the most successful international training program held at OSU.[13]

Short-term consultants who served in Thailand for periods of one to three months provided valuable technical assistance to the LIVE Project. Billy R. Jones, T. Pete Chapman, and Richard Tinnell (later Chief

of Party) served as consultants in drafting, mathematics, and science, respectively. Dewey Yeager and John Swenson advised project officials in their specialty fields, electronics and plumbing, and Paul Robertson and Donald S. Phillips served as technical education specialists.

Top administrators at Oklahoma State University and Oklahoma State Tech also made important contributions to the Thailand project. Robert B. Kamm, President of Oklahoma State, Helmer Sorenson, Dean of the College of Education at OSU, and William S. Abbott, Director of International Programs for OSU each visited and reviewed the Thailand project twice. Wayne W. Miller, Director of Oklahoma State Tech and Vice President of OSU, James H. Boggs, Vice President of Academic Affairs at OSU, and Francis Tuttle, Director of Vocational Education for the State of Oklahoma, each reviewed the Thailand project once. These administrators gave important moral support to the full-time advisors in Thailand, and their presence there symbolized the commitment and concern of their institutions for the Thailand project and for international education.[14]

The success of the vocational educational project in Thailand was obvious to OSU advisors who felt that the project schools and educational system they had helped develop "comprised what could be the finest vocational education system of national scope to be found anywhere in the world," and that system "attracted considerable attention from other countries in Southeast Asia. The Thailand project in many ways was a model program in which the host country, AID, and the technical assistance team worked together harmoniously and coordinated their activities to achieve effective results. Oklahoma State University's technical assistance to Thailand contrasted sharply with clandestine communist activity in Southeast Asia during the same period, and the

effective OSU-AID partnership with the Thai people underscored the fundamental Point Four philosophy of helping people help themselves envisioned by President Truman and initiated by Henry G. Bennett.[15]

The College of Education continued its international service in the 1970s, and in 1974 it developed a unique academic relationship with the University of Carabobo in Valencia, Venezuela. Faculty and administrators at that University discussed with Donald W. Robinson, Dean of the College of Education at OSU, the possibility of developing a Master's degree program in education at Carabobo that would meet specific needs. Robinson agreed to help them establish such a program and to provide needed faculty. In October of 1974 Robinson and Douglas Aichele met in Venezuela with administrators of the University to work out the details of the agreement which had been signed earlier by both universities and to discuss curricula for the new degree program and related academic concerns.

The OSU-University of Carabobo agreement promised to "promote academic and cultural exchanges between the Oklahoma State University and University of Carabobo." Specific objectives were "to improve the graduate program in Education existing at the University of Carabobo..., to create new ones as needed," and "to improve the competence of the Faculty of Education at the University of Carabobo." The agreement between the two universities authorized OSU professors to teach at the University of Carabobo through January 1, 1978, and stipulated that "subject to the evaluation, admission, and registration conditions imposed by each university, credit hours and degrees earned at each university will be recognized by the other."[16]

Faculty from the College of Education who taught in Venezuela were

Roy Gladstone in the spring and summer of 1975, John Hampton in the summer of 1976, and James Yelvington in the fall of 1976. These professors taught courses in higher education administration and educational psychology, and they helped advise members of the Faculty of Education on graduate programs. Unique teaching and learning experiences for students and faculty of both universities resulted from the unselfish sharing of academic resources by two universities committed to international education and cooperation.[17]

In the fall of 1975 and spring of 1976 Oklahoma State University hosted eight educators from Indonesia, providing educational and cultural experiences for them. These administrative internship programs were initiated through the activities and efforts of the Dean of the College of Education. In July of 1974 Robinson traveled in Indonesia "to interview and screen prospective administrative interms" for the international Administrative Internship Program sponsored by the American Association of Colleges for Teacher Education (AACTE) and financed by AID. Educational administrators and government officials in educational agencies in developing countries were eligible to compete for internships, and, if chosen, they studied, observed, and participated in administrative activities of an American college or university selected by AACTE.

Because of Robinson's firsthand knowledge of the Indonesian educational system and because of OSU's tradition of excellence in international education, Oklahoma State was selected by AACTE in January of 1975 to serve as a host institution for three interns from Indonesia. Nasir Hadji, Muslim Ilyas, and Idrus Ramli, administrators in the Institute for Education and Teacher Training at Padang, Sumatra, in

Indonesia, arrived in Stillwater on September 20, 1975, and stayed through December 11. They worked closely with the faculty and staff of the College of Education and other OSU administrators during their two and one-half months in the United States. Also, on October 5 and 6, LeRoy O. Smith, Director of the Administrative Internship Program, visited the OSU campus, reviewed Oklahoma State's internship program, and talked with top administrators at the University.[18]

In the spring of 1976 the United Nations Educational, Scientific, and Cultural Organization (UNESCO) financed five internships for Oklahoma State University. Impressed with the sincerity of OSU's commitment to the Administrative Internship Program, Indonesia sent five outstanding educators who had been working to establish "Developmental Schools," kindergarten through twelfth grade, in Indonesia. If these schools proved superior to the traditional schools in Indonesia, they would serve as models for improving the traditional schools.

Rolland A. Bowers, Associate Dean of the College of Education, and Jerry Williams, project assistant for the internship program, planned a challenging agenda for the Indonesian educators. Activities from January 4 to May 6, 1976, included fourteen half-day seminars on media education, guidance and counseling, open education, test and measurements, student teaching, supervision, vocational schools, and curriculum instruction. The interns observed classroom situations at OSU and in the Stillwater and Norman public schools, spent two weeks at Southwest Missouri State College, attended AACTE meetings in Washington, D.C., and watched or participated in many cultural activities in Oklahoma and Missouri.[19]

Beginning with Dean J. Andrew Holley in the early 1950s and

continuing through Dean Donald Robinson in the 1970s, the leadership and commitment of the College of Education to international service and education matched that of the University. During this period faculty and staff of the College of Education served in Ethiopia, Brazil, Thailand, Venezuela, and Indonesia, contributing significantly to the educational and economic development of these emerging countries.

CHAPTER VIII

INTERNATIONAL SERVICE AROUND THE WORLD

> I think OSU is a far better university, it is a far richer university, than it would have been if we had remained essentially isolationist....Having the different nations on our campus makes us a better educational institution.
>
> --Robert B. Kamm, President of Oklahoma State University

In the 1960s and 1970s Oklahoma State University continued to commit key personnel and important resources to the field of international service in developing countries. From 1965 to 1971 thirty-five faculty and staff members from Oklahoma State served in Guatemala and other Central American countries as consultants and advisors in veterinary medicine and animal science programs. This service was provided through an OSU-AID contract, totaling $725,734 which went to the College of Veterinary Medicine and Animal Science at the University of San Carlos in Gueatemala. In 1962 Rectors (Presidents) of the national universities of the Central American countries of Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica established a Council of Superior Universities in Central America (CSUCA). This council was responsible for coordinating the efforts in higher education in these countries, and for designating certain universities to function as regional professional schools. CSUCA approved San Carlos University as the site for the Regional College of Veterinary Medicine. The University of San Carlos, founded in 1675 at Antigua, Guatemala, was rich in tradition. The campus

had moved to Guatemala City in 1777 following a severe earthquake which damaged the original campus, and San Carlos continued as the third-oldest university in the Western Hemisphere.[1]

