Terminal Report of a Two-Year Assignment as Chief of Party and Adviser to the Principal, Njala University College, beginning March 1, 1964.

University of Illinois AID Projects
Contract AID/Afr-132

R. W. Jugenheimer
Campus Director

T. A. McCowen
Assistant Director

R. T. Odell
Chief of Party

June 10, 1966
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The University of Illinois contracted with the United States Agency for International Development on August 16, 1963, to assist the Government of Sierra Leone in developing Njala University College. Prior to this time, Sierra Leone and AID representatives had visited five United States educational institutions in July 1962; the University of Illinois had been invited by the Government of Sierra Leone to participate in developing a new university, and a University of Illinois survey team had made a study of the agriculture and education development needs of Sierra Leone in February-March 1963.

The University of Illinois survey team spent seven weeks in Sierra Leone to determine the feasibility of establishing a new institution of higher learning, to set up guidelines for its development, and to make recommendations on the advisability of University of Illinois involvement in such a project. The report of the survey team was submitted to the United States AID Mission to Sierra Leone on March 25, 1963, and was printed as an official document of the Sierra Leone Government.

There was agreement among Sierra Leone Government, United States Agency for International Development, and University of Illinois representatives that creation of a new University of Sierra Leone would be desirable. The University of Illinois agreed to assist with the development, and the agreement was formalized in USAID Contract AID/Afr-132, which was signed on August 16, 1963.

Professors Karl E. Gardner and M. Ray Karnes served short-term assignments in Sierra Leone beginning in October 1963. They worked closely with Dr. S. Thomas Matturi, who had been appointed Principal of the new institution effective June 1, 1963, and with the Provisional College Council and USAID and Sierra Leone Government officials in the early stages of the planning for opening of Njala University College.

1/ Chief of Party and Adviser to the Principal, Njala University College, Njala, Sierra Leone, from March 1, 1964, to February 3, 1966; upon completion of this assignment, he returned to the University of Illinois Department of Agricultural Economics as Professor of Farm Management and Policy.

2/ Sierra Leone Government, "Education and Agricultural Development in Sierra Leone, Report of the University of Illinois Survey Team to United States A.I.D. Mission to Sierra Leone," Government Printing Department, Freetown. Members of the Survey Team were Karl E. Gardner, Professor of Nutrition and Associate Dean, College of Agriculture; M. Ray Karnes, Professor of Vocational and Technical Education and Chairman of Department; Russell T. Odell, Professor of Pedology; and James E. Crawford, University Housing Division.

Effective March 1, 1964, the writer was appointed Chief of Party and Adviser to the Principal and Dr. Frank H. Klassen was appointed Education Adviser, the first persons appointed to serve at Njala University College on two-year assignments. After several days of preparation and orientation on the University of Illinois campus, we departed on March 13 and arrived in Sierra Leone on March 17, 1964.

This report covers major accomplishments and developments during the period that the writer served as Chief of Party of the University of Illinois/USAID Contract group and Adviser to the Principal of Njala University College. The activities and accomplishments of the Chief of Party cannot be separated from those of the other members of the contract team. Likewise, because of the close relationship with the Principal in administration of Njala University College, it is not possible to identify the precise role played by each person. Therefore, this is a report of a group effort from the particular point of view of the person administratively responsible for the University of Illinois contribution under the contract with the United States Agency for International Development. Many details are omitted, some of which are included in other reports.

Status of Njala University College, March 1964

Njala University College was in its infancy in mid-March 1964; in fact, the new institution had not been legally born. It was formally created on June 22, 1964, when the Njala University College Act, which had been passed by the Sierra Leone Parliament on May 14, 1964, received the royal assent of the Governor General. Up to this time, the affairs of the embryonic institution had been guided by the Provisional College Council, which had held six meetings between June 21, 1963, and May 27, 1964. Dr. S. T. Matturi, who had acted as Principal since June 1, 1963, was in the United Kingdom searching for staff members during March 1964. Since June 1, 1963, he had devoted all of his time and energies to the planning of Njala University College and had worked closely with Professors Gardner and Karnes while they were on assignment at Njala.

Dr. Matturi was the only senior staff member who had been appointed and was on duty at Njala in March 1964. Mr. Henry M. Lynch-Shyllon had been appointed to the position of Registrar but was in the United States under the participant training provisions of the Contract from February 16 to April 17, 1964. Three employees of the Ministry of Agriculture and Natural Resources, who were later to join Njala University College, were at Njala: Mr. S. A. Kawa, Mr. I. I. May-Parker, and Mr. W. E. Taylor. There were also a number of junior staff and laborers employed by the Ministry who were later employed by Njala University College. All of the expatriate professional workers who had departed from Njala, and practically no research was being conducted at the experiment station.

The Njala oil palm station, formerly a substation of the West African Institute for Oil Palm Research, had lost all professional staff members, and the experiments were being supervised and data collected by a junior staff member.

See "Report of Progress and Plan of Work at Njala University College, March 1, 1964, through December 31, 1964," and "Report of Progress and Plan of Work, Njala University College, University of Illinois/USAID, January 1 to June 30, 1965." These reports are available from the Director, AID Projects, 340 University Armory, University of Illinois, Urbana. The report for the year beginning July 1, 1965, will include information for part of the period of this report.
Mr. A. H. Alghali. Some oil palm seeds and seedlings were being produced and distributed to farmers through the Ministry of Agriculture and Natural Resources. There was no formal relationship with the Main Station of the former West African Institute for Oil Palm Research near Benin City, Nigeria.

The Njala Training College for Teachers still had students and staff in residence. The facilities of this institution were to be handed over to Njala University College in August 1964.

The Rokupa Rice Research Station, formerly the West African Rice Research Institute, was being operated with a professional staff of five persons: Mr. H. D. Jordan, Director; Mr. R. Q. Crauford, Botanist; Mr. J. W. O. Jeffrey, Soil Chemist; Mr. A. J. Carpenter, Botanist; and Dr. F. Jean Jordan, Entomologist (part-time). Some excellent work had been done and was still under way at this station, but the administrative relationships to be established as the station became an integral part of Njala University College had not yet been clarified.

Mr. W. Dewey Green was serving at Njala on a short-term assignment as Adviser in Accounts and Records. The term of his appointment was from January 26 to June 15, 1964, and he arrived in Sierra Leone on February 4 to develop business office and accounting procedures for Njala University College.

University of Illinois/USAID Contract Staff

The original AID Contract provided for nine positions as follows: Chief of Party and Adviser to the Principal, Administrative Assistant, and advisers in teacher education, shop specialist, soils, crops, home economics, agricultural engineering, and agricultural extension.

As plans developed and staff needs were identified, requests for three additional positions were made: agricultural education, English, and animal science. The requests for amendment of the contract were initiated at Njala, and in due course were approved by the Sierra Leone AID Mission, the University of Illinois, and AID/Washington.

The original contract also provided for a person to serve as adviser to the Director of the Experiment Station in addition to serving as adviser in a subject-matter area. It was originally planned that this responsibility would be handled by the person serving in the soils position but, with the creation of a position in animal science, it was requested that the Adviser in Animal Science also serve in the research administration position. This request was approved.

The contract also provided for short-term assignments in positions approved by Njala University College, the Chief of Party, the USAID Mission to Sierra Leone, AID/Washington, and the University of Illinois.

The persons serving under each of the contract positions during the period from March 1, 1964, to February 28, 1966, were as follows:

Chief of Party and Adviser to the Principal

Chief of Party and Adviser to the Principal (Cont.)


Administrative Assistant


Adviser to the Director of Teacher Training


Roger K. Brown, February 1, 1966, to January 31, 1968 (title changed to Adviser in Teacher and Science Education).

Adviser to Agricultural Shop Specialist


English Language Specialist


Dan A. Wilson, February 1, 1966, to January 31, 1968 (title changed to Lecturer in English).

Adviser in Home Economics

Rena K. Roberts, September 14, 1964, to September 13, 1966 (recommended for and willing to accept a second two-year assignment).

Adviser in Agricultural Education


Adviser in Animal Science and to the Director of Agricultural Experiment Station


Adviser in Soils


Adviser in Extension


5/ In cases in which date is subsequent to February 28, 1966, it indicates end of contract term.
Adviser in Tropical Crops


Adviser in Agricultural Engineering

Position vacant.

The following served as short-term contract staff members:

Adviser on Accounts and Records


Adviser on Campus Planning


Adviser to the Registrar


Consultant in Animal Science


The Role of Adviser and Counterpart. In general, it is University of Illinois policy for each person serving on a two-year assignment to work closely with a national staff member. The contract staff member is referred to, in USAID terminology, as an adviser or counterpart to the staff member of the host country institution.

It is often stated that it is University of Illinois policy that no contract staff member is to be assigned to a new university, such as Njala University College, until the new university has appointed a person with whom the contract staff member is to work. This procedure permits the adviser to work with and improve the effectiveness of the staff member of the new institution and thereby makes it possible to have a continuing effect after completion of a two-year assignment.

