

PN-DBA-779  
57762



THE STUDY OF AFGRAD ALUMNI:  
TRAINING HIGH LEVEL HUMAN RESOURCES FOR  
AFRICAN DEVELOPMENT, 1963-1980

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## PREFACE

The Office of Regional Affairs of the Africa Bureau (AFR/RA) and the Office of International Training of the Bureau for Science and Technology (S&T/IT) of the Agency for International Development (A.I.D.) have provided funding for a special study of the African Graduate Fellowship Program (AFGRAD) required under the Agency for International Development's grant number AFR-0433-A-00-2034-00. The Study of AFGRAD Alumni: Training High Level Human Resources for African Development, 1963-1980 has been produced by the African-American Institute in response to that requirement.

As stipulated in the aforementioned grant, "The African-American Institute [contracted] an independent researcher, approved by A.I.D., to direct a study of alumni of the AFGRAD II program and to prepare a report of the study."

Jasperdean Kobes, an independent consultant, was the principal investigator for The Study of AFGRAD Alumni. She has over fifteen years of experience in planning, managing and evaluating education and training programs in developing countries. She received an Ed.D. degree in Education and International Affairs from Columbia University.

Robin Horn, an education economist at Decision Resources Corporation in Washington, D.C., served as a statistical

consultant on the study. He received his Ph.D. in Economics and Education from Columbia University.

The final report was edited by James Rogers, an independent consultant in international development and training, who received his Ph.D. degree from the University of Rochester. Mr. Rogers is currently a program manager and trainer for the Experiment in International Living in Brattleboro, Vermont.

May, 1988

## I. THE AFGRAD PROGRAM

### A. A Brief History and Description of the Program

The African Graduate Fellowship Program (AFGRAD) was created in 1963 as a response to the critical shortage of highly trained Africans available for leadership positions when the wave of independence swept over the continent in the late 1950s and early 1960s. Since then, American graduate and professional schools, African governments, the Agency for International Development (AID), and the African-American Institute (AAI) have worked together to provide between 80 and 125 competitive fellowships per year to qualified Africans for graduate level training on campuses throughout the United States.

The primary purpose of AFGRAD has remained unchanged: to provide quality graduate education to Africans who will assume positions, in universities, in governmental and parastatal institutions, and in the private sector, of critical importance in the development of their respective countries when they return home. AFGRAD alumni are expected to strengthen and influence the growth and development of their respective institutions, and to transfer their technical capabilities to subordinates and the younger generation.

In the words of one of the AID contracts for AFGRAD:

It is the intent of the program that students will be selected primarily in terms of the most urgent needs for manpower for the balanced and integrated economic and social development of the Cooperating Countries and this program will be coordinated with

other United States programs in Africa. The graduate students, upon obtaining degrees, will provide a source of trained Africans, particularly at the junior and middle administrative and academic levels, to instruct and lead in the development of their countries and in strengthening the civil service, research institutions and universities in the Cooperating Countries or to serve in other positions as approved by the Cooperating Countries (Note 1).

AFGRAD program administrators stress the correlation of the sponsored training in the United States and the identification of positions essential to economic and social development in Africa. Early on, African governments recognized AFGRAD as a means of training professionals and administrators for universities, government ministries, research organizations, and parastatals. The typical fellows were usually young civil servants or junior faculty members nominated by their governments or universities for a period of study in the United States, with assurances of reinstatement to their positions or to more advanced ones upon return home. Largely due to the pressing needs of the public sector, African governments have less often viewed AFGRAD as an opportunity for high level training for the private sector. Soon after AFGRAD started, the program encouraged and supported requests for training private sector personnel (Note 2).

#### B. The Program's Response to Africa's Needs

The great scarcity of trained African nationals available for economic and social development when many African nations became independent over twenty-five years ago has been well documented

by both African governments and donor agencies. The number of Africans with university training was particularly small. For example, in 1958 fewer than 10,000 African students were attending universities at home or abroad and very few countries had more than 200 students in university training, which represented less than one per cent of the relevant school-age population (Note 3).

Between 1960 and 1980, African governments made impressive strides in their efforts to expand educational capacity and opportunities at all levels. The percentage of primary school-age children attending school almost doubled, from 32% to 63%. The enrollment growth rate of the respective age groups at the next two higher levels increased even more rapidly: from 16% to 36% at the secondary level, and from 1.5% to 5.6% at the tertiary level (Note 4). These significant achievements notwithstanding, sub-Saharan Africa is still considerably behind the other major world regions in training capacity and human resource availability, particularly at the post-secondary level (Note 5). This shortage of highly trained leaders has continued to be one of the major constraints to accelerating economic and social development throughout Africa since independence (Note 6).

Two references will illustrate the overwhelming agreement that exists on the negative impact this shortage has had on African development efforts. In 1977 AAI researchers noted: "...a

review of various African development plans, World Bank reports, and AID documents produced a flood of opinion that the lack of African manpower is among the most often mentioned factors cited to explain the failure of African nations to meet development objectives." (Note 7) Seven years later, in 1984, AID's Africa Bureau indicated that "[t]here is probably no single barrier to improved management and development ...which is more constraining than the greatly understaffed manpower components of existing programs." (Note 8.)

Because of this shortage, many African institutions still have some expatriates in high-level policy making, managerial, and professional positions. Even though variations exist among African nations, the continuing need in most sectors for highly skilled people is abundantly clear.

#### C. The AFGRAD Partnership

Since 1963 four partners have worked together to create and sustain AFGRAD: American graduate and professional schools and their official membership organization, the Council of Graduate Schools of the United States (CGS); African governments (and their National Selection Committees); the Agency for International Development (AID); and the African-American Institute (AAI). Through the years these partners have organized and refined a flexible structure for implementing AFGRAD. Within this structure, each partner plays an essential role.

1. American Graduate and Professional Schools and CGS

The American Graduate and Professional Schools provide tuition and fee support to the nominees who meet their scholarship standards. For the 1681 fellows included in the AFGRAD study, this represents an investment of approximately 10 million dollars. The provision of some 250 tuition waivers per year for over two decades attests the strong commitment that American universities have made to the training of African students. Tuition waivers have been consistently available even during periodic cutbacks in federal and state support for graduate education, and in spite of revised state laws that restrict the granting of tuition scholarships to foreign students. Other contributions from this partner include the invaluable guidance and encouragement that foreign student advisors, academic advisors, and other faculty members and administrators provide to the fellows during their period of study in the United States.

The participation of American graduate and professional schools in AFGRAD is facilitated and coordinated by the Executive Committee of Graduate Deans, known as the Deans' Committee. Formed in the same year as AFGRAD, it is an active standing committee of the Council of Graduate Schools of the United States (CGS), which has played a significant part in carrying out this participant training program.

Under the leadership of Dr. Gustave O. Arlt, who was the president of CGS in 1963, the plan was conceived to include the United States graduate school community in the education and training of future leaders of the then newly emerging African states. AAI and CGS pursued this broad objective together and developed the framework for what became AFGRAD. Dr. Arlt took the initiative to establish the Deans' Committee and to focus the attention of higher education officials in this country on the pressing needs of higher education in Africa. His presence during the formative years of AFGRAD and his long tenure of chairing both CGS and the Deans' Committee helped to build strong support for the AFGRAD program in the American graduate school community, and to develop it into a widely respected graduate training program for future African professionals and managers (Note 9). Since his departure from the Deans' Committee, its chair has always been filled by the current president of CGS, a strong indication of the Council's continuing commitment to AFGRAD.

The Deans' Committee's rotating membership is composed of 10 to 15 deans of graduate schools from various parts of the country. This committee selects the finalists for AFGRAD awards from among the candidates nominated by the African governments, assists AAI in obtaining tuition waivers and placements at CGS member institutions, advises AAI and AID on matters of academic policy, and formally links and endorses AFGRAD to the graduate school community in the United States. The Deans' Committee's

insistence on awarding tuition waivers according to consistently high standards of academic promise and performance has assured the high quality of the screening process and sustained the program's commitment to academic excellence.

Since 1966, at least two members of the Deans' Committee have travelled each year to Africa to discuss human resource needs with government officials, university administrators, and prospective or existing employers of returning AFGRAD fellows. When possible, they also participate in meetings of the National Selection Committees and interview candidates. These trips have progressively deepened the Committee's understanding of the African context and, simultaneously, the understanding African governments have about the final selection criteria and AFGRAD's emphasis on high academic standards. A practical result of this field level exchange has been that a much higher proportion of the nominees identified by the African governments have been recommended for fellowship awards by the Deans' Committee (Note 10)

## 2. African Governments

The Cooperating Countries nominate the candidates for AFGRAD awards and pay for the fellows' round trip transportation between home and the United States (Note 11). They link with AFGRAD through formal nominating committees for pre-screening of candidates for AFGRAD fellowships. In many countries, these are the same committees that nominate candidates for all overseas

scholarships (Note 12). When they meet to identify AFGRAD candidates, these committees include representatives of the African government and national universities, the USAID Mission or American Embassy, and AAI country representatives.

The selection committees meet annually to identify candidates using the criteria of individual ability and interest, academic potential, and country manpower needs. Members of the Deans' Committee participate in some of these meetings during their annual trips to Africa. Faculty members and civil servants have been proposed to the selection committee directly by their respective institutions, which have in some special cases agreed to pay for the international travel of their employees while they are on leave to pursue graduate study in the United States.

Upon completion of the nominating process, African governments submit their candidates' applications to AAI in New York for the final selection and referral process carried out by the Deans' Committee and AAI. To underscore the importance of AFGRAD's overriding goal of matching training to priority human resource needs, each application must be accompanied by an official written statement from the candidate's government or university attesting that the candidate will be studying in a field of high priority for that country's development requirements, and that he or she will be considered for a university or civil service position upon completion of training in the United States. The

assertion of commitment is a part of the formal application and AAI considers no candidate without it.

The participation of African governments does not end with the nomination of candidates and the provision of transportation. Their involvement in AFGRAD continues through their embassy officials in the United States, particularly the Educational Attachés. With AAI's collaboration, these officials stay in close contact with fellows to monitor their academic and personal adjustment in the United States. Such monitoring only ends with the fellow's return to the home country.

### 3. The Agency for International Development

AID provides funds to AAI to meet student costs, such as medical insurance and housing, and to administer the entire AFGRAD effort, including selection, placement, academic and social counselling, financial disbursements, and visa sponsorship. From 1963 to 1981, AID provided financial support to AAI through three consecutive noncompetitive contracts: AID/afr-120 for waves 1-5 (a "wave" refers to an intake of fellows, usually in September when the academic year begins); AID/afr-538, Task Order No. 4 for waves 6-14; and AID/afr-C-1292 for waves 15-18.

The first two contracts constitute AFGRAD I and refer to AFGRAD when it was a self-contained program. Under these contracts, 1,301 awards were made to Africans from thirty-three countries. AFGRAD I ceased to offer any new awards after the 1976-1977 academic year. Its successor, AFGRAD II, was implemented in

1977 with funding from AID's African Manpower Development Project. Under the third contract noted above, 360 awards were made to candidates from thirty-one countries. No new awards were made under this contract after the 1980-1981 academic year.

In August 1981, AID invited bids on the contract for the extension of AFGRAD II. AAI won this bid and received the contract to support 330 more AFGRAD awards through 1985. AAI also won a second round of competitive bids and is currently administering the ongoing AFGRAD program through 1990.

During the early years of AFGRAD, the program also received financial support from other sources for an additional 45 fellowships. The major funding came from the United States Department of State, which provided 22 USA-UNESCO Fellowships and 17 State-AAI fellowships. The USA-UNESCO Fellowships stressed exclusively the training of university teaching and research personnel, whereas the State-AAI Fellowships were given to both university staff and civil servants (Note 13). In the same period, a grant from the Charles E. Merrill Trust Fund enabled AAI to support three more AFGRAD awards, and AAI also administered three fully-funded university awards (Note 14).

In summary, 1706 fellowships (1,661 AID-supported and 45 other donor-supported) were awarded to 1,681 Africans for graduate study in the United States between 1963 and 1981 (Note 15). AID's willingness to sustain funding for this program on a long-term basis makes the clearest possible statement about its

commitment to African development, particularly in the area of human resource development.

#### 4. The African-American Institute

AAI administers the program, facilitates the contributions of the other AFGRAD partners, and maintains close communication with each of them. The major administrative tasks include processing applications, supervising the progress of current fellows, assisting fellows to return home, and keeping track of alumni and alumna and their career development after their return to Africa. What AAI brings to this large administrative task is not only its institutional capacity to handle participant training with great facility but especially its remarkable familiarity with African realities.

AAI carries out its responsibilities through its AFGRAD Secretariat, which operates from the New York office, and its country representatives or government correspondents in Africa. A brief overview of the major activities that AAI carries out during a typical academic year points to the extensive and critical role that the AFGRAD Secretariat and AAI country representatives play in the program.

##### a. Current Fellows

At the beginning of the academic year in autumn, the Secretariat orients new AFGRAD fellows: acquainting them with the provisions and limits of the program, introducing them to AAI staff, and providing them insights into the resources available at their

respective campuses. Throughout the year, the Secretariat, with each AFGRAD fellow assigned to a particular member of the Secretariat, monitors the fellows' academic progress, pays visits to students, helps fellows address whatever problems that arise, and corresponds or speaks directly on their behalf with academic and financial advisors, immigration officers, and home government officials.

From time to time, the Secretariat arranges special seminars and conferences for fellows through its contacts with private and public international and national organizations. It also keeps abreast of job-related training opportunities and possible internships for the fellows. Staff members of the Secretariat assist in confirming employment commitments in the fellows' home countries, facilitate their return travel, and prepare a final report on each of them. Through the efforts of the AAI country representatives and African government correspondent as well as through periodic surveys, the Secretariat keeps informed of the fellows' employment and professional situations.

b. Prospective Fellows

Early in the academic year, AID informs the Secretariat of the number of awards available for the next academic year, the applicable fields of study, and the countries eligible to participate in AFGRAD. This information is forwarded to AAI's country representatives or government correspondents, who announce it to the government agencies and national institutions

with which they are in constant contact. In November and December, Secretariat staff members and members of the Deans' Committee travel to Africa to meet with African government officials. Wherever feasible they take part in National Selection Committee meetings and interview prospective fellows.

African governments present the dossiers of their candidates to AAI in New York, generally by the end of December, for the annual selection and referral process that takes place in January. The Secretariat meets with the Deans' Committee in New York over several days to review dossiers and to recommend fellows for the next academic year. The Secretariat then attempts to place each recommended candidate at one of the approximately 125 graduate and professional schools that provide tuition waivers to AFGRAD fellows.

Throughout this process, AAI serves as the hub for all the activities that link the four partners together. As AFGRAD fellows have indicated in their comments about the role of AAI, the quality of their experience in the United States has in large measure been due to the ongoing efforts of the AFGRAD Secretariat to provide them with sympathetic and effective support during their stay. This cooperative spirit has characterized the role of all the partners. In a relationship that has lasted now for nearly twenty-five years, the AFGRAD partners have demonstrated a rare ability to build on each other's strengths and to volunteer ungrudging support.

This relationship was unique for many years. Its demonstrated success has made it a model for other large participant training programs supported by AID. What AFGRAD has made clear to all of its partners is that cooperation and mutual understanding make development possible.

## NOTES

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2. African-American Institute, The AFGRAD Annual Report, July 1, 1964 - June 30, 1965, p. 5; and AFGRAD: An Experiment in Purposive Education. A Report to Participating Governments and Institutions, November 1966, p. 5.
3. The World Bank, Accelerated Development in Sub-Saharan Africa: An Agenda for Action (Washington, DC: The World Bank, 1981), p. 10.
4. United Nations Educational, Scientific and Cultural Organization, Statistical Yearbook 1983 (Paris: UNESCO, 1983), p. II-36.
5. Overseas Liaison Committee, The American Council on Education, The African Manpower Development Project: An Evaluation (Washington, DC: The Council, 1980), p. 1.
6. The World Bank, op. cit. p. 9.
7. Joyce Lewinger Moock and Peter R. Moock, Higher Education and Rural Development in Africa: Toward a Balanced Approach for Donor Assistance (New York: The African-American Institute, 1977) in The American Council on Education, op. cit., p. 2.

8. United States Agency for International Development, Africa Bureau Strategic Plan (Washington, DC: AID, 1984) in Africa Bureau Development Training Strategy Paper [Draft] (Washington, DC: AID, 1984), p. 3.
9. In recognition of Dr. Arlt's contributions to African higher education, the University of Ife in Nigeria awarded him an honorary doctoral degree in 1971.
10. African-American Institute, The AFGRAD Annual Report, July 1, 1966 - June 30, 1967, p. 2.
11. While African governments have nearly always paid for the round trip transportation of the fellows, a few exceptions have been made for countries with more severe foreign exchange problems and the lowest per capita incomes. In these rare cases, AID has paid the travel costs.
12. African-American Institute, The AFGRAD Annual Report, July 1, 1972 - June 30, 1973, p. 8.
13. African-American Institute, The AFGRAD Annual Report for the Bureau of Educational and Cultural Affairs, June 30, 1969, p. 1.
14. African-American Institute, The AFGRAD Annual Report, July 1, 1967 - June 30, 1968, p. 1.
15. The discrepancy between the number of awards and the number

of recipients is explained by the fact that twenty-five AFGRAD fellows received two fellowships. Some received separate fellowship awards for their master's and doctoral studies because they went home to work for several years between degrees. Others started out with other donor-supported fellowships, but they were granted AID-supported awards to complete their graduate degrees.

## II. THE AFGRAD STUDY

### A. Objectives of the Study

Evaluating the progress of AFGRAD alumni and their contributions to African development is a continuing interest for AAI, AID and the other AFGRAD partners. The AFGRAD study grew out of AID's general interest in looking at its participant training programs and AAI's contractual obligation to provide the agency with information about the employment and location of AFGRAD fellows who have completed the program. In 1975, AAI carried out its first systematic effort to assemble and compare its data on former participants. "Operation Search" resulted in a directory that listed all AFGRAD participants from the beginning of the program in March 1963 to June 30, 1974 and included information about their country of origin, year of entry into the program, American university attended, and field of study. It also included data about their degree(s), job title, employer, and current address. That survey indicated strong evidence of the early impact that AFGRAD Alumni are having in their respective home countries: of the 746 fellows who had completed their studies by the end of 1975, 91.3 % of them had returned to Africa and had moved into important development-related positions (Note 1).

In 1982, while planning for a second "Operation Search" to cover the entire period from 1963 through 1980, AAI and AID decided that a more thorough assessment of the AFGRAD program would be

advantageous. Given the inherent difficulties in locating and collecting significant information on so many people distributed throughout the African continent, some of whom had been participants almost two decades earlier, this endeavor took years to carry out. Finally completed, the study of AFGRAD alumni now allows an in-depth analysis of the impact and effectiveness of the program.

The broadly stated objectives of the AFGRAD study read as follows:

To collect and analyze data a) to determine how approximately 1,500 AFGRAD alumni have utilized their graduate training; b) to determine how the AFGRAD program has impacted on African development; and c) to determine how the AFGRAD program and other participant training programs might be improved.  
(Note 2)

These objectives are elucidated in a set of twelve study questions. One group of questions focuses on alumni academic activities, career patterns and their relation to national and regional needs for well trained manpower. Another group deals with program efficiency, alumni working conditions and alumni contacts with American colleagues and institutions (Note 3).

The authors of the study were able to identify and characterize relatively easily the factors needed to answer (a) and (c) of the study objectives, but the absence of a preliminary survey made the response to (b) problematic. In order to provide a response to this sub-question, we have set forth a series of patterns that are characteristic of AFGRAD participants, from

which certain inferences about the impact on African development can be reasonably drawn.

B. Approach, by Sub-Groups

To understand the significance of information on such a large and diverse group requires examining patterns in disaggregated data. By dividing alumni according to variables of gender, language, geographic sub-region, degree and field of study, one can compare the AFGRAD Program's impact on different sub-groups of alumni. Data were also analyzed according to when alumni were participants, permitting a view of how the Program has evolved over an eighteen year period.

Alumni were placed into language groups depending upon whether the country that nominated them was predominantly English-speaking or French-speaking. The degree sub-groups were determined according to the academic achievements of alumni while they were participants: masters only, masters and doctorate, doctorate only, other programs, or withdrew from the program. Field of study break-down followed the alumni's graduate school specializations: (1) agriculture; (2) education; (3) mathematics, science, and engineering; (4) economics; (5) business; or (6) all other fields. Alumni were put into one of four time periods, based on the year alumni entered the AFGRAD Program: 1963-1968, 1969-1972, 1973-1976, and 1977-1980.

Finally, the study divides geographic sub-regions as follows:  
East Africa: Ethiopia, Djibouti, Kenya, Madagascar, Mauritius, Somalia, Sudan, Tanzania and Uganda;  
Central Africa: Burundi, Cameroon, Chad, Congo, Rwanda, and Zaire;  
North Africa: Morocco and Tunisia;  
Southern Africa: Botswana, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Zambia, and Zimbabwe;  
West Africa/Anglophone: Gambia, Ghana, Liberia, Nigeria, and Sierra Leone;  
West Africa/Francophone: Benin, Guinea, Ivory Coast (Cote d'Ivoire), Mali, Mauritania, Niger, Senegal, Togo, and Upper Volta (Burkina Faso).

C. Sources of Data

The AFGRAD study relied on two basic data sources: student files and questionnaires; interviews were used to review and corroborate the conclusions, but were not used as a database for the study. The primary source of data for information regarding students' background characteristics was AAI's own alumni record files. AAI collects and maintains records on every AFGRAD participant. A file on each participant is opened with his or her application. Informational records accumulate throughout the individual's academic career and often beyond his or her graduation date. As many participants continued to correspond with AAI staff after their return to their home country,

numerous files contain data on alumni experiences well after their return to Africa.

The alumni record files were the primary source for information pertaining to the participants' personal and academic backgrounds. The AFGRAD application provided the core items for the study, such as name, age, gender, "wave," marital status, number of children, place of birth, and year of birth, the participants' educational and career expectations, their reasons for applying to the AFGRAD program, and other personal characteristics. The alumni files also included letters of reference, the student's signed promise to return to his or her home country after the AFGRAD program, various types of correspondence between AAI staff and the participants, AFGRAD student grade report forms, letters from faculty members, medical reports, the alumni's masters or doctorate theses, and the alumni's return date and destination. The AFGRAD Secretariat provided access to files on over 95% of the alumni.

All 1,508 living alumni who had entered the Program between 1963 and the end of 1980, who had completed their academic programs as of December 31, 1982, and whose current address was obtained were sent a far-ranging questionnaire that asked them to comment on their AFGRAD experience, their career development, and the quality of the program.