Francisco R. Rodas, Dean of the College of Veterinary Medicine and Animal Husbandry, attended the IV Pan American Veterinary Medicine Conference at Mexico City in November of 1962. Glenn C. Holm, Dean of the College of Veterinary Medicine at Oklahoma State University, presented a paper at that conference on the history, philosophy, and the administration of the Southern Regional Education Board program for veterinary medical education. Rodas became excited about the possibilities of incorporating this concept of regional cooperation in Central America, and he presented a slightly revised version of that plan to CSUCA in February of 1963. The council adopted Rodas' plan for the coordination of veterinary medicine programs in Central America.[2]

Rodas and Jorge Arias de Blois, Rector of the University of San Carlos, contacted Holm and asked if qualified individuals from Oklahoma State could study the veterinary medicine program at San Carlos and survey Guatemalan agriculture to determine the feasibility of establishing a mutual assistance program between the two universities. The Rockefeller Foundation, which had been active in technical assistance programs in Central America, financed the feasibility study, and Louis E. Hawkins, Director of the Agriculture Experiment Station at Oklahoma State University, and Holm conducted the study from February 28 to March 11, 1963. Hawkins and Randall J. Jones, Dean of Resident Instruction at OSU, completed another survey of Guatemala in October of that year to determine the possibilities of cooperative assistance for an expanded program, including animal science, agronomy, agricultural

engineering, and other related fields. This study, initiated at the request of the University of San Carlos, also was financed by the Rockefeller Foundation.[3]

Through 1964 and into 1965 administrators of the University of San Carlos made overtures to Rockefeller Foundation and AID for financial support to establish and develop the regional veterinary medicine program. Finally on June 23, 1965, AID, through its Regional Office for Central America and Panama (ROCAP), entered into an agreement with Oklahoma State to provide this assistance. The primary objective of the agreement, drawn up by Holm and AID officials, was to "acquaint the San Carlos University faculty with teaching, research, public service, and administrative procedures employed at this institution [OSU]." Staff members of San Carlos University were to travel to "Oklahoma State where they can experience and participate in the multi-purpose functions of a regional college of veterinary medicine," and OSU personnel would work at San Carlos University, "implementing these techniques, procedures and programs that have application in Central America." The basic purpose of that educational interchange was "the improvement of teaching techniques and laboratory procedures [which] will permit San Carlos University to graduate veterinarians with even greater skills"; more important, those "graduates can bring much improvement in livestock and human health of Central America."[4]

The major responsibility for carrying out the program was delegated to a Field Coordinator for the project who worked at the University of San Carlos; during the six years of the contract three men served as Field Coordinator. This official was to "coordinate teaching, research, and public service activities with the Deans of Veterinary

Medicine at Oklahoma State and San Carlos University, and with the Chief of Human Resources, ROCAP." William E. Brock, who served in this capacity from 1965 to 1967, provided outstanding leadership for the project. He initiated administrative procedures for the project and developed a smooth working relationship between himself and the faculty and staff of the College of Veterinary Medicine at San Carlos. During his two-year tenure Brock emphasized research and scientific methodology, assisted with the development of an animal disease research program, and conducted extensive research on anaplasmosis and babesiosis. Anaplasmosis was particularly prevalent in Central America, causing the death of hundreds of head of cattle yearly, and hence American cattle buyers, fearing infectious diseases, were reluctant to import beef from Central American countries.[5]

Brock earlier had led a team of researchers at the OSU College of Veterinary Medicine who had developed a vaccine against anaplasmosis. The Guatemalean project afforded OSU advisors an excellent opportunity to continue experiments on infected cattle to test the effectiveness of the vaccine. Brock published three papers on his research at the University of San Carlos. For his valuable research in cattle diseases and his untiring efforts in establishing the cooperative program between the two universities, the University of San Carlos conferred on Brock the Honorary Degree of "Doctor Honoris Causa." This degree was the highest honor conferred by the University; only ten persons had received it since the founding of the University more than 300 years before.[6]

In 1967 Paul Barto replaced Brock as Chief Coordinator of the project. During his two years in Guatemala, Barto emphasized curriculum

development, course content, and methods of instruction, especially in the basic sciences: anatomy, physiology, bacteriology, and others. Barto also taught courses in poultry diseases. Theodore S. Eliot, Jr., followed Barto in 1969 and served through the end of the project in 1971. His special interest was animal clinics and hospitals. Fortunately during his tenure, the School of Veterinary Medicine completed the new teaching clinic and hospital. Eliot first restored and reorganized the old clinical facilities and then helped design and construct the new one. He redesigned the clinic to include a new examination room, a sterile surgery, a surgical preparation area, shielding of the x-ray room, and additional office space. He also advised the faculty of the Department of Medicine and Surgery on curriculum and course content.[7]

An important part of the development of the veterinary medicine program at San Carlos University was up-grading equipment and physical facilities. During the six years of the project OSU personnel helped order more than $100,000 of equipment paid for by AID contract funds. OSU provided some of the equipment, and the University of San Carlos assisted financially. OSU advisors stressed the development of the library as an important adjunct to teaching and research, and suggested lists of periodicals and key books that should be added. An OSU consultant helped plan and design the new veterinary medicine education building and the new veterinary teaching hospital and clinic. OSU employed James K. Wright, internationally known architect for veterinary medicine facilities, to review plans for the veterinary facilities.[8]

The OSU-AID contract staff members of San Carlos University studied and trained at OSU. During the first two years of the project ten

faculty members from the University of San Carlos worked, observed, studied, and researched at OSU's College of Veterinary Medicine for periods usually ranging from two to three months during their summer break, which fell in November through January. After these key personnel had observed OSU's operations and procedures in their field of study, it became necessary to arrange for longer periods of training to allow the San Carlos faculty members to pursue degree programs and to secure research positions and jobs. During the four years after 1967, faculty from San Carlos studied in the United States, Canada, South America, and Europe for periods of one to two years, and many earned graduate degrees. Ten studied at OSU, three at other American institutions, and another thirteen studied at universities outside the United States. AID, Rockefeller Foundation, Ford Foundation, World Health Organization, OSU, San Carlos University, and other sources funded these fellowships.[9]

Short-term consultants were important to the success of the veterinary medicine program in Central America, although most were in Guatemala from only a few days to three months. Faculty from the veterinary college and from the Department of Animal Science at OSU advised and assisted the regional College of Veterinary Medicine in their areas of specialization. Duane Peterson, Chairman of the Curriculum Committee for the College of Veterinary Medicine at OSU, worked with the veterinary college in Guatemala in 1965 and again in 1969, helping establish and revise curricula for all departments in the veterinary college. James Wright consulted on the plans for the two new facilities for the veterinary college, and the plans which he submitted were the basis for the subsequent World Bank loan which financed the construction of these

buildings. Richard Corstvet and Theodore Staley initiated research in microbiology, and Sidney Ewing studied parasite problems in Guatemala and worked with the faculty on teaching and research methods in parasitology. Other short-term consultants included Dennis D. Goetsch, Lester Johnson, John H. Venable, J. Wiley Wolfe, Leslie E. McDonald, Karl R. Reinhard, Andrew Monlus, E. Wynn Jones, Ervin W. Schroeder, Clifford H. Burton, Charles W. Nichols, Eugene M. Jones, James C. Hillier, Donald G. Wagner, Richard F. Frahm, Willard E. Rhynes, and Billy C. Ward. Administrators who reviewed the project were William S. Abbott, Director of the Office of International Programs, Glenn C. Holm and later William E. Brock, when each was Dean of the College of Veterinary Medicine, and Robert B. Kamm, President of Oklahoma State University.[10]