While this policy is a sound one, there were some difficulties in following it at Njala University College without some flexibility and deviation. There was a very effective true-counterpart relationship in the following positions: Adviser to the Principal, teacher education (after appointment of the Dean of the Faculty of Education), home economics, soils, and crops. Lack of qualified personnel prevented development of a close counterpart relationship in several of the positions. The Adviser to the Agricultural Shop Specialist worked with several persons inasmuch as no person was available to give leadership in the broad area of industrial education with an agricultural emphasis. He also taught a course
in introductory physics in the absence of a qualified instructor. The English Language Specialist worked with all members of the staff in English. A Sierra Leonean was not available in the field of agricultural education, so the Adviser worked with an appointee from Ceylon, who had had training in agricultural education in the U.S. No senior staff member had been appointed in the field of animal science, and no person had been located to serve as "Director of the Agricultural Experiment Station." Therefore, the Adviser gave guidance to the junior staff of the Department of Animal Science and worked on an informal basis with all staff members having research interests and responsibilities. He taught courses in chemistry and animal science and gave guidance in a number of other activities.

Njala University College staff members in soils and in crops were appointed several months before the appointment of University of Illinois counterparts. The result was a delay in initiation of effective research in these fields. The Njala University College appointee who was to give leadership to the work in agricultural extension resigned to accept another important position in the country shortly before the arrival of the University of Illinois Adviser in Extension. The Illinois counterpart worked with a junior staff member, but the lack of a senior staff member has made progress in planning and implementing an extension program a difficult task.

The delay of nearly two years in appointing a contract staff member in agricultural engineering has seriously delayed work in this area.

The experiences of the first two years at Njala University College indicate the difficulties in recruiting, posting, and retaining both college and contract staff so that there will always be an effective working relationship between the contract counterpart and the Njala University College staff member. Sierra Leoneans are not available for a number of positions. The few with qualifications being sought are also needed in government, quasi-government corporations, educational institutions, and other positions. With the long history of weak training, particularly in the physical and biological sciences and in agriculture, it will be a number of years before trained and experienced nationals are available for many of the senior positions of leadership at Njala University College. Many staff members will lack experience in university work, particularly in universities of the "land-grant type." This suggests the need for contract staff members to work closely with more than one college staff member instead of the "one to one" relationship implied in the counterpart concept.

The word "adviser" has an unfortunate connotation to Sierra Leoneans. It implies that the contract staff member's role is to suggest what should be done without a high degree of involvement in the implementation of ideas and plans. It also suggests that the Njala University College staff member needs someone "looking over his shoulder." The use of this title should be discontinued, and it is suggested that "specialist" be substituted for it.

Future Contract Staff Requirements. The success of the University of Illinois in assisting in development of Njala University College will depend in large measure on identifying staff needs and filling the positions with highly qualified persons. Getting continuity of efforts at Njala and positions filled as staff are needed will require long-range planning and recruitment well in advance of arrival times in Sierra Leone.

The first attempt at identifying contract staff needs for several years in the future was made by the Principal of Njala University College and the contract staff members at Njala in mid-1965 (see accompanying table). Such projections
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**Suggested Schedule of University of Illinois Staff Members to be Assigned to NJALA University College, Sierra Leone (Man Years) (Cont.)**

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1/ Person in position in agriculture to serve as research coordinator throughout period.

* Short-term consultants.

September 1, 1965
must always be looked on as subject to revision because of the unpredictable elements involved. Modifications of the mid-1965 projections are already needed. For example, it is clear that the 1970 and 1971 requirements are too low. More precision in staff planning should be sought, and more involvement of administrators and faculty members at Urbana is needed in planning for and recruiting contract staff members. Planning for continuity of work at Urbana, as well as at Njala, is important.

Njala University College Staff

Staff planning and recruitment was a major task and took a significant share of contract staff time, particularly that of the Chief of Party and Adviser to the Principal, Adviser in Teacher Training, and Experiment Station Adviser. Only the Principal and Registrar had been appointed on March 1, 1964, so the following list of staff members at work on February 1, 1966, gives an idea of the growth of staff.\(^6\) In addition, 20 teachers had been selected for the primary school staff.

PRINCIPAL
Matturi, S. T., B.Sc., London; B.Sc. (Hons); Ph.D., Hull

REGISTRAR

FACULTY OF AGRICULTURE
Worrall, G. A., M.Sc., Ph.D., London; Dean

Agricultural Economics
May-Parker, I. I., B.Sc. Dip. Agr. Econ., Reading; Res. Asst. (on study leave)

Agricultural Engineering
Kuyembeh, N. G., HND Dip. Eng., Huddersfield, GI Mech. Eng.; Lecturer (on study leave)

Cossins, N. J., B.Sc. Agr., Melb.; Lecturer

Sandi, D., Dip. Furn., Tech. City & Guilds, Tech. Teachers Cert., Manchester; Instructor

Kamara, K. B. M., Dip. Agr. Mech., Israel Techn. Centre; Instructor

Agricultural Extension
Murfitt, Richard F. A., B.Sc., DTA; Senior Lecturer (on secondment)

\(^6\) University of Illinois contract staff are excluded from this list; however, they were appointed by the College Council and served in departments of their area of specialization.
Animal Science

Jones, T. A. O. C., B.Sc., McGill; Res. Asst. (on study leave)

Plant Science (Crops)

Fayemi, A. A., B.Sc., Langston, M.Sc., Ill., Ph.D. Kansas State; Senior Lecturer

Crauford, R. Q., B.Sc., Wales (Botany); Senior Lecturer (Rokupr)

Carpenter, A. J., M.A., Dip. Agr. Sci., Camb.; Senior Lecturer (Rokupr)

Das-Cupta, D. K., M.Sc., Cal., Ph.D., Edin.; Lecturer, Plant Physiology, (Rokupr)

Alexander, J. V., B.A., San Diego, M. Sc., Arizona, Ph.D., Calif.; Plant Pathology, Lecturer (Rokupr)

Enyi, B. A. C., M.Sc., Lond.; Lecturer

Plant Science (Soils)

Worrall, G. A., M.Sc., Ph.D., Lond.; Professor

Jarrett, H. O., B.Sc., Glas., Ph.D., Lond.; Senior Lecturer

Dijkerman, F. C., B.Sc., Wageningen, M.Sc., Ill., Ph.D., Corn.; Senior Lecturer.

McKee, R. F., B.A., Ph.D., Durham; Lecturer (also Geography)

Home Economics


Coomber, Mrs. V. E. E., Teachers Cert. (Domestic Science), Liverpool et Manc.; Ext. Asst. Instr.

FACULTY OF BASIC SCIENCES

Chaytor, D. E. B., B.Sc., Aberd., Ph.D., Lond.; Acting Dean

Botany


Chemistry

Holt, J. A., B.A., Oklahoma Baptist, Ph.D., Ill.; Senior Lecturer

Barton, A. B., B.Sc., Brist. (G.V.S.O.); Teaching Fellow
Physics

Phillips, J., B.Sc., Leic. (G.V.S.O.); Teaching Fellow (also Mathematics)

Zoology

Chaytor, D. E. B., B.Sc., Aberd., Ph.D., Lond.; Senior Lecturer
Shank, M. C., Ph.B., Ph.D., Northwestern; Fulbright Teaching Fellow
Arnold, T. S., B.Sc., Lond.; Lecturer
(on study leave)

Mathematics

Phillips, J., B.Sc., Leic. (G.V.S.O.); Teaching Fellow (also Physics)

FACULTY OF EDUCATION

King, V. E., M.A., Yale, Ph.D., Lond.; Dean

Agricultural Education

Ethirveerasingham, N., B.Sc., Calif. State Pol. College; Lecturer

Audio-Visual Education

Fergusson, S. (Professional Artist); Lecturer

Teacher Education

King, V. E., M.A., Dip. Th. Pt., Durh., M.A., Yale, Ph.D., Lond.; Professor
Ferron, O. M., B.A., Madras, M.A., TD Dip. Ed., Ph.D.; Senior Lecturer
Foray, C. P., B.A., Dip. Ed., Durh.; Lecturer (on study leave)
Akinsulure, S. E. A., B. Sc., Dip. Ed., Durh., M.A., Tor.; Lecturer
Mondéh, R. E., B.A., Durh., M.A., Ill.; Lecturer
May-Parker, Mrs. J., B.A., Durh., Cert. Ed., Lond.; Asst. Lecturer (on study leave)
Physical Education

English
Fyle, C. N., M.A. Dip. Ed., Durh.; Lecturer (on study leave)
Coomber, M. E. A., B.A., Durh., M.A., Tor.; Lecturer
Wright, E. C., M.A., Harv.; Lecturer
Sproule, A., M.A., Dip. Ed., Edin.; Lecturer
McKee, Mrs. Kathleen, B.A., Lond.; Asst. Lecturer

Geography
McKee, R. G., B.A., Ph.D., Durh.; Lecturer (also Soils)

SCHOOL OF DEVELOPMENT STUDIES
Pilgrim, J. W., M.A., Camb.; Director

History
Ijagbemi, E. A., B.A., Durh.; Asst. Lecturer

Sociology
Pilgrim, J. W., M.A., Camb.; Senior Lecturer

ADMINISTRATIVE AND OTHER STAFF
Office of the Principal
Nichols, Miss M. T., Secretary