The questionnaire was developed by the principal researcher of the study, in collaboration with the AFGRAD Secretariat. Field

testing of the initial design of the questionnaire took place with the participation of a group of African students, representing six different countries and most of the regions covered by the study. This version was then reviewed and modified, after consultation with AID. Data runs were designed and conducted according to the following methodology:

A team of three research assistants and a supervisor were charged with the responsibility of collecting data from the alumni record files. The supervisor developed a data entry form in order to consolidate the information on all relevant items from the alumni files. The research assistants were asked to locate the alumni record file for each student in the survey. After analyzing the contents of the file, the researchers completed the items on the data form. When the researchers were unable to find or easily interpret the information necessary to complete an item, they were instructed to seek help from the AFGRAD staff member responsible for that alumnus. The supervisor arranged coder reliability and consistency checks (by having more than one research assistant collect data from the files of same student, or having the same researcher complete the forms for the same students at a later period), and coded the data forms for many of the alumni whose records the research staff found problematic.

One of the main sources of difficulty for the research team was the fact that the alumni files were maintained primarily for

administrative rather than research purposes. Consequently, the files did not always have a complete set of records (although all files had the fellow's application, letters of reference, basic academic program information, and his or her signed letters of agreement to return home after the AFGRAD program).

Information from the background files were entered into dBase II data files and comprised the "background data files." This file contained information on the student and personal characteristics of all 1681 alumni derived from the alumni data files (although academic information was usually supplemented or verified by contacting the universities where the students attended). The purpose of contacting the universities was to obtain information regarding the participant's current status, his or her graduation data (if any), degree title, and most recent address. Some participants, numbering less than four percent, fell out of contact with AAI while they were studying in the U.S. Only incomplete information was obtained for these individuals.

The AFGRAD questionnaire was designed to provide the study with the majority of the post-program data necessary for the report. Many staff-suggested items were included in the questionnaire. Also, it was decided that many questions should be open-ended (fill-in type) because staff believed that the fellows would respond better to these types of items rather than multiple-choice type items. Essay type items were also included in the

questionnaire. In its final form, the questionnaire was 20 pages long with about 30 open-ended questions and over 150 simple response questions, of which roughly half were multiple choice items. One of the most formidable tasks for the research staff was to fit the open-ended responses into succinct statements which could be aggregated and summarized across the students. (The AFGRAD questionnaire is included as Appendix 3.)

The questionnaire sample is a subset of the 1681 individuals in the background file. After locating the most recent mailing addresses of as many of the alumni as possible, questionnaires were mailed, pouched, or personally delivered by AAI field staff to approximately 1600 alumni both in the US and overseas. After a year, over fifty percent of the questionnaires were returned, thanks to the persistence of many individuals, including AAI field representatives, the research director, AAI senior executives, and the alumni themselves, who expressed a sense of debt and thanks to AAI for providing their graduate study fellowship assistance. It surprised the research staff that, despite its length, the majority of the alumni found the time and made the effort to complete the questionnaire in its entirety. In fact, many took the time to fill in every inch of available writing space with comments, criticisms, thanks and suggestions. A few even typed and inserted extra pages (Note 4).

Statistical tests were performed (primarily chi-square tests) to

determine whether the questionnaire respondents differed significantly from the non-respondents. In over ninety percent of the variables in the background file, no statistically significant differences were found.

The research staff reviewed the questionnaire responses, developed codes for all the questionnaire items, and input them into a dBase II questionnaire file.

Across the sub-groupings such as gender and language the distribution of questionnaire respondents closely mirrors the distributions for all alumni. One exception to this even representation was noted. Alumni from the most recent time period responded to the questionnaire in greater proportion (20.2% of the total respondents and 15.9% of total alumni) than did those from the first six years of AFGRAD (21.7% of the respondents and 25.8% of all alumni). This time-specific difference also creates a slight under-representation of alumni from the two northern Africa countries which only participated in the early years of the AFGRAD Program (0.5% of respondents, 2.2% of alumni) (Tables 1 and 2).

In-person interviews were conducted in Africa with a total of 73 alumni of five countries: Cameroon, Mali, Sierra Leone, Tanzania and Zambia. The countries, selected for their long history of AFGRAD participation, represent all of the sub-regions except North Africa, where AFGRAD is no longer being implemented. The interviews focused on professional contributions of alumni

after leaving AFGRAD and their utilization of their graduate training.

Because of the limited time available for the interviews, all of them took place in capital cities. This made a truly random sampling of alumni impossible, and alumni working in agricultural fields were under-represented. Nonetheless, alumni from all time periods and different fields were interviewed, and women from each country were among the interviewees.

Also interviewed for the study were 30 African government officials, AID officers, AAI country representatives and government correspondents, and other parties in an effort to learn more about how AFGRAD fits into the high level human resource situation of each country. (See Appendix 2 for the interview schedule and for details on the interviews in this category.)

The original intention to interview supervisors of alumni turned out to be inappropriate, due to the high level positions that many alumni themselves now occupy. While this was disappointing on one hand, on the other it is a measure both of the need for highly trained personnel in these countries and of AFGRAD's success in helping meet these needs.

## NOTES

1. The African-American Institute, The AFGRAD Annual Report, July 1, 1975-June 30, 1976, p. 11.
2. United States Agency for International Development, Grant No. AFR-0433-A-00-2034-00, Amendment No. 1, August 30, 1982, p. 4.
3. Below are the 12 study questions formulated by AID under the rubric, Scope of Work. These questions were to be used as guides to the type of answers AID hoped to obtain from an in-depth study (Ibid., pp. 5-6):
  - What contributions, on a national and regional basis, has AFGRAD made in meeting Africa's critical need for well trained manpower for the public and private sectors;
  - To what extent does a program such as AFGRAD contribute to the creation of "critical masses" for the institutional development of certain university departments, research institutes, government ministries, parastatal bodies and other entities important to development;
  - What variables seem to operate in determining how long individual participants take to complete their studies and return home? How might the selection and training process take those factors into account to ensure more effective results from both the time and cost perspective;
  - What are some of the typical career patterns of AFGRADers who have been home for several years? How has the AFGRAD experience contributed to those patterns? How can AFGRAD training be improved to enable participants to be better prepared for likely career development (e.g., through enhanced training in management and administration)? What is the extent and nature of research done by former AFGRAD students? To what extent does it meet critical development needs;
  - What is the AFGRAD return/non-return ratio? How does it compare to other AID and non-AID training programs? What factors principally contribute to non-return? What can be done in the selection or training

process to insure that the non-return role will diminish;

- How many deans, ministry officials, international organization experts, agricultural experts, business leaders, etc. are alumni graduates;
- What measures can be taken to facilitate the re-entry process (e.g., clarification of degree equivalencies, assurance of greater home government assistance in repatriation);
- What are the conditions of work to which the AFGRAD alumni return? What are the attitudes of supervisors toward AFGRAD alumni? How is the AFGRAD alumnus perceived by colleagues and by supervisors;
- What facilities, materials and equipment are made available by the host government to take advantage of the new knowledge of the AFGRAD alumnus;
- How much continuing contact have AFGRAD alumni had with the USAID Mission? What opportunities are provided for a continuing relationship and follow-up with AFGRAD alumni through USAID Mission resources? How do both returned participants and the responsible USAID Project Officers view the quality of this relationship and its need;
- What is the nature of the alleged "over-trained" phenomenon? What circumstances breed it, and how might the selection process be adjusted to minimize it;
- How much continuing contact have AFGRAD alumni maintained with the United States? Do they come back for visits? Do they correspond with their former professional associations? What initiatives could be taken to enhance opportunities for contact.

4. The question remains as to whether a shorter questionnaire would have encouraged more to respond or a different set of individuals to respond. For instance, those in the most important positions, for whom time is very costly, may have been less likely to respond to a large questionnaire, whereas those who are unsuccessful or who are unstable were unlikely to return a questionnaire in any case.

### III. THE AFGRAD ALUMNI (General Characteristics)

By examining selected characteristics of 1,681 AFGRAD alumni, and looking carefully at their similarities and differences at the time they were selected for the program, we were able to illuminate the changes that took place over the course of the nearly two decades during which AAI implemented this part of the AFGRAD program. When data are disaggregated by gender, language, and geographic sub-region, a clearer picture emerges of the respondents' situation in their home countries, their family and educational background, and what they expected to do after their graduate training.

Most of the data looked at in this chapter emerged from a series of questions within the questionnaire. The purpose of these questions was to identify characteristics that typified or differentiated among participants, in order to see the results of the AFGRAD selection process and to provide AAI with information for modifying and designing future programs.

Although the data do not match explicitly any of the typical study questions posed by AID, the authors consider this information to be of great interest, both actual and potential, in the design, modification and assessment of participant training programs.

#### A. Countries of Origin

During the years covered by this study, AFGRAD participants came to the United States for advanced training from 39 African

countries (Table 3, Note 1). A dozen countries account for 73% of the participants, although only five of them had more than 100 participants each. Numerical leaders are Nigeria (207), Ghana (195), and Ethiopia (182). On the other end of the scale, 17 countries had fewer than 20 participants each (Table 4).

When we correlate the countries of origin to the time of entry into AFGRAD, we find that the distribution of awards varied only slightly from one period to the next. Almost one-half (48.5%) of the participants received their awards during the first and second time periods (the first AFGRAD decade, 1963-1972), while the remaining 51.5% received their awards during the eight years of the latter two periods, 1973-1980 (Table 5). The number of countries represented in each of the four time periods was also quite steady, fluctuating from a low of 24 between 1969 and 1972 to a high of 30 between 1977 and 1980. 18 countries had students participating during each of the four time periods.

#### 1. Income Levels

National income levels enabled us to divide the participating African countries into two groups: incomes above or below an annual per capita GNP level of \$380 (Table 6, Note 2). Over the whole eighteen-year period of the study, more than half the participants came from countries in the higher income group. Consistent with the objectives of AFGRAD, however, there was a clear trend towards involving more participants from lower income countries. The proportion of fellows from the lower

income group of countries increased steadily from 38% in the first time period to 55.4% in the last period.

## 2. Language Groups

Just over two-thirds (69.9%) of the participants were born in English-speaking countries (Table 7). Through the concerted efforts of the AFGRAD partners, the proportion of students from French-speaking countries grew dramatically, from only 16.9% in the first time period to exactly 50% for the final period. We can describe this shift by contrasting the following percentages: almost 60% of the English-speaking participants entered AFGRAD studies between 1963 and 1972, while over 70% of the French-speaking fellows started between 1973 and 1980.

## 3. Geographic Sub-Regions

The five geographic sub-regions used for this study tend to coincide with language groupings, so it was not surprising to find strong parallels between participation patterns in language and sub-region (Table 8, Note 3). In the first ten years of AFGRAD almost 80% of the participants came from either East Africa (37.2%) or Anglophone West Africa (41.1%). During the course of the program, the proportion of participants from French-speaking sub-regions (North Africa, Central Africa and Francophone West Africa) tripled, going from 15.4% in the first period to 46.9% in the last.

Looking at the sub-regions individually, one notes a steady rise in Southern Africa AFGRAD participation from less than 5% to

more than 16% over the course of the four time periods. During that same time span, Francophone West Africa experienced a seven-fold increase in its proportion of total fellowships, going from approximately 5% to almost 36%. Central Africa grew slowly to a peak of 12.1% in the third period. North Africa remained under 4% for the first three periods and was not included in AFGRAD II (1977-1980).

As the participation from Southern and Francophone West Africa sub-regions increased, the proportion of participants from East Africa and Anglophone West Africa dropped, from approximately 80% in the first time period to a combined total of only 36.7% in the last period. Clearly the growth of the Francophone West Africa sub-region's representation accounts for the major increase in French-speaking participants, while the decrease in English-speakers can be traced to the steady decline in the number of participants from Ethiopia, Ghana, Kenya, Nigeria, Tanzania, and Uganda.

#### B. Gender

Only 9% of all AFGRAD fellowships went to women, although their participation tripled between the first and the fourth periods: from 4.5% to 14.4% (Table 9). Almost three-quarters of the women began their studies after 1972. By countries of origin, only 17 of the 39 countries sent women in more than one time period, ten countries gave awards to women in just one period, and twelve offered awards exclusively to men (Table 10).

The increased participation of women in AFGRAD did not always follow the trends in proportional representation by sub-regions, language and national income levels. By the last time period, the steady proportional increase in women from the higher national income countries compared to those from the lower national income countries reached a ratio of two to one (Table 11). Generally, English-speaking women were just as likely to receive awards as French-speaking ones, but by the fourth time period the contingent of Anglophone women was greater by 17.5% to 11.3% (Table 12). Southern Africa out-distanced all the other sub-regions by supplying almost one-third of the women award holders in the latter two time periods (Table 13).

In comparing the proportion of AFGRAD women to men by sub-region, we note that by the last time period women were at least 11% of the participants from each sub-region (except Northern Africa), with Southern Africa leading the way at 27.6% women award holders in period four and 22.8% overall (Table 14). Even though East Africa and Anglophone West Africa sent almost half of the total number of women, these sub-regions had poor overall proportional records for nominating women for AFGRAD awards, due to the very low participation rates in the three countries with the largest number of participants: Ethiopia, Ghana and Nigeria (Tables 10 and 13). To understand some of the reasons why the AFGRAD program has been constrained from

increasing the participation of women, one needs to look at the educational systems in individual countries in terms of both their overall post-secondary school enrollment rate and the ratio between men and women attending school at this level. Four of the five countries that achieved a participation rate for women of over 30% have high post-secondary enrollment rates compared to those in the other countries; these four countries also have relatively well balanced male/female ratios of fewer than three men for every woman being educated at this level. Among the ten countries with AFGRAD participation rates for women between 9% and 30%, most have a somewhat lower enrollment rate and greater imbalance between the number of men and women in school compared to countries whose participation rates exceed 30% (Table 15).

In the two dozen countries with participation rates for women below 9%, half of which offered no award to women at all, the characteristics are less sharp, as the lowest post-secondary enrollments rates do not completely coincide with the greatest male/female imbalance among students. Nonetheless, the very low enrollment rates and unfavorable student gender ratios of these countries do generally correlate with much lower levels of participation in AFGRAD (Table 15). In sum, both the educational capacity at the post-secondary and the male/female student ratio at the post-secondary level within each country appear to be critical factors facilitating or constricting the participation of women in the AFGRAD program.

## C. Personal Background Data

### 1. Age

The mean age of participants at time of entry into the AFGRAD program went up by almost two years between 1963 and 1981: from 26.8 years to 28.5 years, with an overall mean age of 27.9 years (Table 16). The tendency for AFGRAD applicants to be older at time of entry, and other age differences among various groupings of participants, correlated positively with their levels of prior work experience. For those working at the time of application the mean age was 29.1, in contrast to 25.4 for those who were not working.

The general trend of a rise in mean age over the time period of the study remained evident when the data were analyzed by gender, language and geographic sub-region. However, we might take note of some variations. Men were one to two years older than women in the first three time periods, with a slight drop in this age difference to about eleven months in the last period (Table 16). Applicants from English-speaking countries were generally twelve to seventeen months older than their French-speaking colleagues, and that age gap grew to over three years during the third period, when Francophone recruitment was stepped up (Table 17). Mean age patterns among the French-speaking and English-speaking geographic sub-regions closely resembled those for their language groups (Table 18).

## 2. Marital Status

Although the proportion of single participants declined by 9% over the study period, a total of more than two-thirds, 67.4%, of the AFGRAD participants were single when they applied (Table 19). While this decrease in the proportion of single participants applied to both men and women, the percentage of single women was always higher than that of single men, as seen in the last time period when 76.5% of women and 63.8% of men were unmarried (Table 20).

Most of the married participants, 71.7%, had children under 18 years of age, with married women far more likely than married men to have children, by 86.8% to 70.6%. In three of the four time periods 100% of the married women had children (Table 21).

The proportion of married participants increased with time among both English and French speakers, and in all sub-regions except for Anglophone West Africa, where it decreased from 1973 to 1980. English speakers' married rate exceeded that of French speakers by a significant margin, 36.9 % to 22.6%. The sub-regions that accentuated these differences were Southern Africa and Anglophone West Africa, with over 46% married participants in the last two periods, and on the other side, Francophone West Africa, with over 80% single participants during those years (Tables 22 and 23).

## 3. Parents' Education

Given the average ages of AFGRAD participants during the study

period, it is likely that most of the parents of these participants were schooled in the educational environment that prevailed in Africa in the 1930's and 1940's when the possibility of attending the very limited number of mission and government schools varied considerably by country. In spite of scarce opportunities, 40.7% of the mothers (Table 24) and 62.2% of the fathers (Table 25) of AFGRAD participants entered the formal school system and received at least some primary education. No data were collected on their participation in traditional forms of education.

If we look first at the mothers, the proportion receiving education increased noticeably during the eighteen year period, from 31.1% to 45.5%. Increases were most dramatic at the secondary and post-secondary levels (Table 24). Proportionately more mothers of AFGRAD women have attended school and tend to have more education than mothers of male participants, especially at the secondary level, a trend that increased over time (Table 26). By language grouping the proportion of English speakers with educated mothers rose steadily over time from 31.2% to 56.1%, while the rate for French speakers remained almost constant, peaking at 33.8% (Table 27). Among the sub-regions, Southern Africa far exceeds the others in proportion of participants with educated mothers, 79.4%; Central Africa was near the mean with 41.9%; and Francophone West Africa participants with 24.8% were the least likely to have educated mothers (Table 28).

The proportion of fathers of AFGRAD participants receiving some education increased less than 6% during the study period, from 58.4% to 64.0%; however the proportion of fathers who reached the post-secondary level more than doubled to over 20% (Table 25). Similar to the distinction noted between male and female participants regarding education rates of mothers, a higher proportion of AFGRAD women's fathers are educated, as compared to fathers of AFGRAD men, especially above primary levels (Table 29). In tandem with education rates for mothers, English speakers' proportion of fathers receiving at least primary education rose steadily during the study, while that of their French-speaking colleagues did not. However, at the secondary and post-secondary levels, paternal education rates among Francophones surpassed those of the Anglophones (Table 30).

Over 90% of the participants from Southern Africa had educated fathers, a percentage much higher than in any other sub-region. Francophone West Africa participants had the lowest proportion of fathers with some schooling, just 50.4%, but the highest proportion of fathers reaching the post-secondary level (Table 31).

Although it is difficult to draw any obvious conclusions from such a range of data, we can infer that one characteristic that influences trends is the educational level of the parents of AFGRAD women. If both parents attained a level of education beyond the primary schools years, it appears that they were more

likely to support the higher education of their daughters.

Another way of looking at this trend would suggest that increased support of access to higher education among both men and women could influence the future development of larger groups of skilled, trained Africans. This increase could influence, in turn, the resistance within traditional societies to allowing children such opportunities. A slow, incremental pattern of change might be affected and speeded up if future AFGRAD programs analyzed their recruitment procedures and choices in the light of such data.

#### 4. Occupation of Parents

For the mothers of AFGRAD participants, the proportion of those engaged in the traditional occupations of homemaking and farming/trading remained stable at over 85% for almost two decades (Note 4). In keeping with the increasing proportion of educated mothers among AFGRAD participants, the proportion of mothers working in the category of teachers or health/church workers rose by 50% between the first and last periods to just over 10% of the total (Table 32). In sum, the mothers of AFGRAD women were more than twice as likely as the mothers of AFGRAD men to be teachers or health/church workers, 18.3 % versus 8.6% (Table 33).

By language groupings, the proportion of mothers working in traditional occupations was virtually identical for French and English speakers, although the proportion of mothers of

Francophone participants working as teachers or health/church workers declined over time, while it went up considerably for mothers of Anglophone participants. Statistics for mothers' occupations by geographic sub-region do not consistently follow those of language groupings, indicating strong national and sub-regional patterns in occupation (Tables 34 and 35).

The proportion of AFGRAD participants' fathers in four major occupational categories remained remarkably stable over the four time periods of the study: roughly 35% farmers; 37% educators, health/church workers or civil servants; 15% businessmen; and 13% artisan, semi-skilled and other. Fathers of AFGRAD women were less likely than those of AFGRAD men to be farmers and more likely to be in the artisan category (Tables 36 and 37).

Overall, the proportion of Francophone participants whose fathers were classified as farmers declined slightly from that of Anglophone participants whose fathers were similarly classified, but no major differences by language grouping are found (Table 38). There are substantial sub-regional variations from the norms when we look at fathers' occupations; for instance, Southern Africa shows fewer than 23% as farmers and over 50% in the educators, health/church workers, civil servants category (Table 39).

This contrast between Southern Africa and the other sub-regions only becomes noteworthy when we look at the increasingly higher rates of participation for women from this sub-region. Again,

it appears that educational levels and occupational choices for both parents increase the likelihood that their children will receive advanced education and training (Table 40).

#### 5. Undergraduate Training

Three-quarters of the AFGRAD participants, 74.4%, received their undergraduate training in African universities, a proportion which grew from 52.5% to 83.4% in the eighteen year study period (Table 41). During the first decade of AFGRAD, those who did their undergraduate work abroad were three times more likely to have studied in Canada or the United States than in other countries. For the first time period, over 35% of participants were attending schools in the United States when they applied to the AFGRAD program, a proportion which dropped to just 1.1% in the last period (Table 42). This dramatic change attests the increased capacity of African universities to attract and to train their own students as well as AAI's success in localizing the recruitment of AFGRAD participants in their home countries (Tables 41 and 42).

The general trend of selecting increasingly higher proportions of participants who received their first degrees in Africa remains clear when we analyze data by gender, language and sub-region, although deviations can be noted in certain time periods. For instance, in the first decade French speakers did undergraduate study outside of Africa at a much higher rate than did English speakers (Tables 43, 44 and 45).

Of those who attended colleges in North America before their AFGRAD awards, 62.3% studied under the African Scholarship Program of American Universities (ASPAU) (Note 5). For the first decade of AFGRAD, ASPAU graduates made up one-fifth of all AFGRAD participants, a figure which declined to 2.3% in the latter eight years of AFGRAD when ASPAU was winding down and AAI completed the transition to recruitment in Africa (Tables 46, 47 and 48).

#### 6. Work Experience

69.7% of all AFGRAD participants worked for several years (2.2 years on average) prior to their AFGRAD graduate studies. The proportion who worked increased from 56.7% to 79.4% over the study period (Table 49). Proportionately more men than women worked before AFGRAD studies, until the last time period when this gender difference disappeared (Table 50). Similarly, a marked disparity between English-speaking and French-speaking participants over the first three time periods narrowed in the last period when the proportion of Francophone participants with prior work experience doubled (Table 51). Overall, participants from Southern Africa had the most work experience before AFGRAD (80.5%); those from Francophone West Africa had the least (44.7% ) (Table 52).

#### 7. Career Plans

As to the kind of institution with which they would eventually work, almost 90% of the participants indicated on their original

application forms that they expected to be employed by the public sector when they completed their graduate degrees: 61.0% by either education or research institutions; 28.8% by governmental and parastatal agencies. Fewer than 5% of them expected to be hired for positions in banks and the private sector. Some shifts in the general expectations about future employment over time were noted, such as a decline from 65.1% to 54.5% in the number of applicants who expected jobs in education and research institutions (Table 53).