From 1968 through 1971 OSU teams conducted extension short courses and seminars in veterinary medicine and animal science in Central American countries, but the two major efforts were made in the summers of 1968 and 1969. In the summer of 1968 three OSU faculty members joined Barto, who was serving as Chief Coordinator at that time, and conducted a series of conferences and short courses in Guatemala, Honduras, and El Salvador for veterinarians and livestock owners. Allen D. Tillman lectured on nutrition for beef cattle, Milton Wells covered reproductive physiology, and Eric Williams demonstrated surgical techniques. In addition to these extension conferences, Tillman and Wells lectured to students and faculty of the veterinary school at San Carlos University, and assisted faculty in evaluating and planning teaching, research, and extension programs for the Animal Science division of the veterinary college. In 1969 Otto Hoehne and E. J. Turman from the Department of Animal Science at OSU joined veterinarians Eric Williams and Duane

Peterson to conduct extension short courses in Costa Rica and Nicaragua. These specialists also lectured to students and faculty at the University of San Carlos.[11]

The project with the Council of Superior Universities in Central America and with the Regional School of Veterinary Medicine and Animal Science at the University of San Carlos was, in many ways, the most successful international project conducted by OSU. By serving through this one school OSU was able to benefit all countries in Central America.

In addition, the faculty of the Department of Agricultural Economics at Oklahoma State participated in a far-ranging program designed to develop agricultural resources in Columbia. In 1966 the University of Nebraska entered into an agreement with AID to provide technical assistance to Columbia in several fields of agriculture, including agricultural economics. In the 1960s Columbia's population was growing at a rate of more than three percent a year, but food production was not keeping pace. Malnutrition and starvation were problems facing that nation, and the situation was growing more serious because of lagging food production. The agricultural potential was there, but it was not being realized.

In March of 1966 AID granted a contract to the University of Nebraska to serve as the principal contractor for a broad-based agricultural program in Columbia. Because of the scope of the project and the large number of personnel needed, however, the University of Nebraska asked other schools in the Mid-American State Universities Association to assist in the program. The MASUA consortium, which included OSU, provided necessary technical and educational services for

the Columbian project.[12]

The Ford Foundation, Kellog Foundation, and Rockefeller Foundation had been active in Columbia for many years, and they helped AID fund the multi-million dollar project. In May of 1966 the Ford Foundation signed an agreement with the government of Columbia, through the Columbian Institute of Agriculture (ICA), to establish an agricultural economics program in that country. The Ford Foundation provided $806,756 for this project, which was to be coordinated under the administrative umbrella of the Nebraska Mission. The object of the project was to develop a cadre of professional agricultural economists in Columbia by "enhancing the competence of Columbians presently in the profession" and by "improving training at the undergraduate level and providing graduate training for those interested in careers in the profession."[13]

Oklahoma State's involvement with the Ford Foundation in Columbia began with the consulting work of James Plaxico, Head of the Department of Agricultural Economics at OSU. Plaxico served in Columbia as a consultant to the Ford Foundation to analyze the agricultural economics situation there and to make recommendations. Then in February of 1967 Daniel Badger, Professor of Agricultural Economics at OSU, toured Columbia with Glen Vollmar, Head of the Department of Agricultural Economics at the University of Nebraska. Badger, who was to begin a two-year tour of duty in Columbia in July of that year, felt the trip helped him "crystallize the Agricultural Economics program and allowed some initial objectives to be established." He and Vollmar placed priority on taking an inventory of agricultural economists and students, developing teaching programs, establishing a professional society of agricultural economics, and initiating research and extension programs.[14]

In July of 1967 Badger arrived in Bogota, the capital of Columbia, and joined Loyd K. Fischer from the University of Nebraska, Max Bowser from OSU, and Christopher Andrew. The latter two were graduate students who had completed all requirements for the Ph.D. in agricultural economics except the dissertation. They were to research a selected topic in Columbia and prepare a report which also would serve as their doctoral dissertations. James Driscoll from Oklahoma State joined this staff in November of 1968; his duties were similar to those of Badger.[15]

Badger and Bowser returned to Oklahoma in July of 1969 and Driscoll returned the following year. In this short period they accomplished much toward developing programs in agricultural economics at the campuses of the National University and in research and extension activities. Badger helped develop the curriculum for the new master's degree program in agricultural economics offered by ICA in conjunction with the National University in Bogota, and in addition Badger taught, in Spanish, three graduate courses: Production Economics, Research Methodology, and Resource Economics. Along with the other American advisors, Badger helped organize a series of seminars for staff of ICA, for students in the graduate program and for undergraduate students and faculty of the National University. These lecture series on agricultural economics began in January and continued periodically through June of 1968; lectures lasted from one to two hours, and attendance averaged twenty people per lecture.[16]

During Badger's tour of duty he worked on developing excellence in academic programs and on achieving a close, smooth-working relationship between ICA and the National University because of the unique relationship which existed between the two. Before 1966, agricultural economics

had not been offered as a separate academic degree program on the campuses of the National University, although some agricultural economics courses had been taught, and there were no graduate programs in any field of agriculture. When the Columbian Institute of Agriculture was established by the government, it was charged with developing graduate agricultural programs in conjunction with the National University. Badger and other American advisors worked closely with officials of ICA and faculty and staff of the National University to establish and develop undergraduate and graduate programs in agricultural economics.[17]

Another effort to establish agricultural economics as a profession was the organization of a Columbian association of agricultural economists. The organizational meeting was held in July of 1967, and official meetings followed in October of 1967, February of 1968, March of 1969, and annually thereafter. American advisors also helped establish a professional journal patterned after the American agricultural economics journal. Members of the professional society met annually, presented papers, and published a journal of the proceedings. Advisors also encouraged professionalism and academic excellence by upgrading libraries at the National University schools at Bogota, Palmira, and Medellin in the areas of agricultural economics. They compiled lists of important textbooks, journals, and related books in that field, and helped purchase those materials with contract funds and money provided by ICA and the National University. The OSU advisors helped select and process twenty-five students, instructors, and working professionals in Columbia for graduate fellowships abroad. Many of these studied at Oklahoma State University.[18]

Perhaps the most significant contributions of Badger and other OSU

personnel was the establishment of research projects in farm management and production economics. Badger worked with Bowser on a project in potato marketing and with Andrew on a study of beef cattle marketing, supervising the research and writing of those two students on their doctoral programs. The result of these studies were made available to farmers, government officials, ICA, and other interested groups.[19]

Other OSU faculty members contributed to the broad-based Nebraska Mission in Columbia. Plaxico, who earlier had served as a consultant to the Ford Foundation, returned to Columbia in 1968, serving thirteen months as a direct-hire representative of the Ford Foundation. As Program Officer he coordinated and supervised all agricultural projects of the Ford Foundation in Columbia. Wesley Hobbs from the staff of Oklahoma State Tech served in Columbia as chief advisor to the agricultural engineering department in ICA. And Alex Warren from the Extension service at Oklahoma State worked in the Animal Science phase of the Nebraska Mission.[20]

Faculty and staff members of the College of Business Administration also contributed to OSU's international efforts. Mike Applegate, Germain Boer, Julian H. Bradsher, and Mohamad W. Khouja served abroad for short periods as consultants and lecturers and in similar roles. John C. Shearer, Professor of Economics, did short-term consulting work for the Organization of American States, United Nations, Ford Foundation, and Inter-American Development Bank. In addition to his consulting work, Shearer researched and published extensively on topics related to international manpower problems and the "talent migration" of foreign students and scientists to the United States. In 1962 and 1963 Richard H. Leftwich served as principal advisor for an economics project in