Office of the Registrar
Bailor, L. O., M.A., Rutgers, M.A., Columbia; Admin. Assistant

Office of the Director of Physical Plant
Durham, Lt. Col. R. H. L., ARICS, Chartered Surveyor; Director
King, E. J. A., HND (Building) M.R.S.A.; Building Engineer
Williams, T. A.; Surveyor
Library

Hill, Mrs. E. (Peace Corps), B.A., Marquette, B. Sc., Washington; Acting Librarian

Nadanasabapathy, V., B. Sc., Malaya ALA; Asst. Librarian

Akinsulure, Mrs. M., B.A., Western Ontario BLS Tor.; Asst. Cataloguer

Office of the Controller

Taylor, F. O.; Accountant

Asante, D. K., MCFA, Cert. Catering, City & Guilds; Domestic Bursar

Office of the Faculty of Agriculture

Asare, K. A., B. Sc. NYU; Admin. Assistant

Staff Recruitment. Staff members were recruited in cooperation with the Inter-University Council, London, an organization that assists universities in the British Commonwealth countries. The UIC assists in staff recruitment by advertising position vacancies and assessing qualifications of applicants, including soliciting letters from referees and conducting interviews. Recommendations are made, but final selection rests with the individual university. The Inter-University Council was very helpful in recruiting staff for Njala University College, particularly the new staff for the 1965-66 school year. Many of the applicants, particularly Sierra Leoneans and other Africans, were interviewed at Njala or Freetown.

Twenty-six of the 59 members of the senior staff members on February 1 (exclusive of University of Illinois contract staff) were Sierra Leoneans, and an additional seven were Africans (five from Nigeria and two from Ghana). The university experience of most of the Sierra Leoneans was limited; nevertheless it was encouraging to find that this number of nationals were willing to cast their lot with the new institution. Seven Sierra Leoneans went to the United Kingdom and United States for advanced training during the 1965-66 year, and several additional persons were selected for advanced training beginning in the 1966-67 academic year.

Senior staff members were placed on salary scales comparable with those of Fourah Bay College. These scales are adequate to make positions at Njala competitive with positions in government; however, delays in establishing definite conditions of service and a superannuation scheme presented some difficulties in staff recruitment.

While excellent progress was made in recruiting senior staff during the first two years at Njala, one must recognize the formidable difficulties of building and maintaining a good staff to give leadership to and carry out the broad responsibilities of the new institution. The training and experience of the present staff are limited in terms of requirements for a first-rate institution of higher learning, particularly in agriculture. The persons needed at Njala will also be in strong demand for government and other education positions. Foreigners accepting appointments are not likely to stay in Sierra Leone for more than two to four years, creating continual problems of lack of continuity in programs.
The College Council and the administrative officers of the College will need to guard against the possibility that nepotism might produce a mediocre staff. Certain traditions of the extended family system and the quest for security and status make nepotism a potential serious threat to Njala University College.

Developing a good supporting junior (nonacademic) staff should receive attention equal to that of building the senior (academic and administrative) staff. Unfortunately, the shortage of experienced staff during the first year at Njala did not permit proper attention to developing an adequate staff of laboratory assistants and technicians, experimental field supervisors, artisans, secretaries, typists, clerks, storekeepers, etc. The Rokupa Rice Station had developed a rather good junior staff, largely through in-service and on-the-job training. At Njala, many junior staff members and laborers were inherited from the three predecessor institutions. These persons possessed widely varying degrees of basic ability, proficiency, and dedication to the assigned task. In many cases there was little need to continue the task the individual had been performing with the predecessor unit.

Some progress was, however, made in developing a junior staff. A less rigid salary policy than is common in Sierra Leone was established. In-service training programs were initiated for laboratory technicians and primary school teachers. Three laboratory technicians were sent to the U. K. for training. Some of the employees of the predecessor units were transferred to employment with the Ministries of Education and Agriculture and Natural Resources. A few were "sacked." In spite of this progress, there is still much to be done in building an effective staff to support the work of the senior academic and administrative staff. It is hoped that those presently at and to follow at Njala will bring the efforts to build a strong junior staff into proper balance with the efforts to develop and maintain an outstanding senior staff.

Overseas Educational Service/AID Contract. Overseas Educational Service (OES)1 entered into an agreement with Njala University College under a contract with the Agency for International Development to recruit Americans for 10 senior staff positions. These staff members are to be employed by Njala University College on salary and conditions of service that are appropriate for the individual's abilities, education, and experience. OES supplements the Njala University College salary and allowance with USAID-supplied funds so that the combined salary and allowance benefits will be sufficient to attract well-qualified Americans.

The following positions are provided at the senior lecturer or lecturer level under the OES/USAID contract: chemist, physicist, mathematician, English language specialist, secondary school principal, plant pathologist, animal scientist, economist, agricultural economist, and sociologist. The plant pathologist and chemist had been recruited and had arrived in Sierra Leone in September and December 1965 respectively.

With two USAID contracts supporting Njala University College, there is need for careful coordination of the two efforts to maximize the contribution of Americans serving at Njala. University of Illinois contract team members worked

1 Overseas Educational Service, 522 Fifth Avenue, New York, New York, was established in 1963 and is sponsored jointly by the American Council on Education, the National Academy of Sciences, and Education and World Affairs. Its general purpose is to increase the involvement and effectiveness of U. S. colleges and universities in world affairs.
with the Principal of Njala University College in identifying the positions and
with the AID mission in planning the OES project. There is need for continuous
liaison between the University of Illinois, Overseas Educational Service, and AID/
Washington in the U. S. and Illinois contract, OES contract, AID Mission, and N.U.C.
administrative personnel in Sierra Leone. Coordinated effort is particularly impor-
tant in planning positions to be filled under the two contracts in recruiting and
selecting personnel, and in providing comparable salaries and other allowances.
The urgency of the problems and the close working relations between personnel serv-
ing at Njala are likely to force coordination of efforts. There is more risk of
lack of coordination of efforts in the U. S. than in Sierra Leone.

Participant and Other Training. The participant training provisions
of the University of Illinois/USAID contract have as their general objective provid-
ing opportunities for present and prospective N.U.C. staff members to improve their
abilities to serve the needs of the new institution.

The participant training program was implemented to a limited extent dur-
ing the first two years. Mr. Henry Lynch-Shyllon, College Registrar, was a partici-
 pant under the Illinois contract from February 16 to April 17, 1964. He was in
New York with the Sierra Leone Mission to the United Nations at the time of his
appointment to the Njala staff. He studied the duties of a University registrar
at the University of Illinois and other universities and colleges prior to return-
ing to Sierra Leone to take up his new appointment.

Mr. Renner Eric Mondieh was a participant in the University of Illinois
contract from September 1964 to August 1965, following training under the sponsor-
ship of USAID/Sierra Leone during the 1963-64 academic year. He completed the M.A.
degree in education at the University of Illinois and joined the Njala University
College Faculty of Education as Lecturer in September 1965.

Mr. Siaka Kawa was sponsored by USAID/Sierra Leone for an eight-month par-
ticipant training program in the United States to study and observe agricultural
extension work beginning in April 1964. Mr. Kawa assumed duties at Njala as Lect-
turer in Agricultural Extension upon his return to Sierra Leone in December 1964. He gave leadership in developing a program for the widespread introduction of im-
poved rice varieties tested and developed at the Rokupr Rice Research Station.
Upon creation of the Sierra Leone Rice Corporation in August 1965, Mr. Kawa was
appointed Deputy General Manager. As a result his services were lost to Njala
University College.

Mr. Cyril Foray, Lecturer in History and Education, began graduate study
in September 1965 at the University of California in Los Angeles under sponsorship
of USAID/Sierra Leone.

The following Njala University College senior staff members were nominated
for participant training to begin in 1966: Dr. Hilton O. Jarret, Senior Lecturer
in Soils, for a three-month program in soils at the University of Illinois, begin-
ing in July 1966; Mr. Magnus J. A. Cole, Assistant Lecturer in Teacher Education,
for graduate study in science education at the University of Illinois beginning in
September 1966; Mr. Melvin E. A. Coomer, Lecturer in English, for graduate study
in English at Georgetown University beginning in September 1966. In addition, a
junior staff member was nominated for six months of training in offset printing at
the National Cash Register school in Lagos, Nigeria. In early February 1966, sev-
eral others were under consideration for participant training.
Six Njala University College staff members began study abroad in the 1965-66 academic year under sponsorship of Njala University College and cooperating organizations other than USAID: Mr. Clifford Fyle, Lecturer in English, to study at Leeds University and the University of California at Los Angeles, sponsored jointly by the British Council, U.C.L.A., and Njala University College; Mrs. Judith May-Parker, Research Assistant in Education, to pursue the master's degree in history and comparative education at Glasgow University, sponsored by DELCO and Njala University College; and the following, sponsored by Njala University College: Mr. I. I. May-Parker, Research Assistant in Agricultural Economics, to pursue the master's degree at Glasgow University; Mr. W. E. Taylor, Research Assistant in Entomology, to study at Rothamsted (University of London); Mr. N. G. Kuyembeh, Lecturer in Agricultural Engineering, to pursue the M.Sc. in Agricultural Engineering at the University of Newcastle; and Mr. Teddy A. O. C. Jones, Research Assistant in Animal Science, to pursue the master's degree at McDonald College, McGill University.