Between AFGRAD men and women the overall variations were slight, (Table 54) but language groupings and geographic sub-regions showed some differences in certain time periods. French-speaking participants were more likely to expect employment in government and parastatal agencies or banking and private sector, while Anglophones considered education and research more likely (Table 55). Proportions for the two sub-regions in West Africa resembled these language grouping differences, but with even sharper contrasts (Table 56).

As to the kind of work they imagined doing, about two-thirds of the participants, 66.1%, expected to become teachers, a proportion that declined from 70.1% to 60.3% over time. Technical specialists at 16.9% and administrators at 11.5% make up most of the others' expectations (Table 57). Men were slightly more likely than women to expect careers in teaching and research, while more women looked to careers as technicians

and administrators (Table 58). By language groupings, English speakers showed a slightly higher expectation of teaching/research work, while French speakers more frequently looked forward to positions as administrators or technical specialists (Table 59). Again, Anglophone and Francophone West Africa had a sharply contrasted version of these differences, while the other sub-regions showed individual patterns (Table 60).

## NOTES

1. Strictly speaking, country of origin refers to the country that nominated the participant for an AFGRAD fellowship. However, since so few participants were not born in the country that identified them for an award, country of origin is also being used here to mean country of birth.
2. World Bank, Accelerated Development in Sub-Saharan Africa: An Agenda for Action (Washington, DC: The Bank, 1981), p. 143 and World Development Report 1981 (Washington, DC: The Bank, 1981), pp. 134-5. The sixteen countries with a GNP per capita of \$380 or more include: Botswana, Cameroon, Congo, Ghana, Ivory Coast, Kenya, Liberia, Mauritius, Morocco, Nigeria, Senegal, South Africa, Swaziland, Tunisia, Zambia, and Zimbabwe. All of the other countries sending participants have a GNP per capita of less than \$380.
3. East, Southern, and Anglophone West Africa are the predominantly English-speaking sub-regions; and Central, North, and Francophone West Africa, the French-speaking ones. However, English is not a major language in three of the countries in East Africa: Djibouti, Madagascar, and Mauritius. Forty-two participants from these countries have participated in AFGRAD. Southern Africa contains one Lusophone country, Mozambique, but it sent only one participant to the program. Cameroon, in the Central

Africa sub-region, has been considered as French-speaking even though it is officially bilingual (French and English). It has contributed 101 participants.

4. It is unclear what AFGRAD alumni meant when they said that their mother's occupation was "homemaker." At the least, it probably meant that they did not work for wages outside of the home. Yet, most African women carry out a wide variety of tasks for the household, including food production. It is likely that many of the "homemakers" managed the household and performed these traditional household tasks.
5. ASPAU was established in 1961 in response to Africa's critical need for university trained people in the years immediately following independence. Over a fifteen year period, it provided scholarships to 1,594 Africans for undergraduate training in the United States. ASPAU's purpose and funding structure were similar to those of AFGRAD, and AAI administered both programs simultaneously for twelve years.

In coding the data for the location of undergraduate training, those trained in either the United States or Canada were put into the same category. The discussion reveals some limitations in being unable to isolate only those trained in the United States. At least 92 percent of those with first degrees from academic institutions in

the United States or Canada (281) received them in the United States. This is deduced by reducing 281 by the number of ASPAU graduates who became AFGRAD fellows (175) and the number of non-ASPAU candidates who were attending schools in the United States at the time they applied for AFGRAD (83).

#### IV. The AFGRAD Experience

In its study questions AID was particularly concerned with the relationship between the kind of training offered by the AFGRAD program and the concrete results of that training once the AFGRAD participants returned to their home country. Subsidiary questions included such issues as length of study in the United States, the rate at which AFGRAD participants returned home after their studies were completed, the kind of role played by participants upon returning, the conditions and difficulties faced by them upon returning, and the measures needed to make the re-entry process as successful as possible.

In this chapter we look at a wide range of data in order to describe and highlight the nature of the AFGRAD program in terms of its essential focus. The fields of study and degrees earned were unquestionably of use to most of the participants, and the AFGRAD program accomplished its objectives with an unusually high completion rate. The return home, however, was not without its problems; participants offered a number of insights into those problems, which will help in the modification of future programs.

##### A. Academic Achievement

###### 1. Fields of Study and Kinds of Degree

During the first ten years of AFGRAD, there was some disagreement among the partners about which fields of study should be emphasized in the program. AID always stressed

graduate training in technical and scientific fields. For example, one of the early written descriptions of AFGRAD specifically stated that applications would be entertained only for study in the pure sciences, applied and development sciences, and professions (Note 1). This emphasis has continued, even until today.

In contrast, African governments and the Deans' Committee expressed their concern about the exclusion of the humanities and social sciences as fields of study in AFGRAD. They argued that developing countries needed a balance in the kinds of scholars being trained for participation in the institution-building process in Africa.

To some extent, the forty-five fellowships that were made available to AFGRAD by other sources between 1964 and 1969 addressed this concern by providing opportunities for study in the arts and humanities, social sciences, and mass communications. In 1969, the AFGRAD Annual Report noted that the future exclusion of these fields of study would automatically eliminate the support of many graduate school departments that had traditionally been interested in exchange and development programs (Note 2). In the early 1970's, AAI continued to press AID to reconsider its policy of emphasizing technical fields of study, but this proved difficult to achieve. Thus, the AFGRAD program's technical orientation remained the basis of the program throughout the eighteen years.

There was also some debate among the program partners about whether a fellow's award should be for a master's degree or a doctorate. On the one hand, AID viewed AFGRAD primarily as a vehicle for master's level training. This is reflected in an early written description of AFGRAD that was circulated among those interested in the program:

Preference will be given to candidates whose course of study will lead to a Master's degree. Nominations for doctoral study will require extensive justification from the African government or university that the post envisaged for the nominee requires that qualification (Note 3).

AID was always concerned about the risk of "overtraining" participants and the cost involved in longer-term study. On the other hand, African governments were beginning to witness the growth of their universities and the Africanization of civil service positions. They needed highly trained personnel for many positions in these institutions, and wanted their AFGRAD candidates to receive doctorates. By the early 1970's, the increasing desire of participants for the Ph.D. reflected not only the continuing pressure from their governments but also the emphasis within the American graduate school community on the "straight" Ph.D. (Note 4). By 1980, the proportion of participants en route to the Ph.D. greatly exceeded that anticipated by AID (Table 61, Note 5).

Over the 18 years of the study, nearly every academic discipline was represented in the AFGRAD program, although five

fields accounted for more than 60% of masters and more than 70% of doctoral students: agriculture, engineering, education, mathematics/science, and economics (Table 62). When we look at the fields of study of AFGRAD participants in terms of both degrees and variables such as language and gender within those degree fields, we see some interesting patterns.

Thus, when we examine masters participants by language group, we find that English speakers most often majored in engineering, agriculture, and economics while French speakers worked most frequently in business, economics and engineering (Table 63).

A different pattern emerges when we look at gender variables. Over the time period of the study, women were three times more likely to pursue masters degrees in education than men were and more than twice as likely to do so in the field of health. In contrast, men were almost nine times more likely to study engineering than women were and twice as likely to work in agriculture at the masters level. Men and women were proportionately represented in virtually all the other major areas of study (Table 64).

At the doctoral level, major fields studied most frequently were science, economics, agriculture, engineering and education (Table 62). For participants from French-speaking countries the top fields were science, economics and agriculture, while English-speaking participants focused on science, agriculture and engineering, in that order (Table 65).

A far higher proportion of women than men pursued doctoral studies in education and science, while the percentages of men in economics, agriculture and engineering topped those for women (Table 66). The high proportions of men in engineering and of women in education that were noted at the masters level are less striking among doctoral students. Two fields that were studied by many participants at the masters level, business and engineering, were far less popular among doctoral candidates, while math and science fields were proportionally far more frequently studied for doctoral than for masters degrees (Table 62).

In effect, we can see from these patterns that gender had an enormous impact on choice of field of study. It would almost seem as if certain fields of study were virtually closed to women, most particularly engineering, agriculture and economics. Although the data do not allow for any easy conclusions about this particular pattern, it would seem that selection criteria for future training will have to look at the fields in which the discrepancies between men and women are greatest, in order to determine what impact, if any, such discrepancies might have on policy formulation.

## 2. Time Needed to Complete Degree

Completion rates also showed many variations in relation to fields of study and the variables of gender and language. Women took slightly less time than men to complete masters degrees

(19.2 and 19.9 months respectively) (Table 67). French-speaking students took a good while longer at their studies than did English speakers (23.6 vs. 18.3 months) (Table 68). Clearly, the time needed to master English as a language was a factor, which participants confirmed in their comments.

Another variable looked at was the effect of marriage on completion rates. Married participants with children completed their degrees on average one and one-half months sooner than did single participants, although married participants without children show little difference in completion rates from those who were single (Table 69).

As one would expect, the field of study definitely influenced completion rates. Masters studies in technical and quantitative fields required more time than studies in the humanities. For example, an average of 22.5 months was required for economics and 14.9 months for international relations (Table 70).

At the doctoral level men completed their degrees about four months faster than women, while Anglophone participants finished seven months sooner on average than Francophone fellows (Tables 71 and 72). Married participants with children had a mean completion rate of some eight months less than single participants, 45.5 months vs. 53.5 months (Table 73). In contrast to the comparative differences involving married masters candidates with or without children (Table 69), married doctoral candidates without children showed almost the same

completion rate as those with children (Table 73). It can be inferred that such a long separation from family created an incentive for students to finish more quickly. In fact, many participants volunteered a comment on the difficulty of beginning, no less finishing, an arduous academic program abroad while preparing to separate and remain separate from family.

As for the doctoral completion rates by field of study, economics, engineering, and agriculture were longest (57.8, 53.0 and 51.5 months respectively), while the humanities fields took the least amount of time (Table 74).

Quite naturally, the authors asked the AFGRAD participants about the focus of their research. Approximately one-half of the alumni responding to the questionnaire did their thesis or dissertation on Africa, and nearly 70% wrote on development-related topics (Table 75). Of those who did write about their home countries, one-sixth returned home to do research (Table 76). A large number of participants remained to complete their writing in the U.S., a favorable location, according to their questionnaire responses, in terms of access to resources and to advisement from their professors. One-third of the respondents were able to have their thesis or dissertation published (Table 76). A listing of doctoral fellows with dissertation titles is included as Appendix 4.

### 3. Rates of Withdrawal

All in all very few AFGRAD participants withdrew from the

program before completing their studies. One way of looking at withdrawal rates is to compare Anglophones and Francophones at the masters and doctoral levels.

About twice as many French-speakers as English-speakers withdrew from masters programs (11.6% vs. 6.2%). In contrast, almost no difference in withdrawal rates existed between Francophones and Anglophones at the doctoral level (13.9% vs. 12.5%) (Table 77). In all probability, we can explain this relative lack of difference at the doctoral level by inferring that once a French-speaker was able to overcome his or her language and cultural difficulties, which were most acute during the first two years, Francophones were able to compete on a nearly equal basis with Anglophones.

## B. Post-Program Activities

### 1. Repatriation

The AFGRAD program was conducted over the first 18 years, and continues to be conducted, according to the premise that graduates needed to and would return to their home countries or to another African country in order to bring their skills to bear on African development. Indeed, one of the reasons for excluding medical studies from the program after the first few years was the low rate of return to their home countries of those who completed medical school.

The lure to remain in the country in which the advanced training is provided is a problem that all participant training programs

must confront. AFGRAD demonstrated its ability to meet this potential problem with overwhelming success. Overall, 89.1% of all AFGRAD fellows returned to their countries of origin or to another African country within about six months of completion of their total program, which may have included some post-academic practical experience or training. 60% of the students returned home immediately upon completion of their degrees (Table 78).

Of those in masters programs about 32.4% stayed in the U.S. after graduation: 7.1% pursued advanced degrees outside of AFGRAD (usually under visa support of AAI), and 22% gained practical experience. An additional 1.1% of masters students continued academic studies in a third country (Table 79). At the doctoral level, approximately 30% remained in the U.S., most of them for practical training. Of those participants who entered a practical training program or received only post-AFGRAD support to maintain their visa, 87% returned home within one year of completion of that program.

## 2. Resuming Careers after AFGRAD Training

Since the issue of what happened to AFGRAD participants after they returned home is one of the most critical questions asked by AID, the success of the AFGRAD program must be measured carefully against this particular benchmark. The data make it unequivocally clear that AFGRAD participants have returned to Africa to assume positions of importance and responsibility. The re-entry was not always smooth, nor was the adjustment to

American academic life, as we shall see shortly. Yet years later, it is evident that AFGRAD has had a profound influence on the careers of nearly 800 African leaders in all walks of life.

Approximately 90% of those responding to the questionnaire are either currently employed by institutions in Africa (86.1%) or are working abroad for their governments or for international organizations (2.8%) (Table 80). The remaining 11% of the respondents are working outside of their home countries without official connections.

The jobs that AFGRAD fellows were able to find upon returning to Africa were closely linked to their expectations for post-study employment, as outlined in the previous chapter. The majority of participants got their first jobs either in education and research institutions (60%) or in governmental and parastatal agencies (25%) (Table 81).

### 3. Problems upon Return

Clearly, the re-entry issue needs close scrutiny in order to assess both the design of the existing program and possible modifications needed for future programs. AFGRAD graduates responded in a variety of ways when asked about problems encountered upon returning home: 11% of alumni indicated that they experienced difficulties re-adjusting to cultural norms; 15% in re-adjusting to family expectations; 17% in re-adjusting to economic conditions; and 18% to tempo and style of life (Table 82). Far greater levels of difficulty were registered

around logistical problems of re-entry, such as delays in salary payments and finding accommodations (39%), deficiencies in infrastructure at work (43%), and re-adjusting to bureaucratic procedures (37%). Only 11% had difficulty finding a job that provided an opportunity to use graduate training, while over 17% indicated some difficulty in being accepted by colleagues and superiors who remained in their home country. Only one-sixth of the alumni replied that they encountered no problems returning home after AFGRAD.

### C. Observations and Advice from Alumni

Through a series of far-ranging questions alumni were asked about their experiences and opinions on many aspects of the AFGRAD program, such as skill development, the quality of their academic training and of AAI's support, and advice on how to improve the program. While some questions were quantified, many were open-ended, allowing for individual comments. The following is an abstract of the respondents' evaluations and advice, which showed consensus on certain issues and highly individual conclusions on others.

#### 1. Satisfaction with the Program

It is a testimony to the American universities participating in the AFGRAD program that over 85% of all questionnaire respondents were satisfied with the range and quality of courses offered them both in general and in their field of specialty (Note 6). High marks were also registered for other aspects of

academic life, such as satisfaction with research and laboratory facilities, availability of faculty for academic assistance, availability of foreign student advisers, and advisement on dissertation. Slightly lower levels of satisfaction were noted in certain areas, such as number of faculty with African experience, and involvement in professional meetings.

Respondents also gave high ratings for their contacts with the AFGRAD Secretariat, which they considered useful. Highest levels of satisfaction involved contacts concerning financial problems, immigration problems and travel arrangements.

As to what the AFGRAD program could have done to assist them in preparation for their return home, the great majority of alumni responded that nothing more was needed. Small groups asked for help with shipping supplies home, with job placement, and with air tickets.

## 2. Opportunities for Skill Development

In assessing their opportunities for various kinds of skill development during the AFGRAD program, a very high proportion of alumni indicated that they had chances in research, quantitative data analysis, and computer work. Fewer felt they had had opportunities in other areas of development, such as teaching and skills in management/administration. When asked to name what additional skills they now wished they might have been able to develop during their AFGRAD programs, by far the two most frequently noted areas were: more knowledge in one's field and

management skills. Additional teaching skills were noted by only a tiny group.

When asked another non-quantified question about what benefits they gained during the AFGRAD program beyond knowledge in their field, the most frequent answer was professional competence, followed by various concomitant skills such as the ability to carry out research, organize work, present papers and utilize what is learned. A cluster of comments from many respondents dealt with the benefits of experiencing American life, meeting and making friends with Americans and others, appreciating diversity in cultures and social values, observing American style democracy, coping with a different educational system and with new technologies, and becoming more self-reliant and confident.

### 3. Advice to New Participants

AFGRAD participants were ready with suggestions for future candidates from their countries. The strongest advice for prospective participants was to learn all they can in advance about life in the United States, the American educational system, the social and cultural environment, climate, and one's particular school setting in terms of courses, housing and so forth. Many alumni wanted to warn new fellows to be frugal in financial matters and to expect a change in lifestyle while living on a limited stipend in America. AFGRAD alumni also warned new participants to expect culture shock, including the

likelihood of ignorance about Africa and the possibilities for racial tension, language problems and loneliness. To counter these problems it was suggested that fellows take a light course load their first term, make friends with both American and international students, and keep in touch with home.

AFGRAD alumni admonished their successors to make maximum use of all opportunities, to think about thesis or dissertation topics early--before leaving home if possible--to bring along with them data and research material from their home country, to develop a specific academic plan and make careful course selections, to work diligently, and use time wisely, to take advantage of practical training, to travel as widely as possible, and to be open to every learning experience both in and outside of class. A number of fellows recommended bringing cultural artifacts and photos to the U.S., and warm clothes for the "extreme" climate.

The advice proffered by AFGRAD alumni, although it ranges over a diverse area, not only allows the AFGRAD Secretariat to serve the on-going needs of current participants more effectively, it also enables AAI to reshape and refine the whole AFGRAD program in order to fulfill its mandate of offering African participants the fullest opportunity of achieving their goals. We will discuss recommendations about changes in the AFGRAD program in the final chapter.

## NOTES

1. African-American Institute, The AFGRAD Annual Report, July 1, 1964-June 30, 1965, Appendix J, p. 1.
2. African-American Institute, The AFGRAD Annual Report, July 1, 1968-June 30, 1969, p. 3.
3. African-American Institute, The AFGRAD Annual Report, July 1, 1964-June 30, 1965, Appendix J, p. 4.
4. African-American Institute, The AFGRAD Annual Report, July 1, 1970-June 30, 1971, p. 4; The AFGRAD Annual Report, July 1, 1972-June 30 1973, p. 5.
5. Overseas Liaison Committee, The American Council on Education, The African Manpower Development Project: An Evaluation, Washington, D.C., The Council, 1980, p. 75.
6. The relative values described in the rest of the chapter were derived from a series of non-quantified questions in the questionnaire. Although percentages were computed to get an overview, it seemed inappropriate to establish a semblance of statistical exactitude by citing percentages when the questions asked were fundamentally not quantifiable.

## V. Impact of the AFGRAD Fellowships

In attempting to assess the impact of the AFGRAD program on Africa's "critical need for well trained manpower for the public and private sectors," which was the central question asked by AID, the authors of the study framed a series of questions designed to compare the status of AFGRAD participants upon return and at different points of time in their career development. The data gathered demonstrate beyond a shadow of a doubt that the program has accomplished its principal objective: to contribute in a meaningful way to the institutional development of university departments, research institutes, government ministries, parastatal bodies and other entities important to development.

### A. Alumni Career Development

One of the ways we can begin to estimate the impact of AFGRAD training on the careers of alumni is to look at the patterns in the kinds of positions they initially held upon return from their studies in the United States, and then compare these to positions that alumni held at the time of the survey.

Additional criteria for measuring the impact of AFGRAD concern the levels of responsibility that alumni have in their work, and their other professional achievements and contributions.

#### 1. Positions of AFGRAD Alumni

One important correlation is that between the fields of study of AFGRAD alumni and the positions they presently hold. Eighty-

five percent reported that they were working in the field in which they studied under the AFGRAD program (Table 83). Changes in career patterns overall show a shift in the kind of institutions for which alumni work. If we concentrate our attention on the graduates from the first decade of AFGRAD--those who have had the time to develop most fully their career opportunities--we note that slightly more than 55% of them are presently holding jobs in the identical types of institution in which they held their first jobs (Table 84). This varies significantly among the different categories of institutions: for example, 65.5% of the alumni whose first job was with an educational/research institution have remained in the same type of institution. Only 40% of alumni who started work in government or parastatal service continued to work as public servants (Table 85).

What is most striking is the fact that the AFGRAD alumni from the first two periods were quite likely to have moved out of education and research institutions or governmental and parastatal agencies into jobs in banks, international organizations, and increasingly, the private sector. Indeed, the private sector has benefited most from the movement of AFGRAD alumni (Table 86). This shift towards private sector involvement was most marked among Francophones, where 16.5% (as opposed to only 9.7% among Anglophones) are now in banking or private sector work (Table 87).

## 2. Levels of Responsibility

In order to look at levels of responsibility in employment, we have classified positions of alumni into two categories, and then described the kinds of activities that were most typical within those categories. The first category is Manager/Administrator. It includes directors, administrators, supervisors, deans, faculty heads, business managers and others with substantial managerial responsibility in their jobs. The second category, Professional/Technical, includes scientists, technical specialists, loan officers, economists, faculty members other than department heads, engineers who are not working as managers, agriculturalists, and others.

Overall, one-fifth of the alumni from the first decade had first jobs in the Manager/Administrator category (Table 88), a fact which indicates how critically their countries needed highly trained people. What is even more noteworthy, at the time they responded to the study questionnaire more than one-half (52.3%) of all alumni were working at that level of responsibility in their present positions.

Francophone alumni were even more likely than Anglophones to hold positions as Managers/Administrators (65% as compared to 51%) (Table 89). Masters degree holders were much more likely than alumni holding higher degrees to work in Manager/Administrator capacities (62% to 38%) (Table 90).

## B. Alumni Contributions

### 1. Research and Writing

While not all graduate training leads one into continuing formal research or publication in professional journals, the degree to which alumni have participated in post-graduate research and writing does give an indication of the influence that AFGRAD studies have had on the careers and professional contributions of alumni. Of all alumni respondents (not merely those from the first ten years of AFGRAD), more than two-thirds (67.2%) have participated in research projects (Table 91).

Those in Professional/Technical positions have been somewhat more likely to do research than those in Manager/Administrator positions (72.6% to 60%) Anglophone alumni were far more likely to have participated in research than their Francophone counterparts, by 74.9% to 48.8%. When we disaggregate the data according to gender, we find that AFGRAD men and women differed only slightly in the degree of participation (66.8% vs. 70.1%).

In terms of directing research efforts, less than one-half (43.4%) of the group of alumni indicated that they have directed research projects (Table 92). Within the realm of research, the difference between the categories of Manager/Administrator and Professional/Technical virtually disappears. However, the language sub-grouping differences continue, with English-speaking alumni about twice as likely as French-speaking alumni to have directed research efforts. More striking are the

differences that emerge when we compare data by gender. Men were far more likely than women to direct research projects (45.5% to 23.9%).

As to submitting proposals for obtaining research funding, Professional/Technical staff were more likely to have done so than Manager/Administrator staff by 54.8% to 42.8%, and more Anglophone than Francophone alumni have done so (55.8% to 34.2%). The differences between men and women reflect roughly the same percentages: 50.6% to 38.8% (Table 93). We can say the same about publishing articles in professional journals: Anglophones were far more likely to publish than Francophones, 50.9% versus 22.4% (Table 94), whereas 45.7% of alumni in Professional/Technical positions have published compared to 38.6% in Managers/Administrators positions. Again, gender differences show significantly different results in this category (45.5% for men and 19.4% for women).