Chile sponsored by the University of Chicago.[21]

From the fall of 1966 through the summer of 1968, Ansel M. Sharp, Professor of Economics at Oklahoma State University, served with the Ford Foundation as an economic advisor to the Ministry of Economic Planning and Development in the Government of Kenya. In 1966 Edgar Edwards, Professor of Economics at Rice University, contacted Sharp about working with the Ford Foundation in Kenya. Edwards, who had worked with the Ford Foundation earlier, recommended Sharp to that organization, and Sharp was granted a leave of absence by the OSU Board of Regents to work directly with the Ford Foundation, departing for Africa in the fall of 1966.[22]

At that time the Ford Foundation was working with the government of Kenya to solve economic problems relating to urban crowding and other social problems in an emerging country. The Ford Foundation hired economic advisors to work directly with government officials in the Ministry of Economic Planning and Development in solving these problems and proposing long-range economic plans. These advisors also trained Kenyan counterparts to take over when they left. Sharp was assigned to advise the Minister on broad policy matters, but more specifically to work on program development for housing problems, transportation, and local government. He worked in the Ministry under an assigned government official on a day-to-day basis, and consulted with the Minister on special programs about once a month. Sharp and his family lived in Nairobi, the capital of Kenya; Sharp admitted that before he departed for Africa, he "did not know what to expect, and having seen lots of movies, I had all kinds of visions of what I might see and what I might come in contact with." But he found Nairobi to be a

"sophisticated city..., so extremely modern that it is hard to describe." There were excellent medical facilities and school systems, and he and his family "lived in a very modern house with all of the luxuries of any American home."[23]

Sharp made important contributions to the economic development of Kenya in the two years he served there. He developed a systematic grant system that was put into law while he was there; this grant system allocated certain amounts of money from the central government to local governments scattered throughout Kenya. Sharp also developed a scheme for allocating government funds to help build low-cost housing for lower income families, an important step in alleviating sub-standard living conditions in crowded suburban Nairobi and Mombasa, and in other areas in the country. Another contribution made by Sharp was the building of modern paved roads. When he arrived in Kenya, there were no paved highways from Kenya into neighboring countries. He urged construction of modern highways and other important transportation links, and by the time he left paved roads were nearly completed into Tanzania and Uganda, while the road to Ethiopia was well underway.[24]

Assistance needed by developing countries was usually in agricultural and technical fields, but the College of Arts and Sciences supported OSU's growing role in international education whenever possible. An important support function offered through the College of Arts and Sciences was the development of the English Language Institute to teach international students, training in the United States, adequate skills in reading and speaking English. To help develop an interdisciplinary course of studies on education and culture in eastern Africa, faculty members of the College of Arts and Sciences at OSU

toured Ethiopia, Uganda, Tanzania, and Kenya from June to August of 1970. Among those making the trip were Hugh and Hazel Rouk, James E. Kirby, James R. Ellis, Ronald P. duBois, Paul C. Denny, and William H. Kitts.[25]

In the mid-1960s Oklahoma State received grants from the National Science Foundation to teach extension courses on modern mathematics and science to high school teachers. This training was necessitated by the technological explosion triggered by the United States-Russian "race for space" and the subsequent introduction of modern principles of mathematics into the curriculum of secondary schools. This program, supervised by Robert C. Fite, Director of Extension for the College of Arts and Sciences, led to OSU's involvement in two unique international education projects.

In 1964 OSU signed an agreement with the Federal government to teach courses in modern mathematics to the Dependent Schools of the United States Overseas Military in Southeast Asia and the Pacific. From 1964 to 1967 Jimmy Gardner, June Burgess, and Winnefred Osner taught intensive short courses in modern mathematics to service personnel and their dependents. When they completed a course, they would move on to another base, serving as itinerant instructors throughout the Pacific. In 1964 the National Science Foundation asked Oklahoma State to develop a "science materials training project" to assist college instructors in Central America. The Council of Superior Universities in Central America (CSUCA) had requested assistance in helping set up science projects and laboratory experiments at their schools, and this NSF funded project provided a mobile van, operating out of San Jose, Costa Rica, that traveled to universities in Central America on a regular basis. Wendall

Spreadbury and Lawrence Przekob operated this mobile laboratory for OSU from 1965 to 1968, setting up laboratory demonstrations and leaving badly-needed equipment at the schools.[26]

From 1967 to 1973 zoology professors from Oklahoma State University conducted basic research and studied fish populations of Lake Atitlan in Guatemala. Before 1958 the fishing industry there had helped support twenty-three villages and towns surrounding the lake, but the introduction of bass, crappie, and other predatory species into the lake nearly ruined the once flourishing fishing industry. These predatory fish fed on the native species, reducing them to near extinction. Catholic churches in Oklahoma supported a mission in Santiago, Guatemala, which lay on the south end of Lake Atitlan, and two members of the mission board, A. F. Boudreau, Jr. and W. E. Leroux of Tulsa, Oklahoma, financed a study of the lake, hoping to improve the fishing industry and hence the economic plight of the native fishermen.

In July and August of 1967 Troy Dorris and Robert Summerfelt from the Department of Zoology at Oklahoma State studied Lake Atitlan to determine the size and structure of existing fish populations, to evaluate the actual and potential productivity of the lake, and to develop improved methods of fish harvest. Convinced of the need for further research, Dorris and Summerfelt wrote a grant proposal to the National Science Foundation to conduct basic scientific limnological research on the lake and applied research on fisheries. NSF funded the project, beginning in July of 1969, for basic research only. However, Boudreau and Leroux provided private money for fishery research to be conducted in conjunction with the limnological studies.

From January of 1970 through June of 1971 two graduate research

assistants from OSU and their wives lived in Guatemala, collecting important data and conducting research on Lake Atitlan. Jeff Johnson lived on the north shore of the lake and collected limnological data; David Hughes lived near the Catholic mission at Santiago on the south end of the lake and worked on fishery problems. Dorris helped install equipment and establish working procedures in January of 1970, and he and Summerfelt visited the project at least once every six months for two-week periods to help the graduate assistants. The NSF grant was renewed in 1972 and continued through 1973. The Guatemalan project contributed greatly to the basic knowledge of Lake Atitlan and its delicate ecosystem and helped introduce more effective fishing gear among the native fishermen.[27]

From 1970 through 1974 five professors from Oklahoma State University taught graduate courses in mathematics at the University of Carabobo in Valencia, Venezuela, in cooperation with that University and the University of Madrid in Spain. This unusual international educational consortium evolved from events beginning in the summer of 1969. Freddy Mulino Betancourt, Secretary of the University of Carabobo, wrote a letter to Oklahoma State indicating his school's interest in sending some of its faculty, "who are presently teaching in the Engineering and Business Administration Schools, to do a Post Graduate course in Mathematics." Mulino indicated that his University was "interested in considering the possibility of establishing an agreement with an American Institution, which could offer us such a program."[28]