With the efforts of Njala University College and other cooperating organizations in addition to USAID, good progress has been made in beginning advanced training of Njala University College staff members. On February 1, 1966, three staff members had completed training in the U.S., seven were in the U.K., Canada, and the U.S. for graduate study, and four others had been nominated for participant training.

Some difficulties were encountered in getting prospective participants admitted to U.S. universities for the 1964-65 academic year because of the early deadline dates for accepting applications, difficulties in evaluating records of secondary schools and colleges and increasing competition for places for graduate study in U.S. universities. The need for staff members at Njala during the early years, the shortage of qualified staff, and the costs of advanced training make it difficult to send staff for more training. Nevertheless, it is only through making such short-run sacrifices that a highly qualified staff can be developed.

The University of Illinois must make every effort to see that persons with the potential to become Njala University College staff members have the opportunity to obtain in the United States the needed training and education that cannot be provided in Sierra Leone. Records of Njala University College graduates will be difficult to interpret, particularly for the first few years. Evaluation of students' capabilities by University of Illinois contract staff will need to be used along with student records. Some participants may have to be admitted as non-degree candidates until they can demonstrate how they can perform in a U.S. university.

Many persons look on the participant training program under the University of Illinois/USAID contract as being restricted to those pursuing graduate study. USAID does not, however, impose any such restrictions, as is evidenced by the approval of a junior staff member for training in offset printing. With the shortage of trained and experienced junior (nonacademic) staff, there should be a continuing search for persons with the potential for training and experience in the U.S. under the participant training program who are to fill key supporting roles at Njala University College (laboratory technicians, experiment farm supervisors, secretaries, clerk-typists, physical plant supervisors, etc.). Many of these people can be trained in Sierra Leone, but Njala University College would gain from the training and fresh points of view that could be obtained from sending a limited number to the U.S.
Administration of Njala University College

The College Council. The act creating Njala University College provided for a Council of the College\(^3\) composed of the following:

a. Ex-officio members

(1) The Chief Agriculturist (Ministry of Agriculture and Natural Resources).

(2) The Chief Education Officer (Ministry of Education).

(3) The Principal of Njala University College.

b. Other members

(1) Three members of the House of Representatives selected by that body to represent the Parliament of Sierra Leone.

(2) The Principal of Fourah Bay College.

(3) Two persons interested in education, one of whom shall be a woman but not in the public service, to be nominated by the government to represent the people of Sierra Leone.

(4) The Chairman of the Sierra Leone Produce Marketing Board.

(5) A representative of business interests with agricultural projects in the country, to be elected by the Sierra Leone Chamber of Commerce.

(6) Two representatives from each of the Provinces and the Western Area, to be nominated by the President of the College.

(7) One representative selected by and representative of the membership of each of the following:

   (a) The Cooperative Societies in Sierra Leone.

   (b) The Registered Graduates of the College.

   (c) The Sierra Leone Teachers Union.

   (d) The Conference of Principals of Secondary Schools.

The College Council took action providing that faculty deans, senior staff representatives, and the University of Illinois/USAID Chief of Party would also be members of the College Council.

In general, the College Council has been an effective governing and executive body for guiding the affairs of the College. Eight meetings of the College Council were held between October 16, 1964, and January 1, 1966, all of them being held at Njala. Prior to formation of the College Council, the Provisional College Council held six meetings between June 21, 1963, and May 27, 1964. The Finance and Development Committee of the College Council met many times, usually in Freetown, to consider items of business and prepare recommendations for the Council.

\(^3\) Equivalent to a board of trustees or board of regents in a university in the U. S.
Meetings of the Council were conducted in a businesslike manner under the leadership of Mr. F. S. Anthony, chairman. There was lively discussion of many issues, indicating a genuine concern for the future of the new institution. There was some tendency for the Council to spend too much time on certain questions, some of which could have been avoided if the College administration had made more definite recommendations to the Council. There was some evidence that some members of the College staff were approaching individual members of the Council to present their views on certain matters instead of working through administrative channels.

Office of the Principal. Much of the success of Njala University College during its formative years is due to the professional competence, diligence, and excellent judgment of Dr. S. T. Matturi, Principal. It is difficult to realize the many decisions that he must make, particularly in the early years before faculties and departments are organized. There are not only the daily administrative requirements of operating Njala University College, but also the need to make many contacts with government officials and other educational leaders in the country. This process is complicated by lack of dependable telephone communications with Freetown, 127 miles away. In addition, staff recruitment and College development problems require occasional visits to such places as London and Washington and to other West African countries.

The many demands on the time and energies of the Principal make appointment of a Vice-Principal a matter of high priority. The Principal is well aware of this need, but he also recognizes the importance and the difficulty of finding a person, preferably a Sierra Leonean, with the qualifications for this position. Appointment of such a person would improve communication among faculties and departments and smooth the day-to-day administration of the College.

The Chief of Party and Adviser to the Principal served as Acting Principal of the College during the absence of the Principal from Njala. While this arrangement would be questionable on a continuing basis, there were no good alternatives during 1964 and 1965, and perhaps there will not be until a Vice-Principal can be appointed. In this instance it assisted in developing close working relations between the University of Illinois contract personnel and the rest of the Njala University College staff.

The Administrative Group. The act establishing Njala University College provided for the establishment of faculty boards and a Senate to develop and consider faculty and University College policy matters. During 1964 and 1965 there were not sufficient staff numbers to provide for effective faculty boards and a Senate, so the "administrative group" considered and acted on both policy and procedural matters. This group was originally the Principal (S. T. Matturi), the Chief of Party and Adviser to the Principal (W. N. Thompson), and the Adviser in Teacher Education (F. H. Klassen). The size of the group was expanded as new staff members were appointed: The Registrar (Henry M. Lynch-Shyllon), the Director of the Physical Plant (R. H. P. L. Durham), the Comptroller (J. G. Hanwell), and Dean of the Faculty of Education (V. E. King). The administrative group met on call of the Principal (and often) to consider such matters as budget requests, internal budgets, staff requirements and recruitment, student and instructional requirements, physical plant modifications and additions, and administrative procedures.

Faculty boards were formed for agriculture, education, and the basic sciences in late 1965 and early 1966, paving the way for creation of the Senate. Formation of these bodies will provide a means for all members of the senior staff to consider policy matters.
The Faculties. The Njala University College Act provides that there shall be "faculties of Agriculture, Arts, Basic Sciences and Education and such other faculties as may be prescribed in the Statutes."9/

Faculties of Agriculture and Education were established with the arrival of staff members for the 1964-65 year. Staffs in the basic sciences and arts were assigned to these two faculties to provide for efficient administration during the period while these staffs were small. In general, the basic science staff members were assigned to Agriculture and the arts staff to Education.

Departments in the two faculties were identified as follows:

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Education</th>
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</thead>
<tbody>
<tr>
<td>Agricultural Economics</td>
<td>Agricultural Education</td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>Audio-visual center</td>
</tr>
<tr>
<td>Agricultural Extension</td>
<td>English Language and Education</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Experimental School</td>
</tr>
<tr>
<td>Home Economics</td>
<td>Physical Education</td>
</tr>
<tr>
<td>Oil Palm Research Station</td>
<td>Teacher Education</td>
</tr>
<tr>
<td>Plant Science (crops and soils)</td>
<td></td>
</tr>
<tr>
<td>Rice Research Station</td>
<td></td>
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</tbody>
</table>

Budgets were prepared for departments as outlined above and, where possible, a staff member was designated as being "in charge" of the work of the department. It did not seem desirable to set up a large number of distinct operating administrative units while staffs were small, persons qualified to serve as department heads were not available, office space and clerical and stenographic personnel were limited, and policies and administrative procedures were in the process of formulation. In effect, the Faculty of Education was administered as one administrative unit, and all departments of the Faculty of Agriculture except the Rice Research Station were administered as one unit.

Dr. Frank H. Klassen, Adviser in Teacher Education, served as Dean of the Faculty of Education until Dr. Victor E. King was appointed to this position. The Chief of Party served as Dean of the Faculty of Agriculture until January 1, 1966, when Dr. George A. Worrall arrived at Njala to assume these responsibilities. There are certain advantages in having members of the University of Illinois contract staff serve in administrative positions until such time as policies and procedures are established and other qualified staff are available, but a constant effort should be made to fill these positions with other than Illinois contract personnel.

The Faculty of Basic Sciences was organized in October 1965 to include botany, zoology, chemistry, physics, and mathematics. Dr. D. E. B. Chayton was appointed Acting Dean.

The "School of Development Studies" was created by action of the College Council, and Mr. John W. Pilgrim, University of Edinburgh, Department of Anthropology, was appointed Director. The School of Development Studies includes only work in history and sociology. The Faculty of Arts should be established during the 1966-67 academic year to include the arts, humanities, and social sciences, and the work of the School of Development Studies should be integrated into this new faculty.