Although the data might suggest fairly evident conclusions about the relative success of Anglophones over Francophones and men over women, it is necessary to point out that access to research facilities and publications differs widely from one sub-region to another and even among countries within sub-regions. Unfortunately, the scope of this study did not allow us to explore these difficult interpretive areas in sufficient detail to draw clear conclusions. All we can safely say is that, in all probability, the issue of access played a

determining role for the categories of Anglophone/Francophone and Men/Women.

## 2. Institutional Development and Change

Another measure of AFGRAD's impact is the degree to which alumni have been influential in institutional development and change, such as initiating or revising policies, services or courses for government, business or educational institutions. When we look at the alumni from the whole period of AFGRAD, nearly three-fifths (59.5%) reported that they were personally responsible for the development or revision of government, business or academic policy (Table 95). This proportion was different for English and French speakers. The differences between men and women existed but were not as dramatic as in other categories: 61.1% of the men as opposed to 44.8% of the women.

A majority also stated that they have initiated new services or programs, again with Francophone and Anglophone alumni reporting this by nearly identical proportions (Table 96).

Differentiating according to gender, we found that 46.8% of the men participated in this activity, whereas 37.3% of the women reported such a role.

As to the development of new courses, 57% of the respondents (by gender, 58.1% of the men and 46.3% of the women) indicated they had developed and presented a new course, an activity that was more prevalent among Anglophone alumni (Table 97).

The relatively high percentages in all of the different categories demonstrate that, whatever the variables, AFGRAD alumni were active initiators of change within their institutions.

C. Continuing Cortacts with American Colleagues and USAID

1. American Colleagues

This was one of the explicitly stated questions asked by AID, and the authors looked at the data in order to provide as clear a response as possible. For many of the AFGRAD fellows, professional and personal relationships that developed during their studies have continued in the years since returning home. More than half of those responding have corresponded with American friends since leaving the U.S., and nearly as many have been in touch with their former professors (Table 98).

About one-fourth of the respondents (23%) have researched and published with American professors, and 13% have assisted a former professor to visit their home countries in professional capacities (Table 99). Close to 45% have received visits from American friends and colleagues, and more than one-third have returned to the United States for business purposes.

2. USAID

Queried about interactions with USAID offices in their home countries over the past three to five years, slightly over one-quarter had had some sort of contact with the agency, most

often on a social basis, such as being invited to receptions (Table 100). Fewer than 15% had been asked for professional or technical advice, or had done consulting for USAID, although a large proportion of respondents expressed interest in increasing such contacts as consulting on projects, organizing workshops and seminars and providing assistance or advice on an informal basis (Table 101). A majority of these alumni expressed a desire to be considered for USAID research grants and funding for travel outside their countries to attend professional meetings.

It would appear that the opportunities for an on-going relationship with USAID have not been fully explored by all the partners. Again, given the focus of the study, we did not select data for measuring constraints. However, one inference to be drawn is that, if USAID wants to maintain on-going relationships with AFGRAD alumni, a greater effort will be necessary from both sides.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Specific Objectives of the Study

In formulating its approach to the series of questions (scope of work) raised by AID at the outset, the researchers outlined the major objectives of the study in the following terms:

- \* To describe the characteristics of the AFGRAD alumni before they entered the program;
- \* To summarize their academic career, more specifically, their fields of study, the institutions attended, the degrees pursued and the success in completing degrees;
- \* To identify wherever possible those factors associated with the ability of the participants to complete the program;
- \* To examine what participants went on to do after completing their academic program, whether it involved job training in the United States, direct return to a job back in Africa or placement elsewhere;
- \* To determine whether AFGRAD alumni used their training upon their return to Africa;
- \* To map typical career paths and current positions of the alumni in their home countries;
- \* To characterize the degree to which AFGRAD alumni have taken on decision-making responsibilities and how they exercise these responsibilities;
- \* To assess the general impact of AFGRAD alumni in their countries;
- \* To document the perceptions that AFGRAD alumni were willing to offer as a commentary on their overseas training experience.

### B. Conclusions

The various data collected, described and analyzed in the preceding chapters have allowed us to come to a series of conclusions about the AFGRAD program. Most importantly, AID's

funding of the AFGRAD program has resulted in highly successful training of Africans, most of whom have returned to their home countries to use their training. We can summarize these accomplishments in quite specific ways:

1. Alumni have returned home to do significant work and to play major institutional roles in their countries.
2. They have returned to Africa with greater understanding of and respect for American institutions and values.
3. AAI has performed its role well and intervened appropriately on behalf of African participants throughout the program.
4. The Council of Graduate Schools, through its Deans Committee, has successfully promoted and carried out the full participation of the graduate school community throughout the program.
5. AFGRAD has achieved the goals of significantly increasing the participation of fellows from Francophone countries and has also addressed the issue of increasing the participation of women.
6. African governments have successfully identified and made available an excellent group of candidates.

In citing these broadly stated accomplishments, we do not ignore the fact that problems occurred which affected the on-going administration of the program. What is notable about the 18 year period under study is the degree to which the partners were able to recognize and solve those problems in

mutually acceptable and supportive ways in order to help make AFGRAD a success for those who stand most to benefit: the African participants and the African people these participants have chosen to serve.

### C. Policy Issues for the Future

Amidst all the data gathered and analyzed, a certain number of questions emerged forcefully enough to require more serious consideration and inquiry. We have identified these as policy issues because we believe that current approaches will not truly solve the problems to which participants and partners have pointed at different times.

#### 1. AFGRAD and Women

Although AAI made real progress in addressing this question, it was made abundantly clear in chapter three that women are still under-represented, both in terms of total numbers of participants and in the numbers of countries sending women candidates. At the time of the survey, only 14% of the participants were women, and twelve of the countries in the AFGRAD program had never sent a woman candidate.

There is some evidence that participation rates for women should continue to rise in proportion to the increase, on a country by country basis, in the rate of participation of women in secondary education. Undoubtedly, this will occur slowly, leaving open to future programs the option of choosing alternative actions in order to capitalize on this tendency

towards cumulative change.

## 2. Support Systems for Participants

AFGRAD alumni made a number of suggestions in this area, the most frequently stated of which concerned married couples. Simply put, many asked that enough funding be provided in order that participants have their dependents accompany them during their graduate study. This clearly stated demand touches on a nexus of issues concerning the impact of the spouse on a participant's ability to enter and complete the program, especially insofar as women are concerned. Changes implied in such a demand would affect the cost and the administration of the program.

## 3. Kinds of Degrees Offered

From inception of the program the question of the level of graduate training has attracted concern and debate. Many participants expressed a strong preference to pursue a doctoral rather than a master's program of study and specifically wanted to avoid being locked in to a masters degree.

There have been various responses to this expressed concern, most prominent of which has been the fear that participants would be overtrained and therefore unable to use their training, either in their fields or even at all. As for the overtraining issue, since 85% of AFGRAD alumni are working in their fields of study, it would appear that fear of overtraining is beside the point. At least 25% of those trained by AFGRAD moved to higher

positions, indicating that training contributes directly to increased power and responsibility.

Clearly the masters degree is appropriate for certain fields, as is the MBA for others; but teaching and research fields require Ph.D.-level training, and the number of fields in which such activities are taking place is growing. It is also useful to point out that African universities are increasingly able to train people at the Masters level. Adding to the number of African Ph.Ds through AFRAD would impact upon the growing ability of African universities to africanize their teaching and research capabilities.

#### 4. Kinds of Training

Given the responses to questions about training in the questionnaire, should AFRAD continue to address training needs only in terms of specialized fields of study designed for individual fellows, or is there a need for some sort of core training in basic management skills and techniques for all AFRAD fellows regardless of field of study?

And given the relatively lower rates of participation of women and Francophone candidates, should AFRAD address future training in such a way as to accelerate their degree of participation? Certainly, the desirable success rates already achieved with regard to Francophone participants over the last ten years of the study suggest that such choices are within the reach of the program.

#### D. Recommendations

The researchers have looked at the conclusions and the policy issues as a means of formulating suggestions to which the partners could bring their different perspectives and experiences gained from having been part of AFGRAD. Indeed, we view these recommendations as opportunities for promoting discussion and continued collaboration, in the hope that AFGRAD might be improved and thereby strengthened. Whatever their value, all of these recommendations come out of the data gathered during this study and reflect in no way either the personal views of the researchers or the particular preferences of the partners in AFGRAD.

- \* The AFGRAD program should continue to have at least the same levels of support it enjoyed during the first 18 years of its existence. Current continuation of the program suggests that AAI is already benefiting from such support.
- \* AAI should introduce management training as a normal part of the overall participant training experience, whatever the special focus of the individual participant might be.
- \* Future AFGRAD programs should continue to target those areas where institutional support is most needed and identify and target those areas which have become priority concerns of African national development plans (such as the increased recognition of the importance of private sector development in Africa).
- \* AFGRAD alumni should be integrated as fully as possible into the procedures for identifying and orienting new AFGRAD fellows.
- \* USAID should use as fully as possible the skills and knowledge of AFGRAD alumni, most of whom have expressed a desire to develop or continue a working relationship with USAID.

- \* AAI should increase the amount of time devoted to monitoring individual AFGRAD participants as they go through the program.
- \* In order to encourage and deepen understanding of African training and educational needs within the graduate school community, CGS should explore the possibility of establishing a network of regular exchange of faculty between American and African universities.
- \* AAI should establish a special recruitment program for women similar to that created in order to increase the participation of students from Francophone countries. Its task would be to sensitize governments where needed and talk to institutions in order to break down some of the traditional barriers.
- \* AAI should increase its support to its Program Representatives in Africa in order to enhance and accelerate the recruitment process in Africa.

**APPENDIX 1: Tables**

Table 1 QUESTIONNAIRE SURVEY OF AFGRAD ALUMNI BY NUMBER AND COUNTRY

| Country                    | Surveyed*<br>No. | Received<br>No. | (%)         |
|----------------------------|------------------|-----------------|-------------|
| Group A (over 100 fellows) |                  |                 |             |
| Cameroon                   | 91               | 51              | 56.0        |
| Ethiopia                   | 166              | 66              | 39.8        |
| Ghana                      | 184              | 75              | 40.8        |
| Kenya                      | 104              | 61              | 58.7        |
| Nigeria                    | 198              | 103             | 52.0        |
| Subtotal                   | <u>743</u>       | <u>356</u>      | <u>47.9</u> |
| Group B (50-99 fellows)    |                  |                 |             |
| Ivory Coast                | 68               | 53              | 77.9        |
| Liberia                    | 48               | 23              | 47.9        |
| Mali                       | 40               | 24              | 60.0        |
| Sierra Leone               | 48               | 29              | 60.4        |
| Sudan                      | 36               | 14              | 38.9        |
| Uganda                     | 79               | 23              | 29.1        |
| Zaire                      | 51               | 24              | 47.1        |
| Subtotal                   | <u>370</u>       | <u>190</u>      | <u>51.4</u> |
| Group C (20-49 fellows)    |                  |                 |             |
| Lesotho                    | 24               | 17              | 70.8        |
| Madagascar                 | 23               | 16              | 69.6        |
| Malawi                     | 38               | 35              | 92.1        |
| Senegal                    | 35               | 21              | 60.0        |
| Swaziland                  | 23               | 17              | 73.9        |
| Tanzania                   | 48               | 27              | 56.3        |
| Togo                       | 19               | 10              | 52.6        |
| Tunisia                    | 25               | 2               | 8.0         |
| Upper Volta                | 25               | 17              | 68.0        |
| Zambia                     | 47               | 27              | 57.5        |
| Subtotal                   | <u>307</u>       | <u>189</u>      | <u>61.6</u> |

Table 1 (continued)

| Country                | Surveyed*<br>No. | Received |      |
|------------------------|------------------|----------|------|
|                        |                  | No.      | (%)  |
| Group D (1-19 fellows) |                  |          |      |
| Benin                  | 10               | 4        | 40.0 |
| Botswana               | 13               | 12       | 92.3 |
| Burundi                | 5                | 0        | 0.0  |
| Chad                   | 3                | 0        | 0.0  |
| Congo                  | 1                | 0        | 0.0  |
| Djibouti               | 1                | 0        | 0.0  |
| Gambia                 | 11               | 10       | 90.0 |
| Guinea                 | 3                | 2        | 66.7 |
| Mauritania             | 2                | 0        | 0.0  |
| Mauritius              | 12               | 10       | 83.3 |
| Morocco                | 8                | 2        | 25.0 |
| Mozambique             | 1                | 0        | 0.0  |
| Niger                  | 3                | 1        | 33.0 |
| Rwanda                 | 0                | 0        | 0.0  |
| Somalia                | 9                | 6        | 66.7 |
| South Africa           | 1                | 0        | 0.0  |
| Zimbabwe               | 5                | 0        | 0.0  |
| Subtotal               | 88               | 47       | 53.4 |
| GRAND TOTAL            | 1,508            | 782      | 51.9 |

\*Questionnaires were sent to all AFGRAD fellows who had completed their academic programs by December 31, 1982 (1,535). Of these alumni, 27 had died (1.8%). Of the 1,681 fellows who received awards during the period under consideration, 146 were still AFGRAD-sponsored students.

Table 2 AFGRAD ALUMNI BY QUESTIONNAIRE RESPONSE AND TIME PERIOD

| Time Period | Yes        |               | No         |               | Total        |                |
|-------------|------------|---------------|------------|---------------|--------------|----------------|
|             | No.        | (%)           | No.        | (%)           | No.          | (%)            |
| 1963-1968   | 170        | (21.7)        | 219        | (30.2)        | 389          | (25.8)         |
| 1969-1972   | 185        | (23.7)        | 219        | (30.2)        | 404          | (26.8)         |
| 1973-1976   | 269        | (34.4)        | 216        | (29.7)        | 485          | (32.1)         |
| 1977-1980   | 158        | (20.2)        | 72         | (9.9)         | 230          | (15.3)         |
| TOTAL       | <u>782</u> | <u>(51.9)</u> | <u>726</u> | <u>(48.1)</u> | <u>1,508</u> | <u>(100.0)</u> |

Table 3 AFGRAD FELLOWS BY COUNTRY OF ORIGIN, 1963-1980

| Country      | Number | Percent |
|--------------|--------|---------|
| Benin        | 12     | (0.7)   |
| Botswana     | 15     | (0.9)   |
| Burundi      | 5      | (0.3)   |
| Cameroon     | 101    | (6.0)   |
| Chad         | 3      | (0.2)   |
| Congo        | 5      | (0.3)   |
| Djibouti     | 1      | (0.1)   |
| Ethiopia     | 182    | (10.8)  |
| Gambia       | 12     | (0.7)   |
| Ghana        | 195    | (11.6)  |
| Guinea       | 4      | (0.2)   |
| Ivory Coast  | 78     | (4.6)   |
| Kenya        | 107    | (6.4)   |
| Lesotho      | 26     | (1.5)   |
| Liberia      | 53     | (3.2)   |
| Madagascar   | 29     | (1.7)   |
| Malawi       | 41     | (2.4)   |
| Mali         | 52     | (3.1)   |
| Mauritania   | 3      | (0.2)   |
| Mauritius    | 12     | (0.7)   |
| Morocco      | 8      | (0.5)   |
| Mozambique   | 1      | (0.1)   |
| Niger        | 4      | (0.2)   |
| Nigeria      | 207    | (12.3)  |
| Rwanda       | 3      | (0.2)   |
| Senegal      | 43     | (2.6)   |
| Sierra Leone | 57     | (3.4)   |
| Somalia      | 17     | (1.0)   |
| South Africa | 1      | (0.1)   |
| Sudan        | 53     | (3.2)   |
| Swaziland    | 24     | (1.4)   |
| Tanzania     | 49     | (2.9)   |
| Togo         | 35     | (2.1)   |
| Tunisia      | 26     | (1.5)   |
| Uganda       | 82     | (4.9)   |
| Upper Volta  | 26     | (1.5)   |
| Zaire        | 55     | (3.3)   |
| Zambia       | 49     | (2.9)   |
| Zimbabwe     | 5      | (0.3)   |
| TOTAL        | 1,681  | (100.0) |

Table 4 AFGRAD COUNTRIES BY NUMBER OF FELLOWS, 1963-1980

| Country                           | Number     | Percent       |
|-----------------------------------|------------|---------------|
| <u>Group A (over 100 fellows)</u> |            |               |
| Cameroon                          | 101        | (6.0)         |
| Ethiopia                          | 182        | (10.8)        |
| Ghana                             | 195        | (11.6)        |
| Kenya                             | 107        | (6.4)         |
| Nigeria                           | <u>207</u> | <u>(12.3)</u> |
| Subtotal                          | 792        | (47.1)        |
| <u>Group B (50-99 fellows)</u>    |            |               |
| Ivory Coast                       | 78         | (4.6)         |
| Liberia                           | 53         | (3.2)         |
| Mali                              | 52         | (3.1)         |
| Sierra Leone                      | 57         | (3.4)         |
| Sudan                             | 53         | (3.2)         |
| Uganda                            | 82         | (4.9)         |
| Zaire                             | <u>55</u>  | <u>(3.3)</u>  |
| Subtotal                          | 430        | (25.7)        |
| <u>Group C (20-49 fellows)</u>    |            |               |
| Lesotho                           | 26         | (1.5)         |
| Madagascar                        | 29         | (1.7)         |
| Maliawi                           | 41         | (2.4)         |
| Senegal                           | 43         | (2.6)         |
| Swaziland                         | 24         | (1.4)         |
| Tanzania                          | 49         | (2.9)         |
| Togo                              | 35         | (2.1)         |
| Tunisia                           | 26         | (1.5)         |
| Upper Volta                       | 26         | (1.5)         |
| Zambia                            | <u>49</u>  | <u>(2.9)</u>  |
| Subtotal                          | 348        | (20.5)        |
| <u>Group D (1-19 fellows)</u>     |            |               |
| Benin                             | 12         | (0.7)         |
| Botswana                          | 15         | (0.9)         |
| Burundi                           | 5          | (0.3)         |
| Chad                              | 3          | (0.2)         |
| Congo                             | 5          | (0.3)         |
| Djibouti                          | 1          | (0.1)         |
| Gambia                            | 12         | (0.7)         |
| Guinea                            | 4          | (0.2)         |
| Mauritania                        | 3          | (0.2)         |

Table 4 (continued)

| Country                    | Number | Percent |
|----------------------------|--------|---------|
| <u>Group D (continued)</u> |        |         |
| Mauritius                  | 12     | (0.7)   |
| Morocco                    | 8      | (0.5)   |
| Mozambique                 | 1      | (0.1)   |
| Niger                      | 4      | (0.2)   |
| Rwanda                     | 3      | (0.2)   |
| Somalia                    | 17     | (1.0)   |
| South Africa               | 1      | (0.1)   |
| Zimbabwe                   | 5      | (0.3)   |
| Subtotal                   | 111    | (6.7)   |
| GRAND TOTAL                | 1,681  | (100.0) |

Table 5 AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Number     | Percent       |
|-------------|------------|---------------|
| 1963-1968   | 403        | (24.0)        |
| 1969-1972   | 412        | (24.5)        |
| 1973-1976   | 512        | (30.5)        |
| 1977-1980   | <u>354</u> | <u>(21.0)</u> |
| TOTAL       | 1,681      | (100.0)       |

Table 6 AFGRAD FELLOWS BY COUNTRY INCOME LEVEL AND TIME PERIOD

| Time Period | Less than \$380 |               | \$380 or more |               |
|-------------|-----------------|---------------|---------------|---------------|
|             | No.             | (%)           | No.           | (%)           |
| 1963-1968   | 153             | (38.0)        | 250           | (62.0)        |
| 1969-1972   | 160             | (38.9)        | 252           | (61.2)        |
| 1973-1976   | 243             | (47.5)        | 269           | (52.5)        |
| 1977-1980   | <u>196</u>      | <u>(55.4)</u> | <u>158</u>    | <u>(44.6)</u> |
| TOTAL       | 752             | (44.7)        | 929           | (55.3)        |

Source: Adapted from GNP per capita data in 1979 dollars in World Bank, World Development Report 1981, pp. 134-5 and Accelerated Development in Sub-Saharan Africa: An Agenda for Action, p. 143.

Table 7 AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | English    |               | French     |               |
|-------------|------------|---------------|------------|---------------|
|             | No.        | (%)           | No.        | (%)           |
| 1963-1968   | 335        | (83.1)        | 68         | (16.9)        |
| 1969-1972   | 338        | (82.0)        | 74         | (18.0)        |
| 1973-1976   | 325        | (63.5)        | 187        | (36.5)        |
| 1977-1980   | <u>177</u> | <u>(50.0)</u> | <u>177</u> | <u>(50.0)</u> |
| TOTAL       | 1,175      | (69.9)        | 506        | (30.1)        |

Table 8 AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | Eastern   |               | Southern  |               | W.Afr./English |               | Central   |               | Northern |              | W.Afr./French |               |
|-------------|-----------|---------------|-----------|---------------|----------------|---------------|-----------|---------------|----------|--------------|---------------|---------------|
|             | No.       | (%)           | No.       | (%)           | No.            | (%)           | No.       | (%)           | No.      | (%)          | No.           | (%)           |
| 1963-1968   | 159       | (39.5)        | 19        | (4.7)         | 163            | (40.4)        | 28        | (7.0)         | 13       | (3.2)        | 21            | (5.2)         |
| 1969-1972   | 144       | (34.9)        | 22        | (5.3)         | 172            | (41.7)        | 43        | (10.4)        | 3        | (1.0)        | 28            | (6.7)         |
| 1973-1976   | 151       | (29.5)        | 63        | (12.3)        | 137            | (26.8)        | 62        | (12.1)        | 18       | (3.5)        | 81            | (15.8)        |
| 1977-1980   | <u>78</u> | <u>(22.0)</u> | <u>58</u> | <u>(16.4)</u> | <u>52</u>      | <u>(14.7)</u> | <u>39</u> | <u>(11.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>127</u>    | <u>(35.9)</u> |
| TOTAL       | 532       | (31.7)        | 162       | (9.6)         | 524            | (31.2)        | 172       | (10.2)        | 34       | (2.0)        | 257           | (15.3)        |

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Table 9 AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Men        |               | Women     |               |
|-------------|------------|---------------|-----------|---------------|
|             | No.        | (%)           | No.       | (%)           |
| 1963-1968   | 385        | (95.5)        | 18        | (4.5)         |
| 1969-1972   | 392        | (95.1)        | 20        | (4.9)         |
| 1973-1976   | 453        | (88.5)        | 59        | (11.5)        |
| 1977-1980   | <u>303</u> | <u>(85.6)</u> | <u>51</u> | <u>(14.4)</u> |
| TOTAL       | 1,533      | (91.2)        | 148       | (8.8)         |

Table 10 FEMALE AFGRAD FELLOWS BY COUNTRY, 1963-1980

| Country                | Number   | Percent      |  |
|------------------------|----------|--------------|--|
| <u>Over 5 percent</u>  |          |              |  |
| Cameroon               | 12       | (8.1)        |  |
| Kenya                  | 12       | (8.1)        |  |
| Lesotho                | 9        | (6.1)        |  |
| Liberia                | 17       | (11.5)       |  |
| Swaziland              | 14       | (9.5)        |  |
| Togo                   | <u>8</u> | <u>(5.4)</u> |  |
| Subtotal               | 72       | (48.7)       |  |
| <u>4 to 5 percent</u>  |          |              |  |
| Botswana               | 6        | (4.1)        |  |
| Ethiopia               | 7        | (4.7)        |  |
| Ghana                  | 7        | (4.7)        |  |
| Ivory Coast*           | 7        | (4.7)        |  |
| Sierra Leone           | <u>6</u> | <u>(4.1)</u> |  |
| Subtotal               | 33       | (22.3)       |  |
| <u>Under 4 percent</u> |          |              |  |
| Congo*                 | 2        | (1.4)        |  |
| Gambia*                | 1        | (0.7)        |  |
| Madagascar             | 5        | (3.4)        |  |
| Malawi*                | 3        | (2.0)        |  |
| Mali                   | 3        | (2.0)        |  |
| Niger*                 | 1        | (0.7)        |  |
| Nigeria                | 3        | (2.0)        |  |
| Senegal                | 3        | (2.0)        |  |
| Somalia*               | 2        | (1.4)        |  |
| Sudan*                 | 2        | (1.4)        |  |
| Tanzania               | 5        | (3.4)        |  |
| Tunisia*               | 1        | (0.7)        |  |
| Uganda                 | 4        | (2.7)        |  |
| Upper Volta*           | 1        | (0.7)        |  |
| Zaire*                 | 2        | (1.4)        |  |
| Zambia                 | <u>5</u> | <u>(3.4)</u> |  |
| Subtotal               | 43       | (29.3)       |  |
| GRAND TOTAL            | 148      | (100.0)      |  |

None:  
 Benin  
 Burundi  
 Chad  
 Djibouti  
 Guinea  
 Mauritania  
 Mauritius  
 Morocco  
 Mozambique  
 Rwanda  
 South Africa  
 Zimbabwe

\* These countries sent women in only one of the time periods. The other countries with female fellows sent them in two or more time periods.