Gerald Goff, Professor of Mathematics, answered Mulino's letter and enclosed curriculum information on the Doctor of Education degree in Mathematics. Mulino responded with another letter and then a telephone

call in November, indicating that he and his wife would be in the United States in December of 1969, and asked to visit the campus. Mulino visited with the faculty of the Department of Mathematics in the College of Arts and Sciences and talked with Norman Durham, Dean of the Graduate College, George Gries, Dean of the College of Arts and Sciences, and President Kamm. Mulino proposed a cooperative program between the universities to train Venezuelans at the University of Carabobo at the master's degree level; professors from Oklahoma State and the University of Madrid would be teaching these graduate courses. After master's level work had been completed, these professors would obtain leaves of absence from Carabobo to complete requirements for the doctorate at OSU. All master's degree course work taken at the University of Barabobo would be transferable.[29]

In April of 1970 Goff traveled to Venezuela and met with Mulino and other officials of the University and with Pedro Garcia of the University of Madrid to work out a preliminary agreement between the three schools and discuss curriculum and transfer of credit hours. Then Goff and Mulino flew to Madrid in May to complete plans with officials of the University of Madrid and the government of Spain. A final agreement was not reached until April of 1971 when the presidents of the three universities signed a formal agreement; however, OSU initiated the program in September of 1970 on the basis of the temporary agreement that had been reached at that time.[30]

Goff taught a graduate course in mathematics at the University of Carabobo in the fall of 1970. Douglas Aichele followed in the spring of 1971, and James Maxwell in the summer of 1971. Craig Wood taught in the summer of 1972, and Shair Ahmad taught every summer from 1971 through

1974 and in the fall of 1971 and spring of 1974. Expenses for visiting professors were paid by the University of Carabobo from a grant received from the government of Venezuela, but the budget was austere. Each visiting professor negotiated his own salary, and travel expenses to and from Venezuela and living allowances did not include provisions for his family. This was the reason for the short teaching terms of OSU professors, who had to leave their families behind.

Goff's experiences were typical of the other instructors. He taught a class for forty-three teachers and other professionals off campus. He taught four days a week in Valencia and one day off campus. Of the forty-three students, twenty-nine completed the course, but Mulino explained to Goff that previous to that time visiting professors usually had been able to retain only about ten percent of their original enrollment.[31]

CHAPTER IX

LEGACY OF INTERNATIONAL LEADERSHIP

> We can all be proud that our university has chosen to light a candle rather than to curse the darkness.
>
> --Luther H. Brannon, Principal Representative of the Oklahoma State University contract program in Ethiopia

In the quarter-century from 1951 to 1976, Oklahoma State University established a reputation for excellence in international education. This commitment to international education begun in 1951, continued to grow into a fundamental philosophy of service, and international programs became an integral part of the educational outreach of Oklahoma State. Several factors influenced OSU's emphasis in international education; the most important was the leadership provided by the three presidents who served during this quarter-century.

Henry G. Bennett gave the original impetus and early philosophy of international service. His strong sense of Christian commitment and concern for the under-privileged people of the world was evident in his personal life, his presidency, and his service to his country. He propelled OSU to national attention through his international activities and his work as the first Administrator of the Point Four program, and along with President Truman he defined the purpose and importance of international technical assistance to developing countries. More important for Oklahoma State and other colleges and universities, he

pioneered in the development of university contracts abroad. The first international technical assistance program initiated under the Point Four program was in Ethiopia, and Oklahoma State received the contract to backstop that project.

After Bennett's tragic death in December of 1951, Dr. Oliver S. Willham continued OSU's participation and leadership in international education. Under Willham's direction, OSU initiated international projects in many countries, including major long-range programs in Ethiopia, Pakistan, and Central America. His encouragement and administrative support were important to the success of these and other technical assistance projects. Willham traveled to Washington, D. C. and overseas on many occasions, offering moral support and assistance to OSU personnel, and he worked on campus to promote the concept of international service. He held deep convictions about OSU's responsibility to help build a better world, believing that "history will record Point Four as one of the great historical events in man's development in the world." And Willham's presidency ensured OSU's continued participation in international technical assistance projects.[1]

Dr. Robert B. Kamm assumed the presidency in 1966, and in the following decade he contributed greatly to the continuing leadership of Oklahoma State in international education. Under his direction the original concept of technical assistance projects abroad was expanded to include other kinds of international activity, including services and programs on campus. During Kamm's presidency the number of international students enrolled at Oklahoma State increased from 491 in the fall of 1966 to 1002 in the fall of 1976, and the three campuses of Oklahoma State University (Stillwater, Okmulgee, and Oklahoma City) included

international students from more than seventy countries.

President Kamm influenced and emphasized the international role at OSU through his personal philosophy and his many activities in support of international education. During his decade of service, President Kamm visited many foreign countries and toured OSU projects abroad. In the summer of 1967 he traveled to Ethiopia and Pakistan, viewing OSU projects there and then went to Bangkok, Thailand, to help initiate a vocational education project in that country. In the summer of 1969 Kamm returned to Thailand to review the progress of the Oklahoma State project there, and in 1970 he and his wife toured Central and South American countries, inspecting the veterinary medicine project at San Carlos University in Guatemala and the agricultural economics project in Columbia. In 1973 the Kamms traveled around the world, stopping at Israel, Ethiopia, Greece, Pakistan, Bangladesh, and Singapore; then in 1974 President Kamm participated in a remote sensing conference held in Cairo, Egypt. President Kamm's travels and broad experience in international activities convinced him that the "most effective way to share our way of life is on a people to people basis [and] OSU has been doing this so effectively through its people the world over." But Oklahoma State had benefited in return, for President Kamm believed that, because of its international involvement, "OSU is a far better university, it is a far richer university....Having the different nations, different cultures represented on our campus makes us a better educational institution."[2]

President Kamm's international activities and his commitment to serving and helping emerging countries led to his appointment in April of 1976 by President Gerald R. Ford as the United States' representative

to the forty-member Executive Board of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). This important and sensitive part-time post was an ambassador-level position. Kamm attended the UNESCO Executive Board meetings in Paris, France, in May of 1976 and the General Conference of the 136 members of UNESCO at Nairobi, Kenya, in the fall of 1976. Kamm gained some insights and impressions of the importance of the United States' participation in UNESCO and other international forums. He felt that "a strong USA is needed as never before; and if we will hold high, in all of our international dealings, we will help great numbers of the world's people to achieve and to enjoy the freedoms which are ours."[3]

Another factor that contributed to the success of OSU's international endeavors was the quality of faculty and staff that served overseas. In 1952 President Willham established an important precedent when he selected the OSU personnel to serve abroad. When he appointed Luther Brannon Principal Representative for the OSU contract program in Ethiopia, he told Brannon: "you can have anyone you can persuade to go." In Ethiopia, as in all its other international programs, Oklahoma State continued to release highly qualified faculty and top administrators for service overseas. Al Darlow, Vice President for Agriculture, was a member of the original OSU survey team in Ethiopia; Vice President Randall Klemme did consultancy work for Ford Foundation and later served in Pakistan as Principal Representative for that organization; and vice presidents James H. Boggs and Wayne W. Miller visited OSU's vocational education project in Thailand. Deans who served abroad included Randall J. Jones, J. Andrew Holley, Helmer Sorenson, Donald Robinson, Edward R. Stapley, Melvin Lohmann, Lela O'Toole, Glenn C. Holm, William

E. Brock, and others. In addition to deans and vice presidents, many directors and department heads served ably and unselfishly overseas. The dedication, commitment, and competency of these individuals and other Point Four pioneers contributed greatly to the success of the international efforts of Oklahoma State.[4]

Oklahoma State was able to recruit outstanding educators and administrators from on campus to serve on international assignments because of the equitable treatment and support accorded them by university policy. Salary and other benefits of OSU personnel serving abroad were similar to those of their colleagues on campus in all respects, including tenure and consideration for promotion; moreover, their international service was recognized, rewarded, and publicized by the University. Other faculty and administrators who served overseas for Federal agencies or private foundations were granted official leaves of absence from the University, and upon their return to the campus they assumed their former positions or duties of similar responsibility, status, and pay. These progressive policies were supported by members of the Board of Regents for Oklahoma State University. These regents were men with foresight and vision, men who understood the importance and benefits of international service to the world and to Oklahoma State University. Encouragement, leadership, and administrative support for international outreach, begun in the 1950s under R. T. Stuart, Fred G. Drummond, and other far-sighted regents, grew and continued in the 1970s.