9/ A "faculty" at Njala University College is comparable to a college in most universities in the United States.
The Business Office. The Business Office was organized in early 1964. Mr. W. Dewey Green provided the leadership in setting up a system of accounts and records and in planning for personnel and procedures to be followed by this office. Mr. Green served as Adviser on Accounts and Records under the Illinois contract from January 26 to June 15, 1964, and from October 1 to November 15, 1964.

Mr. Green devised an excellent accounting system. The College was fortunate to have his services at an early date, as the establishment of the system and procedures predated the receipt of the first directly appropriated money. However, there were some problems in getting the new system fully accepted and put into practice. The new Comptroller, Mr. J. G. Hanwell, began his appointment about the time Mr. Green finished his second assignment in mid-November 1964, so there was no opportunity for Mr. Green and Mr. Hanwell to work together. To be fully effective, the new system required the use of bookkeeping machines, and problems of delivery made it impossible for Mr. Green to put them into operation. Mr. Hanwell had not had experience with bookkeeping machines and was less than enthusiastic about using them. Mr. Hanwell's untimely death at Njala on October 6, 1965, was a serious loss to Njala University College, leaving the new institution without an experienced accountant and comptroller. Continuing efforts are needed to fully establish the accounting system and procedures planned by Mr. Green.

The Program of Instruction

Curricula and Courses. Curricula were prepared by Dr. Gardner and Dr. Karnes in consultation with Dr. Matturi. The basic outlines of these curricula have been followed, with some modifications necessitated by lack of staff and secondary school background of the students. Shortage of laboratory facilities has led to delay in offering of some science courses.

A definite policy has been established for offering separate curricula and courses for degree and certificate students. It is extremely important that this policy be maintained if a high standard for degree students is to be attained.

A common core program requiring about two years is required of all degree students (agriculture, teacher education, and home economics) and includes English, chemistry, botany, zoology, and mathematics. It is followed by two years of courses that combine the theoretical and applied aspects of the particular field of study. Some degree of specialization is provided, but the need to build up the science background of most of the students limits the time available for specialization.

Two-year-certificate students devote two terms (quarters) of the first year to study of science courses (chemistry, mathematics, biology), followed by four terms of highly applied work. Study of English is required throughout the two-year course.

A large amount of effort still needs to be devoted to establishment of curricula and courses for the last two years of the four-year degree program. During the first two years, staff members in some fields were not available to prepare course outlines and plan for specialization. Continuing attention is needed to

make the study of applied fields relevant to the development needs of Sierra Leone. Since few adequate textbooks are available, the Njala University College staff should be encouraged to prepare and publish books and other instructional materials.

Examinations and Grading System. Many committee and faculty meetings were held on the subject of examinations and grading systems. Sierra Leoneans with college degrees are better acquainted with the British than with the American pattern of education. The students at Njala know the educational practices of their secondary schools and Fourah Bay College. These institutions place heavy reliance on an examination at the end of a year or after a four- or five-year course of study. The grade is usually either "pass" or "fail."

Beginning with the first term of the 1964-65 year at Njala University College, terminal examinations were given and instructors were required to report grades to faculty offices and to the Office of the Registrar. A literal grading system (A, B, C, D, E) was established, beginning in the second term of 1964-65. Instructors were encouraged to give hour examinations and short quizzes within the term and to consider performance in laboratories, on term papers, and in special class projects in determining the grade for the term.

The early experience at Njala University College indicates that students are receptive to a system of evaluation that does not place major or entire emphasis on a single examination. More frequent examinations discourage procrastination of study until shortly before the end of the year or course and also reduce the risk involved if a student does poorly on one examination. Some staff members were reluctant to fully accept the "American" system of examinations and grading, but most of them did accept it.

A beginning was made in establishing guidelines on the performance required for a student to continue at Njala University College. Faculty committees and the Registrar reviewed the performance of students during the first year. Of the 101 students in the first class, 10 were dropped (nine for poor scholastic performance and one who did not meet the student work-experience program requirements), and five were required to repeat the first year (three had serious illnesses during the first year, and two had poor scholastic performance). Twenty of the 86 students promoted to the second year were on probation status. Continuing efforts are needed to establish policies and procedures to encourage excellent academic achievement and to drop those who do not meet the requirements.

The first year's experiences were not sufficient to establish definite policies and procedures on probation, dropping, and readmission. The number of students was small enough to give careful attention to the performance of each student. It is important to outline policies and procedures as more experience is gained, not only to simplify the task with the larger number of students, but also to let students entering Njala University College know the level of attainment expected of them.

Student Work-Experience Program. A work program was instituted to permit students to learn by making practical application of the materials studied in classes, develop useful skills and work habits, and earn money to pay part of the costs of attending college.\footnote{For a detailed description, see "Report of University of Illinois Staff, Njala University College, Sierra Leone, Progress and Work Plan, March 15, 1964," p. 26-31.}
This program was started with the first class of students and good progress has been made but, like many other things at Njala, continuing efforts are needed to make the program fully effective.

The plan was to put the personal allowance portion of each student's scholarship money into a college fund from which the students would be paid for work done in excess of six hours a week. However, the Ministry of Education granted scholarships to Njala University College students on the same basis as to Fourah Bay College students, and this arrangement did not permit Njala University College to withhold the personal allowance money from the students. As a result the financial incentive was removed from the student work-experience program. As an alternative to requiring all students to work six hours a week and paying them for time worked over six hours, all students were required to work six hours a week, but some flexibility was allowed from week to week provided the requirements were fulfilled on a term basis.

During the first year, 53 of the 101 students voluntarily exceeded the yearly work-experience program requirements by more than 10 hours. There were nine students with work deficiencies—six were dropped (five also had unsatisfactory grades), one was permitted to make up the deficiency, and two were excused from part of requirements because of illness.

The experience to date indicates that, to be effective, this program takes a large amount of planning and supervision and the wholehearted support of all senior and key junior staff members. Students will accept the program provided they are gaining experience and feel that the work is useful to them or helps in maintaining or developing the College, but they will resist a "make work" program.

Scheduling of work throughout the day has been nearly impossible with only one or two classes, as all of the students are in classes during some hours. This problem will be less serious as more classes are admitted in the next two years. More effort is needed by the College and faculty administrative officers to get the full support of staff.

Enrollment. Those interested in attending Njala University College are invited to apply for admission. Applicants who have met the minimum requirements for admission in terms of secondary school work and performance on West African School Certificate examinations are invited for individual interviews at one of five centers: Njala, Freetown, Bo, Magburaka, or Kenema. The best qualified students are admitted provided they can obtain a scholarship or other means of financing the costs of attending Njala University College.

The number of applications, interviews, and admissions are shown in the table on page 23. Nearly all students are supported by scholarships provided by the Sierra Leone Government Ministries of Education and Agriculture and Natural Resources and by the Sierra Leone Produce Marketing Board. There were sufficient scholarships for all of the first class of students who were qualified for admission. New enrollment in the second year was limited because enough scholarships were not available. The problem of lack of scholarships was most serious for certificate students in agriculture and trades and crafts. The financial position of the Sierra Leone Government was a contributing factor, but there is also some lack of appreciation of the importance of training personnel at levels below the bachelor's degree.
## Applications for Admission, Interviews, and Admissions
### Njala University College
#### First Class (1964) and Second Class (1965)

<table>
<thead>
<tr>
<th>Degree program</th>
<th>First class (1964)</th>
<th></th>
<th></th>
<th></th>
<th>Second class (1965)</th>
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<tbody>
<tr>
<td></td>
<td>Applications</td>
<td>Inter-</td>
<td>Admis-</td>
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<td>Inter-</td>
<td>Admis-</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>views</td>
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<td>198</td>
<td>117</td>
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<tr>
<td>Home economics</td>
<td>21</td>
<td>14</td>
<td>4</td>
<td></td>
<td>8</td>
<td>4</td>
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<td>41</td>
<td>17</td>
<td></td>
<td>128</td>
<td>68</td>
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<td>Total degree</td>
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<td>165</td>
<td>61</td>
<td></td>
<td>334</td>
<td>189</td>
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<th>Certificate program</th>
<th>First class (1964)</th>
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<th>Second class (1965)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Applications</td>
<td>Inter-</td>
<td>Admis-</td>
<td></td>
<td>Applications</td>
<td>Inter-</td>
<td>Admis-</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>views</td>
<td>sions</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
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<td>47</td>
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<td></td>
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<td>21</td>
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<tr>
<td>Home economics</td>
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<td>--</td>
<td>--</td>
<td></td>
<td>17</td>
<td>14</td>
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<td>Trades and crafts</td>
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<td>6</td>
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<tr>
<td>Total certificate</td>
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<td></td>
<td>524</td>
<td>313</td>
<td>81</td>
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</tbody>
</table>

A thorough review of the college scholarship policy of the Government of Sierra Leone is needed. Unfortunately, there was no alternative for Njala University College but to follow the scholarship policies established by the Ministry of Education and Fourah Bay College. These policies and procedures have been developed over a period of many years. In general, they are extremely generous by U. S. standards and provide for financing all costs of attending a university, including room, board, tuition, fees, books and supplies, transportation, and a personal allowance. It is unusual for a student to defray any of the cost of a college education from personal or family funds. The present scholarship policy has become costly with the increased post-secondary-school enrollment. The social costs involved in a scholarship policy that has the effect of restricting college enrollment when there are both qualified students and staff and facilities are extremely high. Njala University College cannot solve this problem alone. The ministries of government concerned, such educational institutions as Fourah Bay College and Milton Margai Teacher Training College, such organizations as the Sierra Leone Produce Marketing Board, and other educational leaders of the country must tackle the problem jointly. With the growth of several post-secondary colleges, there is also need to consider the related question of which students should be educated within Sierra Leone and which ones should be sent abroad. Sending students abroad fully supported by generous scholarships is very costly, particularly if adequate staff and facilities are available at home.