Table 11 FEMALE AFGRAD FELLOWS BY COUNTRY INCOME LEVEL AND TIME PERIOD

| Time Period | Less than \$380 |               | \$380 or more |               |
|-------------|-----------------|---------------|---------------|---------------|
|             | No.             | (%)           | No.           | (%)           |
| 1963-1968   | 11              | (61.1)        | 7             | (38.9)        |
| 1969-1972   | 8               | (40.0)        | 12            | (60.0)        |
| 1973-1976   | 23              | (39.0)        | 36            | (61.0)        |
| 1977-1980   | <u>17</u>       | <u>(33.3)</u> | <u>34</u>     | <u>(66.7)</u> |
| TOTAL       | 59              | (39.9)        | 89            | (60.1)        |

Source: Adapted from GNP per capita data in 1979 dollars in World Bank, World Development Report 1981, pp. 134-5 and Accelerated Development in Sub-Saharan Africa: An Agenda for Action, p. 143.

Table 12 AFGRAD FELLOWS BY GENDER, LANGUAGE GROUP AND TIME PERIOD

| Time Period | English    |               |           |               | French     |               |           |               |
|-------------|------------|---------------|-----------|---------------|------------|---------------|-----------|---------------|
|             | Men        |               | Women     |               | Men        |               | Women     |               |
|             | No.        | (%)           | No.       | (%)           | No.        | (%)           | No.       | (%)           |
| 1963-1968   | 319        | (95.2)        | 16        | (4.8)         | 66         | (97.1)        | 2         | (2.9)         |
| 1969-1972   | 322        | (95.3)        | 16        | (4.7)         | 70         | (94.6)        | 4         | (5.4)         |
| 1973-1976   | 285        | (87.7)        | 40        | (12.3)        | 168        | (89.8)        | 19        | (10.2)        |
| 1977-1980   | <u>146</u> | <u>(82.5)</u> | <u>31</u> | <u>(17.5)</u> | <u>157</u> | <u>(88.7)</u> | <u>20</u> | <u>(11.3)</u> |
| TOTAL       | 1,072      | (91.2)        | 103       | (8.8)         | 461        | (91.1)        | 45        | (8.9)         |

Table 15 AFGRAD WOMEN BY SUB-REGION AND TIME PERIOD

| Time Period | Eastern   |               | Southern  |               | W.Afr./English |               | Central   |               | Northern |              | W.Afr./French |               |
|-------------|-----------|---------------|-----------|---------------|----------------|---------------|-----------|---------------|----------|--------------|---------------|---------------|
|             | No.       | (%)           | No.       | (%)           | No.            | (%)           | No.       | (%)           | No.      | (%)          | No.           | (%)           |
| 1963-1972   | 16        | (42.1)        | 2         | (5.3)         | 15             | (39.4)        | 3         | (7.9)         | 0        | (0.0)        | 2             | (5.3)         |
| 1973-1980   | <u>21</u> | <u>(19.1)</u> | <u>35</u> | <u>(31.8)</u> | <u>19</u>      | <u>(17.3)</u> | <u>13</u> | <u>(11.8)</u> | <u>1</u> | <u>(1.0)</u> | <u>21</u>     | <u>(19.1)</u> |
| TOTAL       | 37        | (25.0)        | 37        | (25.0)        | 34             | (23.0)        | 16        | (10.8)        | 1        | (0.7)        | 23            | (15.5)        |

| Time Period | Total      |               |
|-------------|------------|---------------|
|             | No.        | (%)           |
| 1963-1972   | 38         | (25.7)        |
| 1973-1978   | <u>110</u> | <u>(74.3)</u> |
| TOTAL       | 148        | (100.0)       |

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Table 14 AFGRAD FELLOWS BY GENDER, SUB-REGION AND TIME PERIOD

| Time Period | Eastern   |               |          |               | Southern  |               |           |               | West Africa/English |               |          |               |
|-------------|-----------|---------------|----------|---------------|-----------|---------------|-----------|---------------|---------------------|---------------|----------|---------------|
|             | Men       |               | Women    |               | Men       |               | Women     |               | Men                 |               | Women    |               |
|             | No.       | (%)           | No.      | (%)           | No.       | (%)           | No.       | (%)           | No.                 | (%)           | No.      | (%)           |
| 1963-1968   | 151       | (95.0)        | 8        | (5.0)         | 19        | (100.0)       | 0         | (0.0)         | 154                 | (94.5)        | 9        | (5.5)         |
| 1969-1972   | 136       | (94.5)        | 8        | (5.5)         | 20        | (90.9)        | 2         | (9.1)         | 166                 | (96.5)        | 6        | (3.5)         |
| 1973-1976   | 139       | (92.1)        | 12       | (7.9)         | 44        | (69.8)        | 19        | (30.2)        | 124                 | (90.5)        | 13       | (9.5)         |
| 1977-1980   | <u>69</u> | <u>(88.5)</u> | <u>9</u> | <u>(11.5)</u> | <u>42</u> | <u>(72.4)</u> | <u>16</u> | <u>(27.6)</u> | <u>46</u>           | <u>(88.5)</u> | <u>6</u> | <u>(11.5)</u> |
| TOTAL       | 495       | (93.0)        | 37       | (7.0)         | 125       | (77.2)        | 37        | (22.8)        | 490                 | (93.5)        | 34       | (6.5)         |

| Time Period | Central   |               |          |               | Northern |              |          |              | West Africa/French |               |           |               |
|-------------|-----------|---------------|----------|---------------|----------|--------------|----------|--------------|--------------------|---------------|-----------|---------------|
|             | Men       |               | Women    |               | Men      |              | Women    |              | Men                |               | Women     |               |
|             | No.       | (%)           | No.      | (%)           | No.      | (%)          | No.      | (%)          | No.                | (%)           | No.       | (%)           |
| 1963-1968   | 28        | (100.0)       | 0        | (0.0)         | 13       | (100.0)      | 0        | (0.0)        | 20                 | (95.5)        | 1         | (4.8)         |
| 1969-1972   | 40        | (93.0)        | 3        | (7.0)         | 3        | (100.0)      | 0        | (0.0)        | 27                 | (96.4)        | 1         | (3.6)         |
| 1973-1977   | 54        | (87.1)        | 8        | (12.9)        | 17       | (94.4)       | 1        | (5.5)        | 75                 | (92.6)        | 6         | (7.4)         |
| 1977-1980   | <u>34</u> | <u>(87.2)</u> | <u>5</u> | <u>(14.7)</u> | <u>0</u> | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>112</u>         | <u>(88.2)</u> | <u>15</u> | <u>(11.8)</u> |
| TOTAL       | 156       | (90.7)        | 16       | (9.3)         | 33       | (97.1)       | 1        | (2.9)        | 234                | (91.1)        | 23        | (8.9)         |

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Table 15 PROPORTION OF FEMALE AFGRAD FELLOWS BY SUB-REGION,  
COUNTRY OF ORIGIN, AND THIRD LEVEL SCHOOL ENROLLMENT RATIO

| Country                    | Fellows<br>Total No. | Female Fellows<br>No. | (%)    | Third Level<br>Enrollment | Male Ratio/<br>Female Ratio** |
|----------------------------|----------------------|-----------------------|--------|---------------------------|-------------------------------|
| Group A: Over 30 percent   |                      |                       |        |                           |                               |
| Botswana                   | 15                   | 6                     | (40.0) | 1.5                       | 1.58                          |
| Congo***                   | 5                    | 2                     | (40.0) | 5.6                       | 6.00                          |
| Lesotho                    | 26                   | 9                     | (34.6) | 1.5                       | 0.67                          |
| Liberia                    | 53                   | 17                    | (32.1) | 2.3                       | 2.54                          |
| Swaziland                  | 24                   | 14                    | (58.3) | 4.8                       | 1.18                          |
| Group B: 9 to 29.9 percent |                      |                       |        |                           |                               |
| Cameroon                   | 101                  | 12                    | (11.9) | 1.6                       | 6.33(1975)                    |
| Ivory Coast***             | 78                   | 7                     | (9.0)  | 2.9                       | 4.18                          |
| Kenya                      | 107                  | 12                    | (11.2) | 1.0                       | 7.50(1970)                    |
| Madagascar                 | 29                   | 5                     | (17.2) | 3.0                       | 2.33(1970)                    |
| Niger***                   | 4                    | 1                     | (25.0) | 0.3                       | 5.00                          |
| Sierre Leone               | 57                   | 6                     | (10.5) | 0.6(1975)                 | 5.50(1975)                    |
| Somalia***                 | 17                   | 2                     | (11.8) | 0.9                       | 7.00(1975)                    |
| Tanzania                   | 49                   | 5                     | (10.2) | 0.3                       | 5.00                          |
| Togo                       | 35                   | 8                     | (22.9) | 1.9                       | 6.60                          |
| Zambia                     | 49                   | 5                     | (10.2) | 1.5                       | 3.43                          |
| Group C: Under 8.9 percent |                      |                       |        |                           |                               |
| Ethiopia                   | 182                  | 7                     | (0.5)  | 0.5                       | 9.00                          |
| Gambia***                  | 12                   | 1                     | (8.3)  | 0.7                       | 3.67                          |
| Ghana                      | 195                  | 7                     | (3.6)  | 1.0                       | 6.00                          |
| Malawi                     | 41                   | 3                     | (7.3)  | 0.3                       | 2.50                          |
| Mali                       | 52                   | 3                     | (5.9)  | 0.9                       | 8.00                          |
| Nigeria                    | 207                  | 3                     | (1.5)  | 2.8                       | 8.00(1970)                    |
| Senegal                    | 43                   | 3                     | (7.0)  | 2.8                       | 4.60                          |
| Sudan***                   | 53                   | 2                     | (3.8)  | 1.7                       | 2.78                          |
| Tunisia***                 | 26                   | 1                     | (3.8)  | 0.3                       | 2.20                          |
| Uganda                     | 82                   | 4                     | (4.9)  | 0.6                       | 2.00                          |
| Upper Volta                | 26                   | 1                     | (3.8)  | 0.3                       | 4.00                          |
| Zaire***                   | 55                   | 2                     | (3.6)  | 1.1                       | 13.00(1970)                   |

Table 15 PROPORTION OF FEMALE AFGRAD FELLOWS BY SUB-REGION,  
COUNTRY OF ORIGIN, AND THIRD LEVEL SCHOOL ENROLLMENT RATIO

| Country                    | Fellows<br>Total No. | Female Fellows<br>No. | (%)    | Third Level<br>Enrollment | Male Ratio/<br>Female Ratio** |
|----------------------------|----------------------|-----------------------|--------|---------------------------|-------------------------------|
| Group A: Over 30 percent   |                      |                       |        |                           |                               |
| Botswana                   | 15                   | 6                     | (40.0) | 1.5                       | 1.58                          |
| Congo***                   | 5                    | 2                     | (40.0) | 5.6                       | 6.00                          |
| Lesotho                    | 26                   | 9                     | (34.6) | 1.5                       | 0.67                          |
| Liberia                    | 53                   | 17                    | (32.1) | 2.3                       | 2.54                          |
| Swaziland                  | 24                   | 14                    | (58.3) | 4.8                       | 1.18                          |
| Group B: 9 to 29.9         |                      |                       |        |                           |                               |
| Cameroon                   | 101                  | 12                    | (11.9) | 1.6                       | 6.33 (1975)                   |
| Ivory Coast***             | 78                   | 7                     | (9.0)  | 2.9                       | 4.18                          |
| Kenya                      | 107                  | 12                    | (11.2) | 1.0                       | 7.50 (1970)                   |
| Madagascar                 | 29                   | 5                     | (17.2) | 3.0                       | 2.33 (1970)                   |
| Niger***                   | 4                    | 1                     | (25.0) | 0.3                       | 5.00                          |
| Sierre Leone               | 57                   | 6                     | (10.5) | 0.6 (1975)                | 5.50 (1975)                   |
| Somalia***                 | 17                   | 2                     | (11.8) | 0.9                       | 7.00 (1975)                   |
| Tanzania                   | 49                   | 5                     | (10.2) | 0.3                       | 5.00                          |
| Togo                       | 35                   | 8                     | (22.9) | 1.9                       | 6.60                          |
| Zambia                     | 49                   | 5                     | (10.2) | 1.5                       | 3.43                          |
| Group C: Under 8.9 percent |                      |                       |        |                           |                               |
| Ethiopia                   | 182                  | 7                     | (0.5)  | 0.5                       | 9.00                          |
| Gambia***                  | 12                   | 1                     | (8.3)  | 0.7                       | 3.67                          |
| Ghana                      | 195                  | 7                     | (3.6)  | 1.0                       | 6.00                          |
| Malawi                     | 41                   | 3                     | (7.3)  | 0.3                       | 2.50                          |
| Mali                       | 52                   | 3                     | (5.9)  | 0.9                       | 8.00                          |
| Nigeria                    | 207                  | 3                     | (1.5)  | 2.8                       | 8.00 (1970)                   |
| Senegal                    | 43                   | 3                     | (7.0)  | 2.8                       | 4.60                          |
| Sudan***                   | 53                   | 2                     | (3.8)  | 1.7                       | 2.78                          |
| Tunisia***                 | 26                   | 1                     | (3.8)  | 0.3                       | 2.20                          |
| Uganda                     | 82                   | 4                     | (4.9)  | 0.6                       | 2.00                          |
| Upper Volta                | 26                   | 1                     | (3.8)  | 0.3                       | 4.00                          |
| Zaire***                   | 55                   | 2                     | (3.6)  | 1.1                       | 13.00 (1970)                  |

Table 16 MEAN AGE OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Men         | Women       | Total <sup>a</sup> |
|-------------|-------------|-------------|--------------------|
| 1963-1968   | 26.9        | 25.7        | 26.8               |
| 1969-1972   | 28.6        | 26.1        | 28.5               |
| 1973-1976   | 28.3        | 26.7        | 28.1               |
| 1977-1980   | <u>28.6</u> | <u>27.7</u> | <u>28.5</u>        |
| ALL FELLOWS | 28.1        | 26.8        | 27.9               |

<sup>a</sup>For age at time of application, n = 1,656. This information is unavailable for 25 AFGRAD fellows (1.5 percent). All tables using this variable have the same n.

Table 17 MEAN AGE OF AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | English     | French      | Total       |
|-------------|-------------|-------------|-------------|
| 1963-1968   | 27.0        | 25.9        | 26.8        |
| 1969-1972   | 28.8        | 27.4        | 28.5        |
| 1973-1976   | 29.2        | 26.1        | 28.1        |
| 1977-1980   | <u>29.1</u> | <u>27.9</u> | <u>28.5</u> |
| ALL FELLOWS | 28.4        | 26.8        | 27.9        |

Table 18 MEAN AGE OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | Eastern     | Southern    | West Africa/<br>English | Central     | Northern  | West Africa/<br>French | Total       |
|-------------|-------------|-------------|-------------------------|-------------|-----------|------------------------|-------------|
| 1963-1968   | 26.8        | 26.8        | 27.2                    | 27.5        | 25.2      | 24.0                   | 26.8        |
| 1969-1972   | 28.8        | 27.5        | 28.9                    | 28.3        | 26.7      | 26.1                   | 28.5        |
| 1973-1976   | 28.9        | 28.8        | 29.2                    | 26.1        | 25.6      | 26.2                   | 28.1        |
| 1977-1980   | <u>30.1</u> | <u>29.0</u> | <u>28.4</u>             | <u>28.2</u> | <u>--</u> | <u>27.4</u>            | <u>28.5</u> |
| ALL FELLOWS | 28.4        | 28.5        | 28.4                    | 27.4        | 25.5      | 26.6                   | 27.9        |

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Table 19 MARITAL STATUS OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Single     |               | Married    |               | Total <sup>a</sup> |               |
|-------------|------------|---------------|------------|---------------|--------------------|---------------|
|             | No.        | (%)           | No.        | (%)           | No.                | (%)           |
| 1963-1968   | 294        | (74.4)        | 101        | (25.6)        | 395                | (24.0)        |
| 1969-1972   | 257        | (63.0)        | 151        | (37.0)        | 408                | (24.7)        |
| 1973-1976   | 333        | (66.7)        | 166        | (33.3)        | 499                | (30.2)        |
| 1977-1980   | <u>229</u> | <u>(65.6)</u> | <u>120</u> | <u>(34.4)</u> | <u>349</u>         | <u>(21.1)</u> |
| TOTAL       | 1,113      | (67.4)        | 538        | (32.6)        | 1,651              | (100.0)       |

<sup>a</sup>For marital status, n = 1,651. This information is unavailable for 30 AFGRAD fellows (1.8 percent). All tables using this variable have the same n.

Table 20 MARRITAL STATUS OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Men        |               |            |               | Women     |               |           |               |
|-------------|------------|---------------|------------|---------------|-----------|---------------|-----------|---------------|
|             | Single     |               | Married    |               | Single    |               | Married   |               |
|             | No.        | (%)           | No.        | (%)           | No.       | (%)           | No.       | (%)           |
| 1963-1968   | 278        | (73.7)        | 99         | (26.3)        | 16        | (88.9)        | 2         | (11.1)        |
| 1967-1972   | 242        | (62.4)        | 146        | (37.6)        | 15        | (75.0)        | 5         | (25.0)        |
| 1973-1976   | 293        | (66.6)        | 147        | (33.4)        | 40        | (67.8)        | 19        | (32.2)        |
| 1977-1980   | <u>190</u> | <u>(63.8)</u> | <u>108</u> | <u>(36.2)</u> | <u>39</u> | <u>(76.5)</u> | <u>12</u> | <u>(23.5)</u> |
| TOTAL       | 1,003      | (66.7)        | 500        | (33.3)        | 110       | (74.3)        | 38        | (25.7)        |

Table 21 MARRIED AFGRAD FELLOWS BY GENDER, DEPENDENTS, AND TIME PERIOD

| Time Period         | Children |        |        |         | No Children |        |        |        |
|---------------------|----------|--------|--------|---------|-------------|--------|--------|--------|
|                     | Men      |        | Women  |         | Men         |        | Women  |        |
|                     | No.      | (%)    | No.    | (%)     | No.         | (%)    | No.    | (%)    |
| 1963-1968           | 68       | (68.7) | 2      | (100.0) | 31          | (31.3) | 0      | (0.0)  |
| 1969-1972           | 105      | (71.9) | 5      | (100.0) | 41          | (28.1) | 0      | (0.0)  |
| 1973-1976           | 104      | (70.7) | 14     | (73.7)  | 43          | (29.3) | 5      | (26.3) |
| 1977-1980           | 76       | (70.4) | 12     | (100.0) | 32          | (29.6) | 0      | (0.0)  |
| TOTAL               | 353      | (70.6) | 33     | (86.8)  | 147         | (29.4) | 5      | (13.2) |
| TOTAL (MEN + WOMEN) | 386      |        | (71.7) |         | 152         |        | (28.3) |        |

Table 22 MARITAL STATUS OF AFGRAD FELLOWS BY LANGUAGE GROUP  
AND TIME PERIOD

| Time Period | English    |               |           |               | French     |               |           |               |
|-------------|------------|---------------|-----------|---------------|------------|---------------|-----------|---------------|
|             | Single     |               | Married   |               | Single     |               | Married   |               |
|             | No.        | (%)           | No.       | (%)           | No.        | (%)           | No.       | (%)           |
| 1963-1968   | 239        | (73.1)        | 88        | (26.9)        | 55         | (80.9)        | 13        | (19.1)        |
| 1969-1972   | 203        | (60.8)        | 131       | (39.2)        | 54         | (73.0)        | 20        | (27.0)        |
| 1973-1976   | 182        | (57.4)        | 135       | (42.6)        | 151        | (83.0)        | 31        | (17.0)        |
| 1977-1980   | <u>103</u> | <u>(59.2)</u> | <u>71</u> | <u>(40.8)</u> | <u>126</u> | <u>(72.0)</u> | <u>49</u> | <u>(28.0)</u> |
| TOTAL       | 727        | (63.1)        | 425       | (36.9)        | 386        | (77.4)        | 113       | (22.6)        |