Many factors contributed to the development of these highly successful and nationally recognized programs of international education at Oklahoma State. The most important reasons for this unique achievement were presidential leadership committed to international service,

dedicated and well-qualified faculty and staff serving abroad, favorable university policies supporting international endeavors, and support services on the campus at Stillwater. The Office of International Programs, established in 1951, provided support, stability, and continuity to Oklahoma State's international projects during OSU's quarter-century of international service. One man served as Director of that office since its inception, William S. Abbott; he deserves much credit for the success of Oklahoma State's international efforts. Abbott was appointed in 1951 and served under Vice President Randall Klemme, helping train and prepare OSU staff members and their families for service in Ethiopia and rendering valuable service to the Principal Representative and other OSU personnel in Ethiopia. This advice, assistance, and encouragement to staff members serving overseas continued through more than twenty other international projects over a twenty-five-year period.[5]

Another important mission of the Office of International Programs, which evolved in the 1960s and 1970s, was the effort to initiate, support, and promote international activities and intercultural awareness on campus. President Kamm stressed this in 1976, saying that OSU's international involvement was "the greatest that it has ever been" but also he pointed out that these efforts were "much more varied." And the Office of International Programs was instrumental in helping develop many of these "varied" international activities. The English Language Institute (ELI) was an excellent example. Many of the contractual programs entered into by OSU called for the training of international students at Oklahoma State; this often involved teaching these students the English language. The Office of International Programs and the Department of Foreign Languages jointly developed ELI to operate on a part-

time basis, but participant training and enrollment increased, necessitating the initiation of ELI on a full-time basis beginning in March of 1975. This institute was placed under the new School of Languages and Literature in the College of Arts and Sciences, with Walter Frenk serving as director.[6]

One outgrowth of ELI was an agreement with Japan to establish a pre-admission training program for Japanese students beginning in May of 1977. Twenty students are scheduled initially, but that number is to be increased eventually to 100. Students will work in the English Language Institute, review high school level college preparatory courses, and participate in cultural enrichment activities. OSU administrators felt that similar programs with other countries could be established in the future as a result of having ELI available year round.[7]

Hugh Rouk, Director of International Education for the Office of International Programs, guided OSU's involvement in another international experience. Oklahoma State was a member of the World Campus Afloat Association of Colleges and Universities, and Rouk served as Chairman of the Executive Board of that association beginning in 1972. Many OSU students and faculty participated in the World Campus Afloat program. When Chapman College dropped its academic sponsorship of World Campus Afloat, Rouk and other members of the Executive Board met in Kansas City, Missouri, in November of 1975 to reorganize the association into a new International Association for Shipboard Education, of which Rouk was selected Chairman of the Executive Board. This association served as an advisory body to the Institute for Shipboard Education, which it helped organize and promote. The Institute was established as

a separate organization responsible for organizing, financing, and managing educational programs. The Institute for Shipboard Education affiliated with the University of Colorado, which granted academic approval and credit for courses offered through that Institute. The University of Colorado also provided faculty, enrolled students, and maintained transcripts and other academic records for students participating in the program.[8]

In April of 1976 Oklahoma State University celebrated its Silver Anniversary of participation in international technical assistance projects. On April 22 and 23 a two-day conference on "Imperatives for Inter-nation Cooperation" focused on "future roles of higher education, industry, and government in working with nations of the world in their development." Distinguished, nationally known speakers addressing the conference were Sterling Wortman, Vice President of the Rockefeller Foundation; Daniel G. Aldrich, Jr., Chancellor of the University of California at Irvine and Chairman of the Council of Presidents of the National Association of State Universities and Land Grant Colleges; M. A. "Mike" Wright, Chairman and Chief Executive of Exxon; and United States Senators from Oklahoma Henry G. Bellmon and Dewey Bartlett. The highlight of the conference was the International Education Banquet on the evening of April 22, which paid tribute to the more than 500 OSU faculty, administrators, and husbands and wives who had served abroad on University projects.[9]

The Silver Anniversary conference held at OSU was indicative of the transformation that had occurred at Oklahoma State. The institution had grown from a small regional agricultural and mechanical college on the Great Plains to a major university and citadel of international learning.

During the quarter-century from 1951 to 1976, remarkable intellectual growth and maturity had been achieved, international outreach had been firmly established as a fundamental mission of the University, and the traditional land grant college roles of instruction, research, and extension had been expanded to include concepts of international service and intercultural awareness. In the bicentennial year of 1976, Oklahoma State University reflected on its heritage of international service and rededicated itself to building "a world better tomorrow than today."[10]

ENDNOTES

CHAPTER I

[1]Inscription on the dedicatory marker on the International Mall at Oklahoma State University; inscription at the base of pedestal supporting the globe and dove on the International Mall at Oklahoma State University; "Flags Fly over International Mall," Oklahoma State Alumnus Magazine, XIII (November 1972), 26; "International Appreciation," Oklahoma State Alumnus Magazine, XIII (March 1975), 5.

[2]Miscellaneous material in "Henry G. Bennett Distinguished Service Award" Folder, Office of the President, Oklahoma State University, Stillwater, Oklahoma, hereafter cited as Office of the President.

[3]Newspaper clippings, Guyer to Kamm, March 21, 1969, and Kamm to Guyer, March 25, 1969, in "Institute of International Education-Reader's Digest Award" Folder, Office of the President; Institute of International Education-Reader's Digest Distinguished Service Award quoted in International Programs of Oklahoma State University (Stillwater: Office of International Programs, Oklahoma State University, n.d.), 2-3. Original award and letter were framed and are on display in the OSU Student Union.

[4]"Senate Resolution No. 13: A Concurrent Resolution Applauding and Commending Oklahoma State University for its Continuing Program of International Education and Service," Journal of the Senate, Thirty-Second Oklahoma Legislature, First Session, 1969, 317-319.

[5]"Department of Special Services International Student Advisement Office Annual Report, 1975-1976" and "Staffing Pattern for International Student Advisement Office, Oklahoma State University, 1968-1976" in the files of the Department of Special Services, International Student Advisement Office, Oklahoma State University, Stillwater, Oklahoma.

[6]Interview with William S. Abbott, Stillwater, Oklahoma, August 17, 1976; interview with Hugh F. Rouk, Stillwater, Oklahoma, August 17, 1976.

[7]U. S. Congress, 81st, First Session, Senate Document No. 5, Inaugural Address of Harry S. Truman, President of the United States, January 20, 1949 (Washington: Government Printing Office, 1949).

[8]Morrill Act, ch. 130, 12 Stat. 503 (1862).