Njala University College should strive to improve methods of selecting students. The personal interview used during the first two years proved to be effective in spite of its limitations. Students fully qualified for entrance except for the required credit in English were given an English language test developed at Njala, and a limited number were admitted on the basis of the results of
Njala University College Enrollment, 1965, and Enrollment Projections, 1966 to 1974[^a/]

<table>
<thead>
<tr>
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<td>212</td>
<td>260</td>
<td>313</td>
<td>365</td>
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<td>Three-year certificate</td>
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<td>74</td>
<td>80</td>
<td>60</td>
<td>53</td>
<td>55</td>
<td>60</td>
<td>65</td>
<td>70</td>
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<tr>
<td>Total—degree and certificate</td>
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<td>261</td>
<td>354</td>
<td>397</td>
<td>439</td>
<td>497</td>
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<td>500</td>
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<td>512</td>
<td>513</td>
<td>513</td>
<td>507</td>
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<td>507</td>
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<tr>
<td>Experimental secondary school</td>
<td>—</td>
<td>—</td>
<td>60</td>
<td>147</td>
<td>229</td>
<td>305</td>
<td>376</td>
<td>400</td>
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<tr>
<td>Total—college, primary, and secondary</td>
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<td>761</td>
<td>920</td>
<td>1,056</td>
<td>1,181</td>
<td>1,315</td>
<td>1,447</td>
<td>1,534</td>
<td>1,578</td>
<td>1,602</td>
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</table>

[^a/]: From "Supplement to the Requirements Analysis for the Capital Development of Njala University College," p. 3.
this test. Plans were laid for giving a mathematics test to the third class applicants. Such tests are useful supplements to the results of West African School Certificate and General Certificate of Education tests.

Enrollment Projections. Enrollment projections for the 1966-1974 period are shown in the table on page 24. A certificate program in education is planned, to start in 1966-67, to train teachers for agricultural secondary schools and farm schools. In 1968, students will be admitted for degree programs in the basic sciences (botany, zoology, chemistry, mathematics, and physics). The primary school is to continue with an enrollment of about 500, and the present plan is to start the secondary school with 60 students in Form I in 1967-68. One form will be added each year until an enrollment of about 400 is attained in Forms I-V in 1971-72.

Research

During the first two years at Njala University College, first priority was given to the program of student instruction, which was dictated by the number of students, staff, and research laboratories and facilities. But at the same time beginnings were made to bring research into proper perspective with student instruction and extension work.

In research, the main early emphases were on reviewing research conducted by predecessor institutions and determining the work to be continued; studying the agricultural problems of the country and establishing research priorities; strengthening the work of the Rokupr Rice Research Station and the Oil Palm Research Station; evaluating the research being conducted at the Musaia livestock station; establishing procedures for planning, conducting, and reporting on research; and ordering laboratory and experimental farm equipment and supplies.

Work of the Njala Agricultural Experiment Station was at a virtual standstill in March 1964, and most of the experiments had been discontinued. As new staff in various fields arrived at Njala, the experimental results were reviewed. Care was taken not to destroy any potentially useful records. This work is continuing. In general, there seems to be little hope of continuing with any substantial portion of the old experiments, as records of research objectives and experimental design are poor. Much of the earlier work was not conducted continuously over a long enough period to provide results that farmers could use.

The agricultural research and extension organization of the country was studied, including the substations of the Ministry of Agriculture and Natural Resources and the Sierra Leone Produce Marketing Board, and also the work being conducted cooperatively with the Food and Agriculture Organization. The Chief of Party and Adviser to the Director of the Agricultural Experiment Station visited the main agricultural areas of the country, usually with the agriculture officers. This study resulted in clarification of ideas on priorities in early agricultural research: evaluation of soil resources of the country; establishment of outstations on widely different soils, such as the boli lands and the coastal swamp soils; development of indigenous sources of feeds for poultry and swine and improved dry-season feed for cattle; research to increase production of rice and oil palm; coordination of the work of the Njala Oil Palm Station with the oil palm expansion efforts of the Produce Marketing Board; development of small, economical farm machines; research in human and animal nutrition; and study of a number of social and economic aspects of Sierra Leone agriculture.
It was clear that good work had been done at the Rokupr rice station, and an effort was made to strengthen this work. A plant pathologist and plant physiologist were appointed, but the departure of the station director and the only soil scientist was an offsetting factor in overall efforts to build up the staff.

The experiments of the Oil Palm Station that had been planned as part of the work of the main station in Nigeria were continued, and the data were sent to the main station for analysis. Seeds and seedlings were produced for the Produce Marketing Board, as the palm trees at Njala are the best in the country; however, some serious questions in plant breeding are involved in the use of these seeds for developing oil palm plantations. Appointment of a senior staff member to supervise the oil palm research work continues to be urgent. Dr. Kastelic has performed an outstanding service in supervising the work of the station, but he cannot be expected to plan and conduct the research that is needed.

Preliminary examination of the work of the Musaia Livestock Station and discussions with the Chief Agriculturist and Minister of Agriculture and Natural Resources indicated a need for thorough evaluation of the cattle breeding work being conducted at this station. Arrangements were made for Dr. Robert W. Touchberry, Professor of Genetics, Department of Dairy Science, University of Illinois, to serve a short-term assignment under the University of Illinois/USAID Contract during June and July 1965. He made an evaluation and prepared a preliminary report, and a formal publication is to follow. The results of this investigation provide recommendations for future work to be conducted at this station by Njala University College in cooperation with the Ministry of Agriculture and Natural Resources.

Dr. Kastelic, Experiment Station Adviser, took the leadership in establishing procedures for planning, conducting, and reporting research, following the general pattern of the U. S. agricultural experiment stations. These procedures will be important in assessing research priorities and in insuring continuity in research efforts.

Little research could be conducted until equipment and supplies were received. Some were ordered under provisions of the AID contract and some from college funds. First priority was given to equipping the soils laboratory and obtaining essential pieces of equipment for the experimental farms.

Preliminary work was done on research in a number of fields, including diagnostic testing of students in English and work in education and human nutrition. Virtually every senior staff member was involved in identifying research areas that need attention and in making estimates of personnel, laboratory, experimental farm, and equipment needs.

Extension

Beginnings were made in organizing the extension work to be conducted by Njala University College in cooperation with government ministries and other organizations. Field personnel are extremely limited, and the organization for extension work is yet to be established. It is anticipated that many of the graduates of the first several classes at Njala will become extension workers. Efforts to plan for and build an effective extension organization for Sierra Leone were intensified with the arrival of Mr. H. Robert Wack, Adviser in Extension.
Mr. S. A. Kava was appointed Lecturer in Agricultural Extension by Njala University College in early 1965 following an eight-month participant training program in the U.S. His major effort involved working with personnel of the Ministry of Agriculture and Natural Resources, Produce Marketing Board, and cooperative societies in multiplying rice seed and organizing for the widespread introduction of improved rice varieties tested and developed at the Rokupr Rice Research Station. With the creation of the Sierra Leone Rice Corporation in August 1965, Mr. Kava became Deputy General Manager, so his abilities and experience in agricultural extension were lost to Njala University College. The work he had organized was carried on by Mr. Wack with the excellent assistance of Mr. E. K. Bendu. Demonstrations of transplanting and threshing rice were added to the work of multiplying and distributing seed.

Conferences were held with personnel of the Ministry of Agriculture and Natural Resources to assist in clarifying the roles of Njala University College and the other organizations that are to cooperate in conducting work in agricultural extension. Further efforts are needed to get the memorandum of understanding in a form acceptable to all concerned. As Njala University College becomes better prepared to assume broad responsibilities in youth and adult education, it will become important to reach an understanding with the Ministries of Education and Social Welfare, and possibly others.

Extension work in home economics has been initiated in villages in the vicinity of Njala. Increased staff support will be needed as experience is gained and work in home economics extension is expanded. A way must be found for home economics certificate graduates to contribute to this program.

Development of the science education center at Njala and the close working relations between Njala University College and the primary and secondary schools offer a great deal of potential for youth and adult education in all fields.

To date less attention has been given to meeting the personnel requirements for building an effective organization and program for extension than for resident instruction and research. This applies to University of Illinois contract as well as Njala University College staff. Some persons argue that little can be done in extension until findings are available from several years of research. However, much extension work can be based on known principles and available technical information. The problems of increasing agricultural productivity and improving the health and social conditions of the people of Sierra Leone are so urgent that development of effective extension services must proceed with improvements in research and teaching.