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Table 23 MARITAL STATUS OF AFGRAAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | Eastern   |               |           |               | Southern  |               |           |               | West Africa/English |               |           |               |
|-------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|---------------------|---------------|-----------|---------------|
|             | Single    |               | Married   |               | Single    |               | Married   |               | Single              |               | Married   |               |
|             | No.       | (%)           | No.       | (%)           | No.       | (%)           | No.       | (%)           | No.                 | (%)           | No.       | (%)           |
| 1963-1968   | 128       | (84.2)        | 24        | (15.8)        | 15        | (78.9)        | 4         | (21.1)        | 101                 | (62.3)        | 61        | (37.7)        |
| 1969-1972   | 108       | (76.1)        | 34        | (23.9)        | 15        | (75.0)        | 5         | (25.0)        | 80                  | (46.5)        | 92        | (53.5)        |
| 1973-1976   | 107       | (71.3)        | 43        | (28.7)        | 33        | (52.4)        | 30        | (47.6)        | 64                  | (49.2)        | 66        | (50.8)        |
| 1977-1980   | <u>44</u> | <u>(57.9)</u> | <u>32</u> | <u>(42.1)</u> | <u>32</u> | <u>(55.2)</u> | <u>26</u> | <u>(44.8)</u> | <u>32</u>           | <u>(62.7)</u> | <u>19</u> | <u>(37.3)</u> |
| TOTAL       | 387       | (74.4)        | 133       | (25.6)        | 95        | (59.4)        | 65        | (40.6)        | 277                 | (53.8)        | 238       | (46.2)        |

| Time Period | Central   |               |           |               | Northern |              |          |              | West Africa/French |               |           |               |
|-------------|-----------|---------------|-----------|---------------|----------|--------------|----------|--------------|--------------------|---------------|-----------|---------------|
|             | Single    |               | Married   |               | Single   |              | Married  |              | Single             |               | Married   |               |
|             | No.       | (%)           | No.       | (%)           | No.      | (%)          | No.      | (%)          | No.                | (%)           | No.       | (%)           |
| 1963-1968   | 21        | (75.0)        | 7         | (25.0)        | 11       | (84.6)       | 2        | (15.4)       | 18                 | (85.7)        | 3         | (14.3)        |
| 1969-1972   | 26        | (60.5)        | 17        | (39.5)        | 3        | (100.0)      | 0        | (0.0)        | 25                 | (89.3)        | 3         | (10.7)        |
| 1973-1976   | 46        | (78.0)        | 13        | (22.0)        | 15       | (83.3)       | 3        | (16.7)       | 68                 | (86.1)        | 11        | (13.9)        |
| 1977-1980   | <u>23</u> | <u>(59.0)</u> | <u>16</u> | <u>(41.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>98</u>          | <u>(78.4)</u> | <u>27</u> | <u>(21.6)</u> |
| TOTAL       | 116       | (68.6)        | 53        | (31.4)        | 29       | (85.3)       | 5        | (14.7)       | 209                | (82.6)        | 44        | (17.4)        |

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Table 24 EDUCATIONAL LEVEL OF MOTHERS OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | None      |               | Some Primary |               | Some Secondary |               | Some Post-Sec |              | Total <sup>a</sup> |               |
|-------------|-----------|---------------|--------------|---------------|----------------|---------------|---------------|--------------|--------------------|---------------|
|             | No.       | (%)           | No.          | (%)           | No.            | (%)           | No.           | (%)          | No.                | (%)           |
| 1963-1968   | 111       | (69.0)        | 37           | (23.0)        | 11             | (6.8)         | 2             | (1.2)        | 161                | (21.2)        |
| 1969-1972   | 125       | (69.1)        | 39           | (21.5)        | 14             | (7.7)         | 3             | (1.7)        | 181                | (23.8)        |
| 1973-1976   | 129       | (49.5)        | 88           | (33.7)        | 34             | (13.0)        | 10            | (3.8)        | 261                | (34.4)        |
| 1977-1980   | <u>85</u> | <u>(54.5)</u> | <u>45</u>    | <u>(28.9)</u> | <u>18</u>      | <u>(11.5)</u> | <u>8</u>      | <u>(5.1)</u> | <u>156</u>         | <u>(20.6)</u> |
| TOTAL       | 450       | (59.3)        | 209          | (27.6)        | 77             | (10.1)        | 23            | (3.0)        | 759                | (100.0)       |

<sup>a</sup>For mother's educational level, n = 759. This information is available only for questionnaire respondents. All tables using this variable have the same n.

Table 25 EDUCATIONAL LEVEL OF FATHERS OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | None      |               | Some Primary |               | Some Secondary |               | Some Post-Sec. |               | Total <sup>a</sup> |               |
|-------------|-----------|---------------|--------------|---------------|----------------|---------------|----------------|---------------|--------------------|---------------|
|             | No.       | (%)           | No.          | (%)           | No.            | (%)           | No.            | (%)           | No.                | (%)           |
| 1963-1968   | 67        | (41.6)        | 59           | (36.7)        | 19             | (11.8)        | 16             | (9.9)         | 161                | (21.5)        |
| 1969-1972   | 82        | (45.3)        | 55           | (30.4)        | 27             | (14.9)        | 17             | (9.4)         | 181                | (24.2)        |
| 1973-1976   | 80        | (31.3)        | 96           | (37.5)        | 48             | (18.7)        | 32             | (12.5)        | 256                | (34.2)        |
| 1977-1980   | <u>54</u> | <u>(36.0)</u> | <u>43</u>    | <u>(28.7)</u> | <u>22</u>      | <u>(14.7)</u> | <u>31</u>      | <u>(20.6)</u> | <u>150</u>         | <u>(20.1)</u> |
| TOTAL       | 281       | (37.8)        | 253          | (33.8)        | 116            | (15.5)        | 96             | (12.9)        | 748                | (100.0)       |

<sup>a</sup>For father's educational level, n = 748. This information is available only for questionnaire respondents. All tables using this variable have the same n.

Table 26 EDUCATIONAL LEVEL OF MOTHERS OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | None      |               | Some Primary |               | Some Secondary |               | Some Post-Sec. |               |           |              |          |               |          |              |          |              |
|-------------|-----------|---------------|--------------|---------------|----------------|---------------|----------------|---------------|-----------|--------------|----------|---------------|----------|--------------|----------|--------------|
|             | Men       |               | Women        |               | Men            |               | Women          |               |           |              |          |               |          |              |          |              |
|             | No.       | (%)           | No.          | (%)           | No.            | (%)           | No.            | (%)           |           |              |          |               |          |              |          |              |
| 1963-1968   | 106       | (69.7)        | 5            | (55.6)        | 34             | (22.4)        | 3              | (33.3)        | 11        | (7.2)        | 0        | (0.0)         | 1        | (0.7)        | 1        | (11.1)       |
| 1969-1972   | 120       | (69.0)        | 5            | (71.4)        | 37             | (21.3)        | 2              | (28.6)        | 14        | (8.0)        | 0        | (0.0)         | 3        | (1.7)        | 0        | (0.0)        |
| 1973-1976   | 120       | (52.2)        | 9            | (29.0)        | 75             | (32.6)        | 13             | (42.0)        | 26        | (11.3)       | 8        | (25.8)        | 9        | (3.9)        | 1        | (3.2)        |
| 1977-1980   | <u>77</u> | <u>(58.3)</u> | <u>8</u>     | <u>(33.3)</u> | <u>35</u>      | <u>(26.5)</u> | <u>10</u>      | <u>(41.7)</u> | <u>13</u> | <u>(9.0)</u> | <u>5</u> | <u>(20.8)</u> | <u>7</u> | <u>(5.3)</u> | <u>1</u> | <u>(4.2)</u> |
| TOTAL       | 423       | (61.5)        | 27           | (38.0)        | 181            | (26.3)        | 28             | (39.5)        | 64        | (9.3)        | 13       | (18.3)        | 20       | (2.9)        | 3        | (4.2)        |

Table 27 EDUCATIONAL LEVEL OF MOTHERS OF AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | None             |                  | Some Primary     |                  | Some Secondary   |                | Some Post-Sec. |                |
|-------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|
|             | English          | French           | English          | French           | English          | French         | English        | French         |
|             | No. (%)          | No. (%)        | No. (%)        | No. (%)        |
| 1963-1968   | 88 (68.8)        | 23 (69.7)        | 30 (23.4)        | 7 (21.2)         | 8 (6.2)          | 3 (9.1)        | 2 (1.6)        | 0 (0.0)        |
| 1969-1972   | 99 (68.8)        | 26 (70.3)        | 29 (20.1)        | 10 (27.0)        | 13 (9.0)         | 1 (2.7)        | 3 (2.1)        | 0 (0.0)        |
| 1973-1976   | 80 (46.0)        | 49 (56.3)        | 63 (36.2)        | 25 (28.7)        | 23 (13.2)        | 11 (12.7)      | 8 (4.6)        | 2 (2.3)        |
| 1977-1980   | <u>36 (43.9)</u> | <u>49 (66.2)</u> | <u>30 (36.6)</u> | <u>15 (20.3)</u> | <u>12 (14.6)</u> | <u>6 (8.1)</u> | <u>4 (4.9)</u> | <u>4 (5.4)</u> |
| TOTAL       | 303 (57.4)       | 147 (63.6)       | 152 (28.8)       | 57 (24.7)        | 56 (10.6)        | 21 (9.1)       | 17 (3.2)       | 6 (2.6)        |

Table 28 EDUCATIONAL LEVEL OF MOTHERS OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | None      |               |          |               |                |               |          |               |               |               |
|-------------|-----------|---------------|----------|---------------|----------------|---------------|----------|---------------|---------------|---------------|
|             | Eastern   |               | Southern |               | W.Afr./English |               | Central  |               | W.Afr./French |               |
|             | No.       | (%)           | No.      | (%)           | No.            | (%)           | No.      | (%)           | No.           | (%)           |
| 1963-1968   | 40        | (67.8)        | 2        | (28.6)        | 46             | (70.8)        | 9        | (69.2)        | 13            | (86.7)        |
| 1969-1972   | 45        | (77.6)        | 5        | (33.3)        | 49             | (69.0)        | 12       | (66.7)        | 13            | (72.2)        |
| 1973-1976   | 30        | (45.5)        | 7        | (15.2)        | 46             | (59.7)        | 15       | (53.6)        | 30            | (69.8)        |
| 1977-1980   | <u>18</u> | <u>(62.1)</u> | <u>8</u> | <u>(20.5)</u> | <u>11</u>      | <u>(55.0)</u> | <u>7</u> | <u>(46.7)</u> | <u>41</u>     | <u>(77.4)</u> |
| TOTAL       | 133       | (62.7)        | 22       | (20.6)        | 152            | (65.2)        | 43       | (58.1)        | 97            | (75.2)        |

| Time Period | Some Primary |               |           |               |                |               |          |               |               |               |
|-------------|--------------|---------------|-----------|---------------|----------------|---------------|----------|---------------|---------------|---------------|
|             | Eastern      |               | Southern  |               | W.Afr./English |               | Central  |               | W.Afr./French |               |
|             | No.          | (%)           | No.       | (%)           | No.            | (%)           | No.      | (%)           | No.           | (%)           |
| 1963-1968   | 15           | (25.4)        | 5         | (71.4)        | 11             | (16.9)        | 4        | (30.8)        | 2             | (13.3)        |
| 1969-1972   | 12           | (20.7)        | 10        | (66.7)        | 7              | (9.8)         | 6        | (33.3)        | 4             | (22.2)        |
| 1973-1976   | 27           | (40.9)        | 29        | (63.1)        | 14             | (18.2)        | 11       | (39.3)        | 7             | (16.3)        |
| 1977-1980   | <u>7</u>     | <u>(24.1)</u> | <u>23</u> | <u>(59.0)</u> | <u>2</u>       | <u>(10.0)</u> | <u>6</u> | <u>(40.0)</u> | <u>7</u>      | <u>(13.2)</u> |
| TOTAL       | 61           | (28.8)        | 67        | (62.6)        | 34             | (14.6)        | 27       | (36.5)        | 20            | (15.5)        |

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Table 28 (continued)

| Time Period | Some Secondary |               |          |               |                |               |          |               |               |              |
|-------------|----------------|---------------|----------|---------------|----------------|---------------|----------|---------------|---------------|--------------|
|             | Eastern        |               | Southern |               | W.Afr./English |               | Central  |               | W.Afr./French |              |
|             | No.            | (%)           | No.      | (%)           | No.            | (%)           | No.      | (%)           | No.           | (%)          |
| 1963-1968   | 4              | (6.8)         | 0        | (0.0)         | 6              | (9.2)         | 0        | (0.0)         | 0             | (0.0)        |
| 1969-1972   | 1              | (1.7)         | 0        | (0.0)         | 12             | (16.9)        | 0        | (0.0)         | 1             | (5.6)        |
| 1973-1976   | 8              | (12.1)        | 7        | (15.2)        | 12             | (15.6)        | 2        | (7.1)         | 5             | (11.6)       |
| 1977-1980   | <u>3</u>       | <u>(10.3)</u> | <u>7</u> | <u>(17.9)</u> | <u>4</u>       | <u>(20.0)</u> | <u>2</u> | <u>(13.3)</u> | <u>2</u>      | <u>(3.8)</u> |
| TOTAL       | 16             | (7.5)         | 14       | (13.1)        | 34             | (14.6)        | 4        | (5.4)         | 8             | (6.2)        |

  

| Time Period | Some Post-Secondary |              |          |              |                |               |          |              |               |              |
|-------------|---------------------|--------------|----------|--------------|----------------|---------------|----------|--------------|---------------|--------------|
|             | Eastern             |              | Southern |              | W.Afr./English |               | Central  |              | W.Afr./French |              |
|             | No.                 | (%)          | No.      | (%)          | No.            | (%)           | No.      | (%)          | No.           | (%)          |
| 1963-1968   | 0                   | (0.0)        | 0        | (0.0)        | 2              | (3.1)         | 0        | (0.0)        | 0             | (0.0)        |
| 1969-1972   | 0                   | (0.0)        | 0        | (0.0)        | 3              | (4.2)         | 0        | (0.0)        | 0             | (0.0)        |
| 1973-1976   | 1                   | (1.5)        | 3        | (6.5)        | 5              | (6.5)         | 0        | (0.0)        | 1             | (2.3)        |
| 1977-1980   | <u>1</u>            | <u>(3.4)</u> | <u>1</u> | <u>(2.6)</u> | <u>3</u>       | <u>(15.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>3</u>      | <u>(5.6)</u> |
| TOTAL       | 2                   | (1.0)        | 4        | (3.7)        | 13             | (5.6)         | 0        | (0.0)        | 4             | (3.1)        |

Table 29 EDUCATIONAL LEVEL OF FATHERS OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | None             |                 | Some Primary     |                 | Some Secondary   |                 | Some Post-Sec.   |                 |
|-------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
|             | Men              | Women           | Men              | Women           | Men              | Women           | Men              | Women           |
|             | No. (%)          | No. (%)         |
| 1963-1968   | 64 (42.1)        | 3 (33.3)        | 56 (36.8)        | 3 (33.3)        | 18 (11.9)        | 1 (11.1)        | 14 (9.2)         | 2 (22.2)        |
| 1969-1972   | 79 (45.7)        | 3 (37.5)        | 53 (30.7)        | 2 (25.0)        | 26 (15.0)        | 1 (12.5)        | 15 (8.6)         | 2 (25.0)        |
| 1973-1976   | 76 (33.6)        | 4 (13.3)        | 84 (37.2)        | 12 (40.0)       | 39 (17.3)        | 9 (30.0)        | 27 (11.9)        | 5 (16.7)        |
| 1977-1980   | <u>50 (39.7)</u> | <u>4 (16.7)</u> | <u>36 (28.6)</u> | <u>7 (29.2)</u> | <u>16 (12.7)</u> | <u>6 (25.0)</u> | <u>24 (19.0)</u> | <u>7 (29.1)</u> |
| TOTAL       | 269 (39.8)       | 14 (19.7)       | 229 (33.8)       | 24 (33.8)       | 99 (14.6)        | 17 (24.0)       | 80 (11.8)        | 16 (22.5)       |

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Table 30 EDUCATIONAL LEVEL OF FATHERS OF AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | None             |                  | Some Primary     |                  | Some Secondary   |                 | Some Post-Sec.   |                  |
|-------------|------------------|------------------|------------------|------------------|------------------|-----------------|------------------|------------------|
|             | English          | French           | English          | French           | English          | French          | English          | French           |
|             | No. (%)          | No. (%)         | No. (%)          | No. (%)          |
| 1963-1968   | 54 (42.2)        | 13 (39.4)        | 51 (39.8)        | 8 (24.2)         | 14 (10.9)        | 5 (15.2)        | 9 (7.1)          | 7 (21.2)         |
| 1969-1972   | 63 (43.8)        | 19 (51.4)        | 47 (32.6)        | 8 (21.6)         | 21 (14.6)        | 6 (16.2)        | 13 (9.0)         | 4 (10.8)         |
| 1973-1976   | 46 (26.9)        | 34 (40.0)        | 72 (42.1)        | 24 (28.2)        | 31 (18.1)        | 17 (20.0)       | 22 (12.9)        | 10 (11.8)        |
| 1977-1980   | <u>22 (27.5)</u> | <u>32 (45.7)</u> | <u>28 (35.0)</u> | <u>15 (21.4)</u> | <u>13 (16.3)</u> | <u>9 (12.9)</u> | <u>17 (21.2)</u> | <u>14 (20.0)</u> |
| TOTAL       | 185 (35.4)       | 98 (43.6)        | 198 (37.9)       | 55 (24.4)        | 79 (15.1)        | 37 (16.4)       | 61 (11.6)        | 35 (15.6)        |

Table 31 EDUCATIONAL LEVEL OF FATHERS OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | None     |               |          |               |                |               |          |               |               |               |
|-------------|----------|---------------|----------|---------------|----------------|---------------|----------|---------------|---------------|---------------|
|             | Eastern  |               | Southern |               | W.Afr./English |               | Central  |               | W.Afr./French |               |
|             | No.      | (%)           | No.      | (%)           | No.            | (%)           | No.      | (%)           | No.           | (%)           |
| 1963-1968   | 22       | (37.3)        | 0        | (0.0)         | 32             | (49.2)        | 4        | (30.8)        | 8             | (53.3)        |
| 1969-1972   | 30       | (50.8)        | 1        | (6.7)         | 32             | (45.7)        | 8        | (44.4)        | 10            | (55.6)        |
| 1973-1976   | 15       | (22.7)        | 4        | (8.9)         | 29             | (38.7)        | 12       | (42.9)        | 19            | (46.3)        |
| 1977-1980   | <u>9</u> | <u>(32.1)</u> | <u>5</u> | <u>(12.8)</u> | <u>8</u>       | <u>(42.1)</u> | <u>7</u> | <u>(53.8)</u> | <u>25</u>     | <u>(49.0)</u> |
| TOTAL       | 76       | (35.8)        | 10       | (9.4)         | 101            | (44.1)        | 31       | (43.0)        | 62            | (49.6)        |

  

| Time Period | Some Primary |               |           |               |                |              |          |               |               |               |
|-------------|--------------|---------------|-----------|---------------|----------------|--------------|----------|---------------|---------------|---------------|
|             | Eastern      |               | Southern  |               | W.Afr./English |              | Central  |               | W.Afr./French |               |
|             | No.          | (%)           | No.       | (%)           | No.            | (%)          | No.      | (%)           | No.           | (%)           |
| 1963-1968   | 29           | (49.2)        | 5         | (71.4)        | 17             | (26.2)       | 6        | (46.1)        | 2             | (13.3)        |
| 1969-1972   | 18           | (30.5)        | 11        | (73.3)        | 18             | (25.7)       | 6        | (33.4)        | 2             | (11.1)        |
| 1973-1976   | 31           | (47.0)        | 25        | (55.6)        | 19             | (25.3)       | 10       | (35.7)        | 11            | (26.8)        |
| 1977-1980   | <u>13</u>    | <u>(46.5)</u> | <u>18</u> | <u>(46.2)</u> | <u>0</u>       | <u>(0.0)</u> | <u>3</u> | <u>(23.1)</u> | <u>9</u>      | <u>(17.7)</u> |
| TOTAL       | 91           | (42.9)        | 59        | (55.7)        | 54             | (23.6)       | 25       | (34.7)        | 24            | (19.2)        |

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Table 31 (continued)

| Time Period | Some Secondary |               |          |               |                |               |          |               |               |              |
|-------------|----------------|---------------|----------|---------------|----------------|---------------|----------|---------------|---------------|--------------|
|             | Eastern        |               | Southern |               | W.Afr./English |               | Central  |               | W.Afr./French |              |
|             | No.            | (%)           | No.      | (%)           | No.            | (%)           | No.      | (%)           | No.           | (%)          |
| 1963-1968   | 6              | (10.2)        | 0        | (0.0)         | 9              | (13.8)        | 2        | (15.4)        | 2             | (13.4)       |
| 1969-1972   | 10             | (17.0)        | 1        | (6.7)         | 10             | (14.3)        | 4        | (22.2)        | 2             | (11.1)       |
| 1973-1976   | 11             | (16.7)        | 13       | (28.9)        | 13             | (17.3)        | 4        | (14.3)        | 7             | (17.1)       |
| 1977-1980   | <u>3</u>       | <u>(10.7)</u> | <u>5</u> | <u>(12.8)</u> | <u>7</u>       | <u>(36.8)</u> | <u>2</u> | <u>(15.4)</u> | <u>5</u>      | <u>(9.8)</u> |
| TOTAL       | 30             | (14.2)        | 19       | (17.9)        | 39             | (17.0)        | 12       | (16.7)        | 16            | (12.8)       |

| Time Period | Some Post-Secondary |               |           |               |                |               |          |              |               |               |
|-------------|---------------------|---------------|-----------|---------------|----------------|---------------|----------|--------------|---------------|---------------|
|             | Eastern             |               | Southern  |               | W.Afr./English |               | Central  |              | W.Afr./French |               |
|             | No.                 | (%)           | No.       | (%)           | No.            | (%)           | No.      | (%)          | No.           | (%)           |
| 1963-1968   | 2                   | (3.3)         | 2         | (28.6)        | 7              | (10.8)        | 1        | (7.7)        | 3             | (20.0)        |
| 1969-1972   | 1                   | (1.7)         | 2         | (13.3)        | 10             | (14.3)        | 0        | (0.0)        | 4             | (22.2)        |
| 1973-1976   | 9                   | (13.6)        | 3         | (6.6)         | 14             | (18.7)        | 2        | (7.1)        | 4             | (9.8)         |
| 1977-1980   | <u>3</u>            | <u>(10.7)</u> | <u>11</u> | <u>(28.2)</u> | <u>4</u>       | <u>(21.1)</u> | <u>1</u> | <u>(7.7)</u> | <u>12</u>     | <u>(23.5)</u> |
| TOTAL       | 15                  | (7.1)         | 18        | (17.0)        | 35             | (15.3)        | 4        | (5.6)        | 23            | (18.4)        |

Table 32 OCCUPATION OF MOTHERS OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Homemaker |               | Farmer/<br>Trader |               | Teacher/<br>Health or<br>Church Worker |               | Other    |              | Total <sup>a</sup> |               |
|-------------|-----------|---------------|-------------------|---------------|--|---------------|----------|--------------|--------------------|---------------|
|             | No.       | (%)           | No.               | (%)           | No.                                    | (%)           | No.      | (%)          | No.                | (%)           |
| 1963-1968   | 76        | (46.6)        | 67                | (41.1)        | 11                                     | (6.8)         | 9        | (5.5)        | 163                | (21.9)        |
| 1969-1972   | 85        | (47.8)        | 73                | (41.0)        | 8                                      | (4.5)         | 12       | (6.7)        | 178                | (23.9)        |
| 1973-1976   | 105       | (41.0)        | 108               | (42.2)        | 37                                     | (14.5)        | 6        | (2.3)        | 256                | (34.3)        |
| 1977-1980   | <u>85</u> | <u>(57.4)</u> | <u>44</u>         | <u>(29.7)</u> | <u>15</u>                              | <u>(10.2)</u> | <u>4</u> | <u>(2.7)</u> | <u>148</u>         | <u>(19.9)</u> |
| TOTAL       | 351       | (47.1)        | 292               | (39.2)        | 71                                     | (9.5)         | 31       | (4.2)        | 745                | (100.0)       |

<sup>a</sup>For mother's occupation, n = 745. This information is available only for questionnaire respondents. All tables using this variable have the same n.