[9]Lucrece Beale, People to People: The Role of State and Land-Grant Universities in Modern America (Washington: Office of Research and Information, National Association of State Universities and Land-Grant Colleges, 1974), 89; Herman R. Allen, Open Door to Learning: The Land-Grant System Enters Its Second Century (Urbana: University of Illinois Press, 1963), 50-51.

[10]Truman to Kerr, July 13, 1950, and Kerr to Truman, July 14, 1950, Official File 319 (Ethiopia), "The Papers of Harry S. Truman," Truman Library, Independence, Missouri.

[11]Phillip Reed Rulon, "Henry Garland Bennett: The Father of the 'Great Adventure' in University-Contracts Abroad," Red River Valley Historical Review, II (Summer 1975), 255-272.

[12]Speech, "Point 4: Adventure in Education," in Jonathan Bingham, ed., "Speeches and Articles by the Late Dr. Henry Bennett, As Administrator, Technical Cooperation Administration, Department of State," "The Papers of Henry G. Bennett," Truman Library, Independence, Missouri.

[13]"Mechanic of Christianity," Oklahoma A. & M. College Magazine, XXIII (February 1952), 20-21.

[14]Statement by President Harry S. Truman on the death of Henry G. Bennett quoted in "Truman Gives Statement," Daily O'Collegian (Stillwater, Oklahoma), January 10, 1952, 6.

[15]Department of State News release, "Point Four Administrator Visits Ethiopia," No. 612, July 10, 1951, "Ethiopia Contract (TCA)" and "Conference on Imperial Ethiopian College of Agriculture and Mechanical Arts, July 2, 1952," "Ethiopia," Subject File, Presidents' Papers, OSU Collection, Oklahoma State University Library, Stillwater, Oklahoma, hereafter cited as OSU Collection.

ENDNOTES

CHAPTER II

[1][Luther H. Brannon] Oklahoma State University in Ethiopia, 1952-1968 (Stillwater: Oklahoma State University Press, 1969), 58-59. This book is the final report for the Oklahoma State University-United States Agency for International Development contract program in Ethiopia.

[2]Richard M. Caldwell, "A & M Takes Global Obligation," The Oklahoma A. & M. College Magazine, XXIII (June 1952), 18-21.

[3]Luther H. Brannon, Our Ethiopian Adventure (Stillwater: Oklahoma State University Press, 1966), 1-3; Interview with Luther H. Brannon, Stillwater, Oklahoma, May 17, 1976; "Introducing the Director of Extension," The Oklahoma A. & M. College Magazine, XXVIII (December 1956), 12.

[4][Brannon] Our Ethiopian Adventure, 2-3; Interview with Luther H. Brannon, Stillwater, Oklahoma, May 17, 1976; Hi W. Staten, "Groundwork For A College," The Oklahoma A. & M. College Magazine, XXIV (March 1953), 16-19; [Joseph S. Vandiver] Oklahoma A & M In Ethiopia, Number 2 (Stillwater: Oklahoma State University Press, 1955), 1.

[5]Hanson to Morrison, October 15, 1951, "Ethiopia," Subject File, Presidents' Papers and Edward L. Morrison, "Travels Through Ethiopia," (Unpublished manuscript), OSU Collection, "Ethiopian Culture is Discussed at IRC," Daily O'Collegian (Stillwater, Oklahoma), October 17, 1952, 8.

[6]"Conference on Imperial Ethiopian College of Agriculture and Mechanical Arts, July 2, 1952," 13, "Ethiopia," Subject File, Presidents' Papers, OSU Collection.

[7]Staten, "Groundwork For A College," The Oklahoma A. & M. College Magazine, XXIV, 17; Interview with Hugh F. Rouk, Stillwater, Oklahoma, May 18, 1976.

[8][Brannon] Oklahoma State University in Ethiopia, 1952-1968, 36; Brannon, Our Ethiopian Adventure, 4.

[9][Brannon] Oklahoma State University in Ethiopia, 1952-1968, 18; Staten, "Groundwork For A College," The Oklahoma A. & M. College Magazine, XXIV, 16-19.

[10]"Alumni Chapters Are in Ethiopia," The Oklahoma A. & M. College Magazine, XXIV (March 1953), 19.

[11][Joseph S. Vandiver] Oklahoma A & M in Ethiopia, Number 3 (Stillwater: Oklahoma State University Press, n. d.), 2; Staten, "Groundwork For A College," The Oklahoma A. & M. College Magazine, XXIV, 19.

[12]Interview with Hugh F. Rouk, Stillwater, Oklahoma, May 18, 1976.

[13]Ibid.; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 9-10; [Vandiver] Oklahoma A & M in Ethiopia, Number 3, 1-3; Joseph S. Vandiver, Oklahoma State University in Ethiopia, Number 8 (Stillwater: Oklahoma State University Press, 1961), 4-5; Robert C. Doty, "U. S. Instructors Teach Ethiopians," New York Times, December 28, 1954, 6.

[14]Interview with Hugh F. Rouk, Stillwater, Oklahoma, May 18, 1976; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 10; Brannon, Our Ethiopian Adventure, 4.

[15]Interview with Hugh F. Rouk, Stillwater, Oklahoma, May 18, 1976; Doty, "U. S. Instructors Teach Ethiopians," New York Times, December 28, 1954, 6; Brannon, Oklahoma State University in Ethiopia, 1952-1968, 9-10.

[16][Brannon] Oklahoma State University in Ethiopia, 1952-1968, 10-12; [Vandiver] Oklahoma A & M in Ethiopia, Number 3, 4.

[17][Brannon] Oklahoma State University in Ethiopia, 1952-1968, 14; [Vandiver] Oklahoma A & M in Ethiopia, Number 3, 3.

[18][Brannon] Oklahoma State University in Ethiopia, 1952-1968, 14; Brannon, Our Ethiopian Adventure, 5.

[19]Interview with Luther H. Brannon, Stillwater, Oklahoma, May 17, 1976.

[20]Luther H. Brannon, and others, "Recommendations For A Program of Agricultural And Mechanical Arts Education for Ethiopia, 1953," 28 (unpublished, mimeographed manuscript), Ethiopian File, Office of International Programs, Oklahoma State University, Stillwater, Oklahoma, hereafter cited as Office of International Programs; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 18-22.

[21]Joseph S. Vandiver, Oklahoma State University in Ethiopia, 1952-1968, Number 6 (Stillwater: Oklahoma State University Press, 1958), 1-2.

[22]Conrad L. Evans, "History and Development of Physical Plant and Services Department, 1954-1968: College of Agriculture, Haile Selassie I University, Alemaya, Ethiopia," 2-6 (Unpublished mimeographed manuscript), Ethiopian File, Office of International Programs; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 52-68; "A & M To Take Building Plans Abroad," Daily O'Collegian (Stillwater, Oklahoma), November 16, 1955, 8.

[23]Scearce to Wilber, March 6, 1958, Nicholson to Willham, March 3,

1958, Nicholson to Wilber, March 11, 1958, and Willham to Nicholson, April 2, 1958, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

[24]Evans, "History and Development of Physical Plant and Services Department, 1954-1968...," 2-6; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 22, 24.

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[26]Parcher, "Tour of Duty Report, August, 1955-July, 1959," 3, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection; Evans, "History and Development of Physical Plant and Services Department, 1954-1968...," 6.