Physical Plant Development

The physical facilities of the four predecessor administrative units were turned over to Njala University College in the March-August 1964 period. The new institution was fortunate to get these buildings and other facilities.

12/ For an inventory of facilities, see Barrow, Joseph M., "Report on Campus Planning, Njala University College, Sierra Leone, West Africa," University of Illinois Office of AID Projects, Urbana, November 1, 1964. This report does not contain an inventory of facilities of the oil palm experiment station or the Rokupr rice research station.
Some were well suited to the initial needs of the new institution—junior and senior staff housing, classrooms, offices, laboratories at the Rokupr Rice Station, etc. Others were immediately inadequate—library, teaching and research laboratories, shops for industrial education, physical plant stores, electricity supply and distribution, water supply, kitchen and dining facilities, experimental farm tools and equipment, etc. Practically all usable buildings, offices, and classrooms needed repair and painting.

While the immediate needs for the first class of students and early senior staff arrivals could be met through repairs, remodeling, and repainting, it could be seen that virtually all types of physical facilities would soon be grossly inadequate. Planning for development of the physical plant was therefore a major task of Illinois contract and other Njala University College staff members.

Campus Planning. Mr. Joseph M. Barrow served a short-term assignment under the contract as Campus Planner and Architect from March 23 to July 22, 1964. He was at Njala from March 31 to July 2, 1964. Mr. Barrow completed the first phase of a campus plan for Njala University College, including a study of basic considerations in developing facilities, inventory of existing facilities, and approximation of physical plant needs and costs.13/ This study resulted in a number of guidelines for long-range development and pointed up immediate needs for the initial years.

At the time of Mr. Barrow's study, the staff at Njala University College was too limited to specify in detail the physical plant needs for carrying out research and educational functions. Thus it was not possible for him to prepare a complete long-range campus plan. Nevertheless he made several important contributions, including study of the campus site and survey of the present site; study of the design of other educational institutions in West Africa; determination of availability of economical construction materials; plans for improvement and expansion of electric generating and distribution facilities; determination of needs for furnishing of dormitories, classrooms, kitchen and dining facilities, offices, and housing units; and plans and arrangements with suppliers for constructing eight three-bedroom houses, four two-bedroom houses, and one one-bedroom guest house.

Land Acquisition and Survey. Njala University College took over about 780 acres of land from predecessor administrative units at Njala, that is, 90 acres formerly occupied by the Njala Teacher Training College, 296 acres in the Njala Agricultural Experiment Station, and 434 acres in the Oil Palm Research Station.14/ The 434 acres are located across the Taia River from the 346 acres and are accessible from the Njala side of the river only by boat. The boundaries of the land had been surveyed, but there were no topographic maps or maps showing precise locations of buildings, roads, and utilities.

Mr. Barrow took the initial steps to get the Ministry of Lands, Mines, and Surveys to prepare a detailed topographic map. The survey of the 346 acres was completed in September 1964. Negotiations were completed with the local tribal authorities to get control of an additional 3,170 acres of land contiguous to the

13/ Barrow, Joseph M., Ibid.
14/ In addition, there are about 200 acres in the Rice Research Station, located at Rokupr, about 145 miles from Njala. All land has been leased from the tribal authorities on a long-term basis.
15/ The survey showed 341.1 acres in this area.
346 acres. Fortunately, there were few houses in this area and few tree crops on this land. Damages were paid to farmers who were asked to give up houses or land on which economic trees were growing. In September 1965, the topographic map for several hundred acres of new land was completed. It is this area on which it is anticipated that the campus will be developed. Surveying was started on land on which experimental farms will be established. This task was simplified by appointment of a surveyor to the staff of Njala University College.

Physical Plant Changes, 1964-65. The major objective was to modify the physical facilities taken over from predecessor organizations to meet the needs of students and staff for the first school year, beginning in September 1964. There was a seemingly endless list of small and large tasks to be completed in a short period with an inexperienced staff. The appointment of Lt. Col. R. H. P. L. Durham as Director of the Physical Plant was the answer to many of the problems involved in physical plant improvement.

The major changes in the physical plant from July 1964 to February 1965 were: construction of 12 senior staff houses and one guest house; remodeling of dormitory facilities; kitchen and dining hall improvements; remodeling of a building for the language laboratory and installation of 16-booth equipment; construction of a medical center; installation of a new 50 kw generator; and construction of a business office and warehouse in Freetown.

Building Program—Phase I. Soon after the first class of students had arrived at Njala in late September 1964, planning was started on physical plant changes and additions needed by October 1, 1965, when the second class of students was to be admitted and several new staff members were expected to arrive. This planning produced the following list of needs:

1. Remodeling of dormitories for 100 students and addition to the women's dormitory.
2. 30 senior staff houses.
3. 30 junior staff houses.
4. Science laboratory block (two laboratories and air-conditioned storage space).
5. Library (about 5,000 square feet).
6. Food service storage and office space.
7. Four lecture rooms.
8. Six faculty and staff office units (about 6,000 square feet).
9. Agricultural engineering and industrial education workshops.
10. Crop storage and processing buildings for experimental farms.
11. New electric power station and distribution system.
12. Additional sanitary facilities.
13. New furniture and equipment for the above.

A request was made to the Government of Sierra Leone for the money to finance these physical plant additions, and Le 870,000 ($1,218,000) was included in the Government's capital development budget estimate for the year beginning April 1, 1965.

This was the College's first large construction program, so the staff anticipated that there would be many difficulties in getting the several projects completed as soon as desirable. They decided to use several means of accomplishing the task. Physical plant labor was used to remodel dormitories and build the addition to the women's dormitory, construct 10 senior staff houses, and prepare foundations for the new electric generators. Experimental farm and physical plant labor constructed the agricultural engineering and industrial education workshops and the crop storage and processing buildings. Two Freetown contractors were to build 10 senior staff houses, the 30 junior staff houses, science laboratory, library, food service storage and office space, and the sanitary facilities. The Forest Industries Corporation constructed the four lecture rooms, six faculty and staff office units, and 10 senior staff houses. The Sierra Leone Electricity Corporation assisted with installation of the new generators and the new high-voltage distribution system.

The first experience in a major building program pointed up a number of problems suggesting that inadequate attention was given to physical plant development in the early stages of planning for the new institution. Limited architectural services were available only through the generous cooperation of the Ministry of Works. Major additions were being made to the physical plant without a long-range campus plan. Commitments had to be made to contractors and suppliers without assurance that money would be available when the contracts had been fulfilled and goods delivered. Difficulties in obtaining construction materials and in predicting construction progress during the rainy season made it virtually impossible to get contractors to make a serious commitment on completion dates. Contractor practices and relationship of contractors to individuals and government seemed to make it difficult to predict the final cost of a building project. Shortage of highly proficient artisans and supervisory personnel made high-quality construction difficult. In future stages of physical plant development, ways should be sought to reduce the magnitude of these problems.

If one evaluates the progress made in the "Building Program--Phase I" in light of the difficulties involved, the only reasonable conclusion can be that it was a successful major step forward. This statement is made in spite of the fact that some of the building projects had only begun on October 1, 1965. The dormitories had been remodeled and the addition to the women's dormitory and the classrooms had been completed by the time the second class of students arrived. Excellent progress was made on the 10 senior staff houses built by College physical plant personnel. Delays in completing the science laboratory made it impossible to use the chemistry laboratories until the third term of the 1965-66 session. Adequate housing was not available for some senior staff members, and appointment of junior staff members had to be delayed because the houses being built on contract were not finished on schedule. Delays in getting roof structures on order from the United Kingdom held up early progress on workshops and experimental farm buildings. Several of the projects are still not completed; nevertheless, most essential college functions are being carried out reasonably well.

"Building Program--Phase I" experiences indicate the desirability of the College's taking steps to gain control of the planning and most of the actual construction of physical plant projects. The most successful building projects, in
terms of meeting critical deadlines, have been those supervised and constructed by College physical plant personnel. However, it should be pointed out that they have not been the types of construction requiring the most technical knowledge and skill. Furthermore, it is an open question whether the construction has been more economical than it would have been by other means. But the uncertainties and high costs involved in use of contractors and government corporations argue for having the College attempt to do much of its own work. This arrangement would require development of a highly qualified construction staff that could be employed economically only if the long-range physical plant development program was carefully planned and scheduled over a period of years.

Long-Range Capital Development. Building Program--Phase I was financed from current revenue of the Sierra Leone Government. The financial position of the country and its many development needs will make it impossible for the government to continue to finance the Njala University College physical plant development from current income. The difficulties in getting money from the treasury during late 1965 and early 1966 emphasize this point.

Discussions and correspondence on the question of capital requirements led to an informal agreement among Njala University College, USAID Mission to Sierra Leone, and University of Illinois personnel that USAID would assist Njala University College in obtaining financing for campus development from external sources.