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Table 33 OCCUPATION OF MOTHERS OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Homemaker        |                  | Farmer/Trader    |                 | Teacher/Health<br>or Church Worker |                 | Other          |                |
|-------------|------------------|------------------|------------------|-----------------|------------------------------------|-----------------|----------------|----------------|
|             | Men              | Women            | Men              | Women           | Men                                | Women           | Men            | Women          |
|             | No. (%)          | No. (%)          | No. (%)          | No. (%)         | No. (%)                            | No. (%)         | No. (%)        | No. (%)        |
| 1963-1968   | 73 (47.4)        | 3 (33.4)         | 63 (40.9)        | 4 (44.4)        | 10 (6.5)                           | 1 (11.1)        | 8 (5.2)        | 1 (11.1)       |
| 1969-1972   | 83 (48.8)        | 2 (25.0)         | 70 (41.2)        | 3 (37.5)        | 6 (3.5)                            | 2 (25.0)        | 11 (6.5)       | 1 (12.5)       |
| 1973-1976   | 90 (39.8)        | 15 (50.0)        | 100 (44.3)       | 8 (26.6)        | 31 (13.7)                          | 6 (20.0)        | 5 (2.2)        | 1 (3.3)        |
| 1977-1980   | <u>71 (57.3)</u> | <u>14 (58.3)</u> | <u>38 (30.6)</u> | <u>6 (25.0)</u> | <u>11 (8.9)</u>                    | <u>4 (16.7)</u> | <u>4 (3.2)</u> | <u>0 (0.0)</u> |
| TOTAL       | 317 (47.0)       | 34 (47.9)        | 271 (40.2)       | 21 (29.6)       | 58 (8.6)                           | 13 (18.3)       | 28 (4.2)       | 3 (4.2)        |

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Table 34 OCCUPATION OF MOTHERS OF AFGRAAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | Homemaker        |                  | Farmer/Trader    |                  | Teacher/Health<br>or Church Worker |                | Other          |                |
|-------------|------------------|------------------|------------------|------------------|------------------------------------|----------------|----------------|----------------|
|             | English          | French           | English          | French           | English                            | French         | English        | French         |
|             | No. (%)                            | No. (%)        | No. (%)        | No. (%)        |
| 1963-1968   | 57 (43.5)        | 19 (59.4)        | 60 (45.8)        | 7 (21.9)         | 7 (5.3)                            | 4 (12.5)       | 7 (5.3)        | 2 (6.3)        |
| 1969-1972   | 67 (46.8)        | 18 (51.4)        | 61 (42.7)        | 12 (34.3)        | 4 (2.8)                            | 4 (11.4)       | 11 (7.7)       | 1 (2.9)        |
| 1973-1976   | 60 (34.9)        | 45 (53.6)        | 80 (46.5)        | 28 (33.3)        | 30 (17.4)                          | 7 (8.3)        | 2 (1.2)        | 4 (4.8)        |
| 1977-1980   | <u>46 (36.8)</u> | <u>39 (58.2)</u> | <u>23 (28.4)</u> | <u>21 (31.3)</u> | <u>10 (12.3)</u>                   | <u>5 (7.5)</u> | <u>2 (2.5)</u> | <u>2 (3.0)</u> |
| TOTAL       | 230 (43.6)       | 121 (55.5)       | 224 (42.5)       | 68 (31.2)        | 51 (9.7)                           | 20 (9.2)       | 22 (4.2)       | 9 (4.1)        |

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Table 35 OCCUPATIONS OF MOTHERS OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Eastern     |           |               |               |               |                                    |              |          |              |
|-------------|-----------|---------------|---------------|---------------|------------------------------------|--------------|----------|--------------|
| Time Period | Homemaker |               | Farmer/Trader |               | Teacher/Health<br>or Church Worker |              | Other    |              |
|             | No.       | (%)           | No.           | (%)           | No.                                | (%)          | No.      | (%)          |
| 1963-1968   | 38        | (63.3)        | 19            | (31.7)        | 1                                  | (1.7)        | 2        | (3.3)        |
| 1969-1972   | 34        | (59.6)        | 18            | (31.6)        | 0                                  | (0.0)        | 5        | (8.8)        |
| 1973-1976   | 36        | (56.3)        | 20            | (31.2)        | 7                                  | (11.0)       | 1        | (1.5)        |
| 1977-1980   | <u>16</u> | <u>(59.3)</u> | <u>9</u>      | <u>(33.3)</u> | <u>1</u>                           | <u>(3.7)</u> | <u>1</u> | <u>(3.7)</u> |
| TOTAL       | 124       | (59.6)        | 66            | (31.8)        | 9                                  | (4.3)        | 9        | (4.3)        |

  

| Southern    |           |               |               |               |                                    |               |          |              |
|-------------|-----------|---------------|---------------|---------------|------------------------------------|---------------|----------|--------------|
| Time Period | Homemaker |               | Farmer/Trader |               | Teacher/Health<br>or Church Worker |               | Other    |              |
|             | No.       | (%)           | No.           | (%)           | No.                                | (%)           | No.      | (%)          |
| 1963-1968   | 3         | (42.9)        | 1             | (14.2)        | 3                                  | (42.9)        | 0        | (0.0)        |
| 1969-1972   | 10        | (66.6)        | 4             | (26.7)        | 1                                  | (6.7)         | 0        | (0.0)        |
| 1973-1976   | 24        | (53.3)        | 10            | (22.2)        | 10                                 | (22.2)        | 1        | (2.2)        |
| 1977-1980   | <u>25</u> | <u>(64.1)</u> | <u>9</u>      | <u>(23.1)</u> | <u>4</u>                           | <u>(10.3)</u> | <u>1</u> | <u>(2.5)</u> |
| TOTAL       | 62        | (58.5)        | 24            | (22.6)        | 18                                 | (17.1)        | 2        | (1.8)        |

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Table 35 (continued)

| West Africa/English |           |               |               |               |                                    |               |          |              |
|---------------------|-----------|---------------|---------------|---------------|------------------------------------|---------------|----------|--------------|
| Time Period         | Homemaker |               | Farmer/Trader |               | Teacher/Health<br>or Church Worker |               | Other    |              |
|                     | No.       | (%)           | No.           | (%)           | No.                                | (%)           | No.      | (%)          |
| 1963-1968           | 18        | (26.9)        | 40            | (59.6)        | 4                                  | (6.0)         | 5        | (7.5)        |
| 1969-1972           | 23        | (32.4)        | 39            | (54.9)        | 3                                  | (4.2)         | 6        | (8.5)        |
| 1973-1976           | 11        | (14.5)        | 50            | (65.8)        | 14                                 | (18.4)        | 1        | (1.3)        |
| 1977-1980           | <u>9</u>  | <u>(47.4)</u> | <u>5</u>      | <u>(26.3)</u> | <u>5</u>                           | <u>(26.3)</u> | <u>0</u> | <u>(0.0)</u> |
| TOTAL               | 61        | (26.2)        | 134           | (57.6)        | 26                                 | (11.2)        | 12       | (5.0)        |

  

| Central     |           |               |               |               |                                    |              |          |              |
|-------------|-----------|---------------|---------------|---------------|------------------------------------|--------------|----------|--------------|
| Time Period | Homemaker |               | Farmer/Trader |               | Teacher/Health<br>or Church Worker |              | Other    |              |
|             | No.       | (%)           | No.           | (%)           | No.                                | (%)          | No.      | (%)          |
| 1963-1968   | 8         | (61.5)        | 3             | (23.1)        | 2                                  | (15.4)       | 0        | (0.0)        |
| 1969-1972   | 7         | (41.1)        | 9             | (53.0)        | 1                                  | (5.9)        | 0        | (0.0)        |
| 1973-1976   | 15        | (55.6)        | 10            | (37.0)        | 1                                  | (3.7)        | 1        | (3.7)        |
| 1977-1980   | <u>6</u>  | <u>(42.9)</u> | <u>8</u>      | <u>(57.1)</u> | <u>0</u>                           | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> |
| TOTAL       | 36        | (50.7)        | 30            | (42.3)        | 4                                  | (5.6)        | 1        | (1.4)        |

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Table 36 OCCUPATION OF FATHERS OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Farmer    |               | Educator, Health/<br>Church Worker,<br>Civil Servant |               | Business  |               | Artisan,<br>Semi-skilled,<br>Other |               | Total <sup>a</sup> |               |
|-------------|-----------|---------------|--|---------------|-----------|---------------|------------------------------------|---------------|--------------------|---------------|
|             | No.       | (%)           | No.  | (%)           | No.       | (%)           | No.                                | (%)           | No.                | (%)           |
| 1963-1968   | 60        | (36.6)        | 55   | (33.5)        | 27        | (16.5)        | 22                                 | (13.4)        | 164                | (21.9)        |
| 1969-1972   | 64        | (36.2)        | 61   | (34.4)        | 26        | (14.7)        | 26                                 | (14.7)        | 177                | (23.6)        |
| 1973-1976   | 83        | (31.9)        | 108  | (41.6)        | 38        | (14.6)        | 31                                 | (11.9)        | 260                | (34.6)        |
| 1977-1980   | <u>53</u> | <u>(35.6)</u> | <u>57</u>  | <u>(38.2)</u> | <u>19</u> | <u>(12.8)</u> | <u>20</u>                          | <u>(13.4)</u> | <u>149</u>         | <u>(19.9)</u> |
| TOTAL       | 260       | (34.7)        | 281  | (37.4)        | 110       | (14.7)        | 99                                 | (13.2)        | 750                | (100.0)       |

<sup>a</sup>For father's occupation, n = 750. This information is available only for questionnaire respondents. All tables using this variable have the same n.

Table 37 OCCUPATION OF FATHERS OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Farmer           |                 | Educator, Health/Church<br>Worker, Civil Servant |                 | Business         |                 | Artisan,<br>Semi-Skilled, Other |                 |
|-------------|------------------|-----------------|--|-----------------|------------------|-----------------|---------------------------------|-----------------|
|             | Men              | Women           | Men  | Women           | Men              | Women           | Men                             | Women           |
|             | No. (%)          | No. (%)         | No. (%)  | No. (%)         | No. (%)          | No. (%)         | No. (%)                         | No. (%)         |
| 1963-1968   | 56 (36.1)        | 4 (44.4)        | 51 (32.9)  | 4 (44.4)        | 27 (17.4)        | 0 (0.0)         | 21 (13.6)                       | 1 (11.2)        |
| 1969-1972   | 62 (36.5)        | 2 (28.5)        | 58 (34.1)  | 3 (42.9)        | 25 (14.7)        | 1 (14.3)        | 25 (14.7)                       | 1 (14.3)        |
| 1973-1976   | 80 (34.8)        | 3 (10.0)        | 92 (40.0)  | 16 (53.3)       | 35 (15.2)        | 3 (10.0)        | 23 (10.0)                       | 8 (26.7)        |
| 1977-1980   | <u>47 (37.3)</u> | <u>6 (26.1)</u> | <u>51 (40.5)</u>                                 | <u>6 (26.1)</u> | <u>14 (11.1)</u> | <u>5 (21.7)</u> | <u>14 (11.1)</u>                | <u>6 (26.1)</u> |
| TOTAL       | 245 (36.0)       | 15 (21.8)       | 252 (37.0)                                       | 29 (42.0)       | 101 (14.8)       | 9 (13.0)        | 83 (12.2)                       | 16 (23.2)       |

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Table 38 OCCUPATION OF FATHERS OF AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | Farmer    |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business  |               | Artisan,<br>Semi-Skilled, Other |               |           |               |          |               |           |               |          |               |
|-------------|-----------|---------------|--|---------------|-----------|---------------|---------------------------------|---------------|-----------|---------------|----------|---------------|-----------|---------------|----------|---------------|
|             | English   |               | French   |               | English   |               | French                          |               |           |               |          |               |           |               |          |               |
|             | No.       | (%)           | No.  | (%)           | No.       | (%)           | No.                             | (%)           |           |               |          |               |           |               |          |               |
| 1963-1968   | 52        | (39.7)        | 8  | (24.2)        | 40        | (30.5)        | 15                              | (45.5)        | 21        | (16.0)        | 6        | (18.2)        | 18        | (13.8)        | 4        | (12.1)        |
| 1969-1972   | 55        | (38.7)        | 9  | (25.7)        | 46        | (32.4)        | 15                              | (42.9)        | 21        | (14.8)        | 5        | (14.3)        | 20        | (14.1)        | 6        | (17.1)        |
| 1973-1976   | 55        | (31.8)        | 28   | (32.2)        | 74        | (42.8)        | 34                              | (39.1)        | 20        | (11.5)        | 18       | (20.7)        | 24        | (13.9)        | 7        | (8.0)         |
| 1977-1980   | <u>26</u> | <u>(32.1)</u> | <u>27</u>  | <u>(39.7)</u> | <u>33</u> | <u>(40.7)</u> | <u>24</u>                       | <u>(35.3)</u> | <u>11</u> | <u>(13.6)</u> | <u>8</u> | <u>(11.8)</u> | <u>11</u> | <u>(13.6)</u> | <u>9</u> | <u>(13.2)</u> |
| TOTAL       | 188       | (35.6)        | 72   | (32.3)        | 193       | (36.6)        | 88                              | (39.4)        | 73        | (13.9)        | 37       | (16.6)        | 73        | (13.9)        | 26       | (11.7)        |

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Table 39 OCCUPATION OF FATHERS OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Eastern     |           |               |  |               |          |               |                                 |               |
|-------------|-----------|---------------|--|---------------|----------|---------------|---------------------------------|---------------|
| Time Period | Farmer    |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business |               | Artisan,<br>Semi-Skilled, Other |               |
|             | No.       | (%)           | No.  | (%)           | No.      | (%)           | No.                             | (%)           |
| 1963-1968   | 22        | (36.6)        | 18   | (30.0)        | 10       | (16.7)        | 10                              | (16.7)        |
| 1969-1972   | 26        | (45.6)        | 15   | (26.3)        | 9        | (15.8)        | 7                               | (12.3)        |
| 1973-1976   | 17        | (25.4)        | 30   | (44.8)        | 12       | (17.9)        | 8                               | (11.9)        |
| 1977-1980   | <u>14</u> | <u>(50.0)</u> | <u>5</u>   | <u>(17.9)</u> | <u>5</u> | <u>(17.9)</u> | <u>4</u>                        | <u>(14.2)</u> |
| TOTAL       | 79        | (37.2)        | 68   | (32.1)        | 36       | (17.0)        | 29                              | (13.7)        |

  

| Southern    |          |               |  |               |          |               |                                |               |
|-------------|----------|---------------|--|---------------|----------|---------------|--------------------------------|---------------|
| Time Period | Farmer   |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business |               | Artisan<br>Semi-Skilled, Other |               |
|             | No.      | (%)           | No.  | (%)           | No.      | (%)           | No.                            | (%)           |
| 1963-1968   | 2        | (28.6)        | 5  | (71.4)        | 0        | (0.0)         | 0                              | (0.0)         |
| 1969-1972   | 4        | (28.6)        | 7  | (50.0)        | 1        | (7.1)         | 2                              | (14.3)        |
| 1973-1976   | 9        | (20.0)        | 24   | (53.3)        | 2        | (4.5)         | 10                             | (22.2)        |
| 1977-1980   | <u>9</u> | <u>(23.1)</u> | <u>17</u>  | <u>(43.6)</u> | <u>7</u> | <u>(17.9)</u> | <u>6</u>                       | <u>(15.4)</u> |
| TOTAL       | 24       | (22.9)        | 53   | (50.5)        | 10       | (9.5)         | 18                             | (17.1)        |

Table 39 (continued)

| West Africa/English |          |               |  |               |          |               |                                 |               |
|---------------------|----------|---------------|--|---------------|----------|---------------|---------------------------------|---------------|
| Time Period         | Farmer   |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business |               | Artisan,<br>Semi-Skilled, Other |               |
|                     | No.      | (%)           | No.  | (%)           | No.      | (%)           | No.                             | (%)           |
| 1963-1968           | 28       | (41.8)        | 18   | (26.9)        | 11       | (16.4)        | 10                              | (14.9)        |
| 1969-1972           | 25       | (35.2)        | 24   | (33.8)        | 11       | (15.5)        | 11                              | (15.5)        |
| 1973-1976           | 29       | (38.2)        | 27   | (35.5)        | 11       | (14.5)        | 9                               | (11.8)        |
| 1977-1982           | <u>4</u> | <u>(21.1)</u> | <u>11</u>  | <u>(57.9)</u> | <u>2</u> | <u>(10.5)</u> | <u>2</u>                        | <u>(10.5)</u> |
| TOTAL               | 86       | (36.9)        | 80   | (34.3)        | 35       | (15.0)        | 32                              | (13.8)        |

  

| Central     |          |               |  |               |          |               |                                 |               |
|-------------|----------|---------------|--|---------------|----------|---------------|---------------------------------|---------------|
| Time Period | Farmer   |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business |               | Artisan,<br>Semi-Skilled, Other |               |
|             | No.      | (%)           | No.  | (%)           | No.      | (%)           | No.                             | (%)           |
| 1963-1968   | 2        | (15.4)        | 9  | (69.2)        | 2        | (15.4)        | 0                               | (0.0)         |
| 1969-1972   | 6        | (35.3)        | 5  | (29.4)        | 1        | (5.9)         | 5                               | (29.4)        |
| 1973-1976   | 9        | (31.0)        | 11   | (37.9)        | 7        | (24.2)        | 2                               | (6.9)         |
| 1977-1980   | <u>6</u> | <u>(42.8)</u> | <u>4</u>   | <u>(28.6)</u> | <u>2</u> | <u>(14.3)</u> | <u>2</u>                        | <u>(14.3)</u> |
| TOTAL       | 23       | (31.5)        | 29   | (39.8)        | 12       | (16.4)        | 9                               | (12.3)        |

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Table 39 (continued)

| Time Period | West Africa/French |               |  |               |          |              |                                 |               |
|-------------|--------------------|---------------|--|---------------|----------|--------------|---------------------------------|---------------|
|             | Farmer             |               | Educator, Health/Church<br>Worker, Civil Servant |               | Business |              | Artisan,<br>Semi-Skilled, Other |               |
|             | No.                | (%)           | No.  | (%)           | No.      | (%)          | No.                             | (%)           |
| 1963-1968   | 5                  | (33.3)        | 4  | (26.7)        | 4        | (26.7)       | 2                               | (13.3)        |
| 1969-1972   | 3                  | (17.7)        | 9  | (52.9)        | 4        | (23.5)       | 1                               | (5.9)         |
| 1973-1976   | 19                 | (45.2)        | 16   | (38.1)        | 6        | (14.3)       | 1                               | (2.4)         |
| 1977-1980   | <u>20</u>          | <u>(40.8)</u> | <u>20</u>  | <u>(40.8)</u> | <u>3</u> | <u>(6.1)</u> | <u>6</u>                        | <u>(12.3)</u> |
| TOTAL       | 47                 | (38.2)        | 49   | (39.9)        | 17       | (13.8)       | 10                              | (8.1)         |

Table 40 OCCUPATION OF PARENTS OF AFGRAD FELLOWS BY EDUCATIONAL LEVEL

| Occupation   | None       |               | Some Primary |               |
|--|------------|---------------|--------------|---------------|
|  | No.        | (%)           | No.          | (%)           |
| <b>MOTHER</b>  |            |               |              |               |
| Homemaker  | 208        | (59.8)        | 113          | (32.5)        |
| Farmer/Trader  | 212        | (72.6)        | 59           | (20.2)        |
| Teacher/Health or<br>Church Worker                   | 9          | (13.2)        | 22           | (32.4)        |
| Other  | 11         | (37.9)        | 8            | (27.6)        |
| TOTAL  | <u>440</u> | <u>(59.7)</u> | <u>202</u>   | <u>(27.4)</u> |
| <b>FATHER</b>  |            |               |              |               |
| Farmer   | 177        | (68.6)        | 70           | (27.1)        |
| Educator, Health/<br>Church Worker,<br>Civil Servant | 19         | (7.2)         | 103          | (38.7)        |
| Business   | 46         | (41.8)        | 36           | (32.7)        |
| Artisan,<br>Semi-Skilled,<br>Other                   | 35         | (35.7)        | 40           | (40.8)        |
| TOTAL  | <u>277</u> | <u>(37.9)</u> | <u>249</u>   | <u>(34.0)</u> |

Table 40 (continued)

| Occupation   | Some Secondary |               | Some Post-Sec. |               | Total      |                |
|--|----------------|---------------|----------------|---------------|------------|----------------|
|  | No.            | (%)           | No.            | (%)           | No.        | (%)            |
| <b>MOTHER</b>  |                |               |                |               |            |                |
| Homemaker  | 27             | (7.7)         | 0              | (0.0)         | 348        | (47.2)         |
| Farmer/Trader  | 20             | (6.9)         | 1              | (0.3)         | 292        | (39.6)         |
| Teacher/Health or<br>Church Worker                   | 21             | (30.9)        | 16             | (23.5)        | 68         | (9.2)          |
| Other  | 6              | (20.7)        | 4              | (13.8)        | 29         | (4.0)          |
|  | <u>74</u>      | <u>(10.0)</u> | <u>21</u>      | <u>(2.9)</u>  | <u>737</u> | <u>(100.0)</u> |
| <b>FATHER</b>  |                |               |                |               |            |                |
| Farmer   | 11             | (4.3)         | 0              | (0.0)         | 258        | (35.3)         |
| Educator, Health/<br>Church Worker,<br>Civil Servant | 69             | (25.9)        | 75             | (28.2)        | 266        | (36.3)         |
| Business   | 18             | (16.4)        | 10             | (9.1)         | 110        | (15.0)         |
| Artisan,<br>Semi-Skilled,<br>Other                   | 14             | (14.3)        | 9              | (9.2)         | 98         | (13.4)         |
|  | <u>112</u>     | <u>(15.3)</u> | <u>94</u>      | <u>(12.8)</u> | <u>732</u> | <u>(100.0)</u> |

Table 41 UNDERGRADUATE TRAINING OF AFGRAD FELLOWS BY LOCATION AND TIME PERIOD

| Time Period | Africa     |               | USA/Canada |              | Other     |               | Total <sup>a</sup> |               |
|-------------|------------|---------------|------------|--------------|-----------|---------------|--------------------|---------------|
|             | No.        | (%)           | No.        | (%)          | No.       | (%)           | No.                | (%)           |
| 1963-1968   | 208        | (52.5)        | 155        | (39.2)       | 33        | (8.3)         | 396                | (24.0)        |
| 1969-1972   | 299        | (73.8)        | 71         | (17.5)       | 35        | (8.7)         | 405                | (24.6)        |
| 1973-1976   | 428        | (86.0)        | 34         | (6.8)        | 36        | (7.2)         | 498                | (30.2)        |
| 1977-1980   | <u>292</u> | <u>(83.4)</u> | <u>21</u>  | <u>(6.0)</u> | <u>37</u> | <u>(10.6)</u> | <u>350</u>         | <u>(21.2)</u> |
| TOTAL       | 1,227      | (74.4)        | 281        | (17.0)       | 141       | (8.6)         | 1,649              | (100.0)       |

<sup>a</sup>For location of undergraduate training, n = 1,649. This information is unavailable for 32 AFGRAD fellows (1.9 percent). All tables using this variable have the same n.