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[8]Joseph S. Vandiver, Oklahoma State University in Ethiopia, Number 7 (Stillwater: Oklahoma State University Press, 1959), 3, 5, 7; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 40-42; Willham to Nicholson, January 17, 1958, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

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[11]Joseph S. Vandiver, Oklahoma State University in Ethiopia, Number 5 (Stillwater: Oklahoma State University Press, 1957), 4-5; Vandiver, Oklahoma State University in Ethiopia, Number 7, 4; James E. Hedrick, ed., The Agriculture of Ethiopia, 12 vols. (Addis Ababa: n. p., 1964), XI, 8-13; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 15-17, 37-44, 70-72; "Agricultural Education in Ethiopia," (film produced by Oklahoma State University, n. d.), Audiovisual Center, Oklahoma State University, Stillwater, Oklahoma, hereafter cited as Audiovisual Center; "Our Ethiopian Adventure," (film produced by Oklahoma State University, 1969), Audiovisual Center. This film is part of the terminal report for the Oklahoma State University-United States Agency for International Development contract program in Ethiopia.

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[21]Vandiver, Oklahoma State University in Ethiopia, Number 8, 7-8; Vandiver, Oklahoma State University in Ethiopia, Number 5, 4-5; [Brannan] Oklahoma State University in Ethiopia, 1952-1968, 44-46.

[22]Vandiver, Oklahoma State University in Ethiopia, Number 5, 4-6; [Brannon] Oklahoma State University in Ethiopia, 1952-1968, 44-46.

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[32]Angerer to Willham, February 7, 1956, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

[33]Brannon to Willham, March 3, 1956, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

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[35]Ibid.; Willham to Angerer, February 15, 1956, Angerer to Willham, February 29, 1956, Brannon to Willham, March 3, 1956, Angerer to Willham, April 11, 1956, and Willham to Kessler, April 25, 1956, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection; Philip Reed Rulon, Oklahoma State University--Since 1890 (Stillwater: Oklahoma State University Press, 1975), 299.

[36]Angerer to Willham, August 6, 1956, Brannon to Willham, January 23, 1956, Brannon to Willham, February 1, 1956, and Eichholzer to Willham, February 6, 1956, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection; Interview with Luther H. Brannon, Stillwater, Oklahoma, May 17, 1976.

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[39]Jones to Eichholzer, April 12, 1957, and Jones to Abbott, April 30, 1957, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

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[45]Nicholson to Abbott, August 12, 1957, and Nicholson to Abbott, September 30, 1957, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

[46]Nicholson to Abbott, May 9, 1958, Nicholson to Abbott, August 30, 1958, Nicholson to Abbott, February 27, 1959, and Kleine to ICA/W, January 10, 1959, "Ethiopian College," Subject File, Presidents' Papers, OSU Collection.

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CHAPTER IV

[1]The Division of Engineering, Technology, and Architecture has had different names during the twenty-five years of this study. In 1951 this administrative unit was the Oklahoma Institute of Technology, after 1957 it was the College of Engineering, and in 1971 it was designated the Division of Engineering, Technology, and Architecture. That same year the name the OSU Technical Institute in the Division was changed to the School of Engineering Technology when it began offering four-year Bachelor of Science degree programs. The current names for both will be used throughout the twenty-five year period of this study.

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[4]Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 30; Interview with Donald W. Brown, Stillwater, Oklahoma, July 13, 1976; "Klemme Joins Ford; 'Whit' Is Rehired," The Oklahoma A. & M. College Magazine, XXIV (December 1952), 45; "Randall Klemme Speaks to IRC About Grants," Daily O'Collegian (Stillwater, Oklahoma), October 8, 1955, 7.

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[8]Stapley, "A Survey of Technical Education in Pakistan With Particular Reference to the Establishment of Technical Institutes, July 16, 1954," 26-27, 30, 39.

[9]Ibid., 43.

[10]Ibid., 17.

[11]McDaniel to Hasan, May 4, 1955, and McDaniel to Adams, May 4, 1955, in Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 188-191; Interview with Donald W. Brown, Stillwater, Oklahoma, July 13, 1976.

[12]McDaniel to Adams, May 4, 1955, and McDaniel to Hasan, May 4, 1955, in Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 188-191.

[13]"Memorandum of Agreement Between the Ford Foundation and the Oklahoma Agricultural and Mechanical College for Assistance in the Planning, Development, and Operation of Up to Three Technical Institutes in Pakistan," Pakistan (Technology) File, Office of Internal Audit, Oklahoma State University, Stillwater, Oklahoma, hereafter cited as Office of Internal Audit.

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[16]Interview with Donald W. Brown, Stillwater, Oklahoma, July 13, 1976; Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 29-30, 42.

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[18]Annual report of H. E. Degler, 1955, quoted in Adams, "Oklahoma

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[26]Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 45-46, 67-71.

[27]Ibid., 72.

[28]Ibid., 145-146.

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[31]Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 141-143.

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[33]Ibid., 16-19, 38, 48-50, 122-125, 147-148; Brown to Smuckler, January 23, 1968, and Brown to Smuckler, February 28, 1969, (Annual "Progress Reports"), Pakistan (Technology) File, Office of Internal Audit.

[34]Adams, "Oklahoma State University-Pakistan Technical Education Program, 1955-1971," 50-53.

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CHAPTER V

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[2]Doe, "An Analysis of Engineering Technical Education in Brazil," 8-9; Fonseca to Carlson, July 16, 1965 (Grant Proposal [translation]), 3, Brazil File, Office of the School of Occupational and Adult Education.

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[6]Ibid., 7.

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[9]Ibid., 23; Perry R. McNeill, "Final Report: Oklahoma State University-Ford Foundation Brazil Technical Education Program" (Unpublished report), 25-29, "Brazil Project Reports" Folder, Personal Papers of Perry R. McNeill, Stillwater, Oklahoma.

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[13]Henry P. Adams, "An Evaluation of the Accomplishments of the Special Commission on Operational Engineering, May 15, 1970" (Unpublished report), 1-2, Brazil File, Office of the School of Occupational and Adult Education; McNeill, "Final Report: Oklahoma State University-Ford Foundation Brazil Technical Education Program," 17; Adams, "Final Evaluation of the Oklahoma State University-Ford Foundation Project...," 35-38.

[14]McNeill, "Final Report: Oklahoma State University-Ford Foundation Brazil Technical Education Program," 17-24; Adams, "An Evaluation of the Accomplishments of the Special Commission on Operational Engineering, May 15, 1970," 4-6, 35.

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[19]da Silva to Nicholson, March 8, 1972, and Goncalves to Kamm, September 12, 1972, Personal Papers of Perry R. McNeill, Stillwater, Oklahoma.

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[22]"Report to the Ford Foundation on the Mid America State Universities Association Project at the National Engineering University, Lima, Peru" (Unpublished report), "Mid-American State University Association" Folder, M5, and "Resume: M. R. Lohmann," Office of the Dean, Division of Engineering, Technology, and Architecture, Oklahoma State University, Stillwater, Oklahoma; Interview with Melvin R. Lohmann, Stillwater, Oklahoma, March 11, 1976.

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[24]Interview with Charles F. Cameron, Stillwater, Oklahoma, August 2, 1976; Interview with Melvin R. Lohmann, Stillwater, Oklahoma, March 11, 1976.

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[29]Ibid., 1-3.

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[38]"Dr. M. R. Lohmann Assumes Duties As Dean," The Oklahoma A. & M. College Magazine, XXVII (September 1955), 12; "Resume: M. R. Lohmann," Office of the Dean, Division of Engineering, Technology, and Architecture, Oklahoma State University, Stillwater, Oklahoma.

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CHAPTER VI

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VITA 2

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