The first step in making a request for external capital was preparation of a statement of long-range plans and requirements for the new institutions. The University of Illinois contract staff worked closely with other Njala University College staff members in preparing a "Requirements Analysis for the Capital Development of Njala University College,"17/ which was submitted to the United States Agency for International Development in May 1965. After review of this document, USAID requested further detailed information on enrollment and sources of students, employment of graduates, and staff requirements and sources. The "Supplement to the Requirements Analysis for the Capital Development of Njala University College"18/ was submitted in November 1965. The latter report included year-by-year projections to 1974 on enrollment by curricula, graduates, employment of graduates, and junior and senior staff requirements. Staff members also identified the research areas to receive priority and made estimates of personnel and physical requirements. The plans included extension as well as teaching and research programs.

By early 1966 AID/Washington had agreed to send an architectural and engineering team to Sierra Leone to prepare a long-range campus plan for Njala University College, including estimates of the capital requirements for physical plant developments. This study should not only pave the way to obtaining external financing, but also alleviate some of the problems encountered in "Building Program--Phase I." While progress is being made, the urgency of the problem of financing of campus development cannot be overemphasized. It is clear that developing the Njala University College physical plant economically and yet in such a way that the functional requirements for teaching, research, and extension can be met will require continuing and persistent attention.

The financial support provided by the Government of Sierra Leone and the Sierra Leone Produce Marketing Board, a quasi-government corporation, was as follows:19/20

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/ and /a Year beginning April 1.
b/ Amount included in budget estimates.
c/ Estimated.

The financial support obtained from these two sources was excellent during the 1963-64 and 1964-65 years. The budget estimates for 1965-66 also indicate the intentions of government officials to support Njala University College. The financial requirements during 1963-64 were relatively modest, as staff numbers were small and most physical requirements could be met by the facilities taken over from predecessor institutions. With the large increase in staff for the 1965-66 year and the launching of "Building Program—Phase I," the financial requirements were greatly increased. During the latter half of 1965, it became more and more difficult to obtain money from the Sierra Leone Government, particularly to pay capital costs. This points up the urgency of finding means of financing the capital development of Njala University College other than from current revenue of the government.

A careful study of all costs (capital and recurrent, including scholarships) of Njala University College over a period of years (say 10) is needed. The two "requirements analysis" papers and the forthcoming planning for physical plant development by the architectural-engineering team should provide much of the data needed for such a study. This study should be followed by a careful review of sources of financing. To date more or less arbitrary decisions have been made regarding the sharing of capital and recurrent costs. This review should make possible more realistic judgments on how costs are to be shared and the rate at which Njala University College should be developed within the financial limitations.

Commodity Procurement

Equipment, supplies, and books ordered under contract provisions to February 1, 1966, had a value of approximately $225,000. In ordering contract-financed items, the staff followed four general guidelines: Purchase items that

19/ Adapted from "Requirements Analysis for the Capital Development of Njala University College," May 1965, p. 17.
would be usable for several years and that could be maintained and repaired in Sierra Leone; develop an excellent library in the physical and biological sciences, agriculture, home economics, and teacher education; give priority to laboratory equipment and teaching aids to improve the quality of instruction; and purchase equipment and supplies for agricultural research laboratories and experimental farms.

The only serious problem in commodity procurement was the time lag between submission of orders and delivery of commodities in Sierra Leone. Inasmuch as Njala University College is an autonomous institution, it was not necessary to clear requisitions through government channels. Approval by the AID Mission was prompt except for one requisition that was not approved and one that was misplaced. At Njala, an attempt was made to write precise, detailed specifications for items ordered, but that was not always possible from the available information. Often because of inadequate specifications and the complex procedures involved in bid purchases and shipments to a foreign country, the real burden of procurement fell upon personnel of the University of Illinois Purchasing Division. There were some problems with the international freight forwarder, particularly in sending bills of lading which were essential for Freetown port clearance, and we often suspected that commodities were not being forwarded as promptly as possible. Most items, however, finally arrived in good condition. The AID emblems were not attached by some suppliers, resulting in extra effort on the part of the contract staff to see that they were applied.

Periodic attention is needed by all concerned to see that commodity procurement time is reduced to the absolute minimum. The cost of maintaining contract and other staff at Njala University College without essential equipment and supplies to carry out their work is very high. Likewise, lack of library books, laboratory equipment and supplies, and other teaching aids seriously affects the progress of students. Unless solutions are found, these problems will increase as student numbers increase and the research program develops.

Relationships With Other Educational Institutions

Continuous efforts are being made to relate the programs of Njala University College to those of other educational institutions and make them complementary. Many conferences and informal discussions have been held with personnel of the Ministry of Education, Fourah Bay College, teacher training colleges, and primary and secondary schools. University of Illinois contract staff members have participated in the work of the Sierra Leone Board of Teacher Training, Institute of Education, Sierra Leone Association for the Teaching of English, and University Status Committee.

Among the most important policy decisions facing Njala University College are those centering around the relationships with Fourah Bay College and the teacher training colleges. Government officials and leaders in higher education in Sierra Leone must be concerned about the adequacy and economy of the country's system of higher education. A number of Sierra Leone educators favor one tightly federated university for Sierra Leone. Their attitudes seem to be influenced by the organizational pattern of British universities, the long history and stature of Fourah Bay College, and concern about such matters as parity of standards, duplication of curricula, and costs of higher education. Others share some of the same concerns but are not certain that forming a tightly federated university is in the
best interest of the country or of either Fourah Bay College or Njala University College. They point to the widely different goals of the two institutions--Fourah Bay College with its stature and traditions and its long and close association with the University of Durham, in contrast to the newly created Njala University College with no traditions but with definite objectives and flexible means of attaining them.

The experiences of the first two years indicate that both Njala University College and Fourah Bay College are capable of growth as autonomous institutions; each institution can draw on the reservoir of secondary school graduates; there is little, if any, duplication of curricula and programs between the two; and the government has been effective in allocating public resources to both.

The University Status Committee was created to consider the advisability of forming a federated university, commonly referred to as the University of Sierra Leone, which would include Fourah Bay College and Njala University College as constituent colleges. Serving on the committee were representatives of the college councils and administrative and academic staffs of each college, the Ministry of Education, and the Ministry of Agriculture and Natural Resources. This committee held several meetings to consider the authority, objectives, functions, and organization of the proposed University of Sierra Leone. Progress was made in preparation of materials to be reviewed by staff members and college councils of the two colleges.

AID Mission Relations

Excellent working relationships have existed between the AID Mission to Sierra Leone and University of Illinois contract staff and Njala University College administrative staff. The genuine interest and support of both AID and U. S. Embassy personnel have been shown in many ways. There have been frequent discussions with the AID Contract Officer and Affairs Officer as well as with the U. S. Ambassador who served as Mission Director. The "housekeeping" support of several members of the CAMO (Consolidated Administrative Management Organization) staff has been extremely helpful.

As the size and effectiveness of Njala University College grow, it will become increasingly important that the University of Illinois contract efforts be closely related to other efforts of the AID Mission to Sierra Leone, particularly in planning and executing programs. To obtain maximum complementarity among all American efforts, there is a need to coordinate such programs as those in rural development and education. Coordination of effort with other American groups, such as the Peace Corps and CARE, may also be fruitful. Periodic conferences of key personnel of the AID Mission and Embassy, Peace Corps, CARE, U. S. Information Service, Hampton Institute contract staff, and Illinois contract staff would be helpful in strengthening the American effort in Sierra Leone and would make the combined efforts more effective in furthering the social and economic development of the country.

An audit of the University of Illinois contract operations at Njala University College was conducted at the request of the USAID Mission to Sierra Leone. This audit, which covered the period from the inception of the contract on August 16, 1963, through November 30, 1965, had as its purposes "to ascertain that the provisions of the Contract are being complied with by the Contractor, to determine the adequacy of records maintained, and evaluate the effectiveness of implementation of the Contract objectives."
The conclusion of the 40-page report of the audit was as follows:

"Based upon the data available and examined during this audit, and from discussions with the Principal, College Staff, GOSL and USAID officials, we believe that, subject to our comments, the terms of the Contract have been complied with, that the Contractor's performance has been satisfactory, and that a firm foundation has been laid for the future success of Njala University College.

"The Contractor's Staff has developed a close and harmonious relationship with College, USAID and GOSL personnel. Lack of progress in some areas cannot be attributed to poor staff performance, but rather to the difficulties inherent in building this type of institution in any developing country such as Sierra Leone. Progress has been made towards overcoming these difficulties, but more time is required before the results of the Contract can be properly assessed.

"The College Staff must also be recognized as having contributed considerably to the progress achieved. The Principal is held in high esteem, and he has been able to inspire his staff to accept the challenge to build up an autonomous institution which will ultimately provide great benefits to Sierra Leone.

"The Government of Sierra Leone has also shown enthusiasm towards the project and to date has, with the exceptions mentioned before, met their financial commitments, while giving the Contractor's staff complete freedom in programme planning and implementation. The most immediate problem the College faces is one of finance. Considering the present financial situation of the GOSL, the possibility can be foreseen that grants to the College may be drastically reduced, particularly Capital grants for Physical Plant. Clearly such a possibility must be borne in mind when considering the future development of the College. The GOSL wishes to see the College develop successfully, but it may well be that the economic state of the country will make it necessary to seek additional outside assistance to prevent progress of the project being seriously impeded."