Table 42 AFGRAD FELLOWS ATTENDING AMERICAN SCHOOLS AT TIME OF APPLICATION BY TIME PERIOD

| Time Period | Yes      |              | No         |               | Total      |               |
|-------------|----------|--------------|------------|---------------|------------|---------------|
|             | No.      | (%)          | No.        | (%)           | No.        | (%)           |
| 1963-1968   | 140      | (35.4)       | 256        | (64.6)        | 396        | (23.9)        |
| 1969-1972   | 54       | (13.3)       | 353        | (86.7)        | 407        | (24.6)        |
| 1973-1976   | 10       | (2.0)        | 492        | (98.0)        | 502        | (30.4)        |
| 1977-1980   | <u>4</u> | <u>(1.1)</u> | <u>346</u> | <u>(98.9)</u> | <u>350</u> | <u>(21.1)</u> |
| TOTAL       | 208      | (12.6)       | 1,447      | (87.4)        | 1,655      | (100.0)       |

Table 43 UNDERGRADUATE TRAINING OF AFGRAD FELLOWS BY LOCATION, GENDER, AND TIME PERIOD

| Time Period | Africa     |               |           |               | USA/Canada |              |          |              | Other     |               |          |              |
|-------------|------------|---------------|-----------|---------------|------------|--------------|----------|--------------|-----------|---------------|----------|--------------|
|             | Men        |               | Women     |               | Men        |              | Women    |              | Men       |               | Women    |              |
|             | No.        | (%)           | No.       | (%)           | No.        | (%)          | No.      | (%)          | No.       | (%)           | No.      | (%)          |
| 1963-1968   | 202        | (53.4)        | 6         | (33.3)        | 145        | (38.4)       | 10       | (55.6)       | 31        | (8.2)         | 2        | (11.1)       |
| 1969-1972   | 287        | (74.5)        | 12        | (60.0)        | 63         | (16.4)       | 8        | (40.0)       | 35        | (9.1)         | 0        | (0.0)        |
| 1973-1976   | 375        | (85.2)        | 53        | (91.4)        | 32         | (7.3)        | 2        | (3.4)        | 33        | (7.5)         | 3        | (5.2)        |
| 1977-1980   | <u>247</u> | <u>(82.9)</u> | <u>45</u> | <u>(86.5)</u> | <u>17</u>  | <u>(5.7)</u> | <u>4</u> | <u>(7.7)</u> | <u>34</u> | <u>(11.4)</u> | <u>3</u> | <u>(5.8)</u> |
| TOTAL       | 1,111      | (74.0)        | 116       | (78.4)        | 257        | (17.1)       | 24       | (16.2)       | 133       | (8.9)         | 8        | (5.4)        |

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Table 44 UNDERGRADUATE TRAINING OF AFGRAD FELLOWS BY LOCATION, SUB-REGION, AND TIME PERIOD

| Time Period | Eastern          |                 |                 | Southern         |                |                | West Africa/English |                |                |
|-------------|------------------|-----------------|-----------------|------------------|----------------|----------------|---------------------|----------------|----------------|
|             | Africa           | USA/Can.        | Other           | Africa           | USA/Can.       | Other          | Africa              | USA/Can.       | Other          |
|             | No. (%)          | No. (%)         | No. (%)         | No. (%)          | No. (%)        | No. (%)        | No. (%)             | No. (%)        | No. (%)        |
| 1963-1968   | 91 (59.8)        | 58 (38.2)       | 3 (2.0)         | 4 (21.0)         | 14 (73.7)      | 1 (5.3)        | 91 (56.9)           | 51 (31.9)      | 18 (11.2)      |
| 1969-1972   | 108 (77.1)       | 18 (12.9)       | 14 (10.0)       | 10 (50.0)        | 9 (45.0)       | 1 (5.0)        | 137 (78.7)          | 20 (11.5)      | 17 (9.8)       |
| 1973-1976   | 134 (89.9)       | 8 (5.4)         | 7 (4.7)         | 46 (73.0)        | 13 (20.6)      | 4 (6.4)        | 111 (85.4)          | 10 (7.7)       | 9 (6.9)        |
| 1977-1980   | <u>60 (77.9)</u> | <u>9 (10.4)</u> | <u>9 (11.7)</u> | <u>50 (87.7)</u> | <u>5 (8.8)</u> | <u>2 (3.5)</u> | <u>41 (80.4)</u>    | <u>5 (9.8)</u> | <u>5 (9.8)</u> |
| TOTAL       | 393 (75.8)       | 92 (17.8)       | 33 (6.4)        | 110 (69.2)       | 41 (25.8)      | 8 (5.0)        | 380 (73.8)          | 86 (16.7)      | 49 (9.5)       |

  

| Time Period | Central          |                |                | Northern       |                |                | West Africa/French |                |                  |
|-------------|------------------|----------------|----------------|----------------|----------------|----------------|--------------------|----------------|------------------|
|             | Africa           | USA/Can.       | Other          | Africa         | USA/Can.       | Other          | Africa             | USA/Can.       | Other            |
|             | No. (%)          | No. (%)        | No. (%)        | No. (%)        | No. (%)        | No. (%)        | No. (%)            | No. (%)        | No. (%)          |
| 1963-1968   | 12 (42.8)        | 13 (46.4)      | 3 (10.8)       | 6 (46.1)       | 3 (23.1)       | 4 (30.8)       | 4 (19.0)           | 16 (76.2)      | 1 (4.8)          |
| 1969-1972   | 22 (51.2)        | 18 (41.9)      | 3 (6.9)        | 2 (66.7)       | 0 (0.0)        | 1 (33.3)       | 20 (71.5)          | 6 (21.4)       | 2 (7.1)          |
| 1973-1976   | 51 (86.4)        | 2 (3.4)        | 6 (10.2)       | 17 (94.4)      | 1 (5.6)        | 0 (0.0)        | 69 (87.3)          | 0 (0.0)        | 10 (12.7)        |
| 1977-1980   | <u>37 (94.9)</u> | <u>0 (0.0)</u> | <u>2 (5.1)</u> | <u>0 (0.0)</u> | <u>0 (0.0)</u> | <u>0 (0.0)</u> | <u>104 (82.5)</u>  | <u>3 (2.4)</u> | <u>19 (15.1)</u> |
| TOTAL       | 122 (72.2)       | 33 (19.5)      | 14 (8.3)       | 25 (73.5)      | 4 (11.8)       | 5 (14.7)       | 197 (77.6)         | 25 (9.8)       | 32 (12.6)        |

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Table 45 UNDERGRADUATE TRAINING OF AFGRAAD FELLOWS BY LOCATION, LANGUAGE GROUP, AND TIME PERIOD

| Time Period | Africa     |               |            |               | USA/Canada |              |          |              | Other     |              |           |               |
|-------------|------------|---------------|------------|---------------|------------|--------------|----------|--------------|-----------|--------------|-----------|---------------|
|             | English    |               | French     |               | English    |              | French   |              | English   |              | French    |               |
|             | No.        | (%)           | No.        | (%)           | No.        | (%)          | No.      | (%)          | No.       | (%)          | No.       | (%)           |
| 1963-1968   | 185        | (56.4)        | 23         | (33.8)        | 118        | (36.0)       | 37       | (54.4)       | 25        | (7.6)        | 8         | (11.8)        |
| 1969-1972   | 255        | (77.0)        | 44         | (59.5)        | 47         | (14.2)       | 24       | (32.4)       | 29        | (8.8)        | 6         | (8.1)         |
| 1973-1976   | 268        | (84.8)        | 160        | (87.9)        | 31         | (9.8)        | 3        | (1.7)        | 17        | (5.4)        | 19        | (10.4)        |
| 1977-1980   | <u>149</u> | <u>(85.6)</u> | <u>143</u> | <u>(81.3)</u> | <u>15</u>  | <u>(8.6)</u> | <u>6</u> | <u>(3.4)</u> | <u>10</u> | <u>(5.8)</u> | <u>27</u> | <u>(15.3)</u> |
| TOTAL       | 857        | (74.6)        | 370        | (74.0)        | 211        | (18.4)       | 70       | (14.0)       | 81        | (7.0)        | 60        | (12.0)        |

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Table 46 AFGRAD FELLOWS WITH UNDERGRADUATE TRAINING IN THE UNITED STATES OR CANADA BY ASPAU EXPERIENCE AND TIME PERIOD

| Time Period | ASPAU    |               | Other     |               | Total     |              |
|-------------|----------|---------------|-----------|---------------|-----------|--------------|
|             | No.      | (%)           | No.       | (%)           | No.       | (%)          |
| 1963-1968   | 101      | (65.2)        | 54        | (34.8)        | 155       | (55.2)       |
| 1969-1972   | 55       | (77.5)        | 16        | (22.5)        | 71        | (25.2)       |
| 1973-1976   | 13       | (38.2)        | 21        | (61.8)        | 34        | (12.1)       |
| 1977-1980   | <u>6</u> | <u>(28.6)</u> | <u>15</u> | <u>(71.4)</u> | <u>21</u> | <u>(7.5)</u> |
| TOTAL       | 175      | (62.3)        | 106       | (37.7)        | 281       | (100.0)      |

Table 47 ASPAU EXPERIENCE OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Yes       |              | No         |               | Total      |               |
|-------------|-----------|--------------|------------|---------------|------------|---------------|
|             | No.       | (%)          | No.        | (%)           | No.        | (%)           |
| 1963-1972   | 156       | (19.5)       | 646        | (80.5)        | 802        | (48.7)        |
| 1973-1980   | <u>19</u> | <u>(2.3)</u> | <u>825</u> | <u>(97.7)</u> | <u>844</u> | <u>(51.3)</u> |
| TOTAL       | 175       | (10.6)       | 1,471      | (89.4)        | 1,646      | (100.0)       |

Table 48 AFGRAD FELLOWS WITH UNDERGRADUATE TRAINING IN THE UNITED STATES OR CANADA BY ATTENDANCE AT AMERICAN SCHOOLS AT TIME OF APPLICATION AND TIME PERIOD

| Time Period | Yes      |               | No        |               | Total     |              |
|-------------|----------|---------------|-----------|---------------|-----------|--------------|
|             | No.      | (%)           | No.       | (%)           | No.       | (%)          |
| 1963-1968   | 140      | (90.3)        | 15        | (9.7)         | 155       | (55.1)       |
| 1969-1972   | 54       | (76.1)        | 17        | (23.9)        | 71        | (25.3)       |
| 1973-1976   | 10       | (29.4)        | 24        | (70.6)        | 34        | (12.1)       |
| 1977-1980   | <u>4</u> | <u>(19.0)</u> | <u>17</u> | <u>(81.0)</u> | <u>21</u> | <u>(7.5)</u> |
| TOTAL       | 208      | (74.0)        | 73        | (26.0)        | 281       | (100.0)      |

Table 49 PREVIOUS WORK EXPERIENCE OF AFGRAD FELLOWS BY TIME PERIOD

| Time Period | Yes        |               | No        |               | Total <sup>a</sup> |               |
|-------------|------------|---------------|-----------|---------------|--------------------|---------------|
|             | No.        | (%)           | No.       | (%)           | No.                | (%)           |
| 1963-1968   | 223        | (56.7)        | 170       | (43.3)        | 393                | (23.9)        |
| 1969-1972   | 300        | (73.5)        | 108       | (26.5)        | 408                | (24.8)        |
| 1973-1976   | 348        | (70.2)        | 148       | (29.8)        | 496                | (30.1)        |
| 1977-1980   | <u>277</u> | <u>(79.4)</u> | <u>72</u> | <u>(20.6)</u> | <u>349</u>         | <u>(21.2)</u> |
| TOTAL       | 1,148      | (69.7)        | 498       | (30.3)        | 1,646              | (100.0)       |

<sup>a</sup>For previous work experience, n = 1,646. This information is unavailable for 35 AFGRAD fellows (2.1 percent). All tables using this variable have the same n.

Table 50 PREVIOUS WORK EXPERIENCE OF AFGRAD FELLOWS BY GENDER AND TIME PERIOD

| Time Period | Yes        |               |           |               | No        |               |           |               |
|-------------|------------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|
|             | Men        |               | Women     |               | Men       |               | Women     |               |
|             | No.        | (%)           | No.       | (%)           | No.       | (%)           | No.       | (%)           |
| 1963-1968   | 215        | (57.0)        | 8         | (50.0)        | 162       | (43.0)        | 8         | (50.0)        |
| 1969-1972   | 289        | (74.5)        | 11        | (55.0)        | 99        | (25.5)        | 9         | (45.0)        |
| 1973-1976   | 310        | (70.9)        | 38        | (64.4)        | 127       | (29.1)        | 21        | (35.6)        |
| 1977-1980   | <u>236</u> | <u>(79.2)</u> | <u>41</u> | <u>(80.4)</u> | <u>62</u> | <u>(20.8)</u> | <u>10</u> | <u>(19.6)</u> |
| TOTAL       | 1,050      | (70.0)        | 98        | (67.1)        | 450       | (30.0)        | 48        | (32.9)        |

Table 51 PREVIOUS WORK EXPERIENCE OF AFGRAD FELLOWS BY LANGUAGE GROUP AND TIME PERIOD

| Time Period | English    |               |           |              | French     |               |           |               |
|-------------|------------|---------------|-----------|--------------|------------|---------------|-----------|---------------|
|             | Yes        |               | No        |              | Yes        |               | No        |               |
|             | No.        | (%)           | No.       | (%)          | No.        | (%)           | No.       | (%)           |
| 1963-1968   | 201        | (61.8)        | 124       | (38.2)       | 21         | (31.3)        | 46        | (68.7)        |
| 1969-1972   | 270        | (80.8)        | 64        | (19.2)       | 30         | (40.5)        | 44        | (59.5)        |
| 1973-1976   | 280        | (89.2)        | 34        | (10.8)       | 68         | (37.4)        | 114       | (62.6)        |
| 1977-1980   | <u>162</u> | <u>(92.6)</u> | <u>13</u> | <u>(7.4)</u> | <u>116</u> | <u>(66.3)</u> | <u>59</u> | <u>(33.7)</u> |
| TOTAL       | 913        | (79.5)        | 235       | (20.5)       | 235        | (47.2)        | 263       | (52.8)        |

Table 52 PREVIOUS WORK EXPERIENCE OF AFGRAD FELLOWS BY SUB-REGION AND TIME PERIOD

| Time Period | Eastern   |               |          |               | Southern  |               |          |              | West Africa/English |               |          |              |
|-------------|-----------|---------------|----------|---------------|-----------|---------------|----------|--------------|---------------------|---------------|----------|--------------|
|             | Yes       |               | No       |               | Yes       |               | No       |              | Yes                 |               | No       |              |
|             | No.       | (%)           | No.      | (%)           | No.       | (%)           | No.      | (%)          | No.                 | (%)           | No.      | (%)          |
| 1963-1968   | 104       | (68.4)        | 48       | (31.6)        | 4         | (21.1)        | 15       | (78.9)       | 94                  | (58.7)        | 66       | (41.3)       |
| 1969-1972   | 114       | (79.7)        | 29       | (20.3)        | 11        | (55.0)        | 9        | (45.0)       | 145                 | (84.8)        | 26       | (15.2)       |
| 1973-1976   | 114       | (77.6)        | 33       | (22.5)        | 57        | (91.9)        | 5        | (8.1)        | 117                 | (89.3)        | 14       | (10.7)       |
| 1977-1980   | <u>68</u> | <u>(88.3)</u> | <u>9</u> | <u>(11.7)</u> | <u>56</u> | <u>(96.6)</u> | <u>2</u> | <u>(3.4)</u> | <u>47</u>           | <u>(92.2)</u> | <u>4</u> | <u>(7.8)</u> |
| TOTAL       | 400       | (77.1)        | 119      | (22.9)        | 128       | (80.5)        | 31       | (19.5)       | 403                 | (78.6)        | 110      | (21.4)       |

| Time Period | Central   |               |          |               | Northern |              |          |              | West Africa/French |               |           |               |
|-------------|-----------|---------------|----------|---------------|----------|--------------|----------|--------------|--------------------|---------------|-----------|---------------|
|             | Yes       |               | No       |               | Yes      |              | No       |              | Yes                |               | No        |               |
|             | No.       | (%)           | No.      | (%)           | No.      | (%)          | No.      | (%)          | No.                | (%)           | No.       | (%)           |
| 1963-1968   | 8         | (28.6)        | 20       | (71.4)        | 9        | (69.2)       | 4        | (30.8)       | 3                  | (15.0)        | 17        | (85.0)        |
| 1969-1972   | 21        | (48.8)        | 22       | (51.2)        | 2        | (66.7)       | 1        | (33.3)       | 7                  | (25.0)        | 21        | (75.0)        |
| 1973-1976   | 25        | (43.1)        | 33       | (56.9)        | 6        | (33.3)       | 12       | (66.7)       | 29                 | (36.3)        | 51        | (63.8)        |
| 1977-1980   | <u>32</u> | <u>(86.5)</u> | <u>5</u> | <u>(13.5)</u> | <u>0</u> | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> | <u>75</u>          | <u>(59.1)</u> | <u>52</u> | <u>(40.9)</u> |
| TOTAL       | 86        | (51.8)        | 80       | (48.2)        | 17       | (50.0)       | 17       | (50.0)       | 114                | (44.7)        | 141       | (55.3)        |

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Table 53 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF INSTITUTION AND TIME PERIOD

| Time Period | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other     |              | Total <sup>a</sup> |               |
|-------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|-----------|--------------|--------------------|---------------|
|             | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.       | (%)          | No.                | (%)           |
| 1963-1968   | 241                  | (65.1)        | 108                 | (29.2)        | 10                       | (2.7)        | 11        | (3.0)        | 370                | (23.8)        |
| 1969-1972   | 242                  | (63.0)        | 108                 | (28.1)        | 15                       | (3.9)        | 19        | (5.0)        | 384                | (24.6)        |
| 1973-1976   | 290                  | (60.5)        | 126                 | (26.3)        | 35                       | (7.3)        | 28        | (5.9)        | 479                | (30.7)        |
| 1977-1980   | <u>177</u>           | <u>(54.5)</u> | <u>107</u>          | <u>(32.9)</u> | <u>12</u>                | <u>(3.7)</u> | <u>29</u> | <u>(8.9)</u> | <u>325</u>         | <u>(20.9)</u> |
| TOTAL       | 950                  | (61.0)        | 449                 | (28.8)        | 72                       | (4.6)        | 87        | (5.6)        | 1,558              | (100.0)       |

<sup>a</sup>For career plans by kind of institution, n = 1,558. This information is unavailable for 123 AFGRAD fellows (7.3 percent). All tables using this variable have the same n.

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Table 54 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF INSTITUTION, GENDER, AND TIME PERIOD

| Time Period | Education & Research |                  | Gov't. & Parastatal |                  | Banking & Private Sector |                | Other           |                |
|-------------|----------------------|------------------|---------------------|------------------|--------------------------|----------------|-----------------|----------------|
|             | Men                  | Women            | Men                 | Women            | Men                      | Women          | Men             | Women          |
|             | No. (%)              | No. (%)          | No. (%)             | No. (%)          | No. (%)                  | No. (%)        | No. (%)         | No. (%)        |
| 1963-1968   | 231 (65.1)           | 10 (66.6)        | 105 (29.6)          | 3 (20.0)         | 9 (2.5)                  | 1 (6.7)        | 10 (2.8)        | 1 (6.7)        |
| 1969-1972   | 227 (62.0)           | 15 (83.3)        | 105 (28.7)          | 3 (16.7)         | 15 (4.1)                 | 0 (0.0)        | 19 (5.2)        | 0 (0.0)        |
| 1973-1976   | 264 (62.1)           | 26 (48.1)        | 106 (24.9)          | 20 (37.0)        | 28 (6.6)                 | 7 (13.0)       | 27 (6.4)        | 1 (1.9)        |
| 1977-1980   | <u>150 (54.2)</u>    | <u>27 (56.2)</u> | <u>92 (33.2)</u>    | <u>15 (31.2)</u> | <u>9 (3.2)</u>           | <u>3 (6.3)</u> | <u>26 (9.4)</u> | <u>3 (6.3)</u> |
| TOTAL       | 872 (61.3)           | 78 (57.8)        | 408 (28.7)          | 41 (30.4)        | 61 (4.3)                 | 11 (8.1)       | 82 (5.7)        | 5 (3.7)        |

Table 55 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF INSTITUTION, LANGUAGE GROUP, AND TIME PERIOD

| Time Period | Education & Research |                   | Gov't. & Parastatal |                  | Banking & Private Sector |                | Other            |                |
|-------------|----------------------|-------------------|---------------------|------------------|--------------------------|----------------|------------------|----------------|
|             | French               | English           | French              | English          | French                   | English        | French           | English        |
|             | No. (%)              | No. (%)           | No. (%)             | No. (%)          | No. (%)                  | No. (%)        | No. (%)          | No. (%)        |
| 1963-1968   | 26 (44.8)            | 215 (68.9)        | 28 (48.4)           | 80 (25.6)        | 2 (3.4)                  | 8 (2.6)        | 2 (3.4)          | 9 (2.9)        |
| 1969-1972   | 28 (44.5)            | 214 (66.7)        | 21 (33.3)           | 87 (27.1)        | 7 (11.1)                 | 8 (2.5)        | 7 (11.1)         | 12 (3.7)       |
| 1973-1976   | 90 (54.5)            | 200 (63.7)        | 42 (25.5)           | 84 (26.7)        | 21 (12.7)                | 14 (4.5)       | 12 (7.3)         | 16 (5.1)       |
| 1977-1980   | <u>59 (38.5)</u>     | <u>118 (68.6)</u> | <u>65 (42.5)</u>    | <u>42 (24.4)</u> | <u>7 (4.6)</u>           | <u>5 (2.9)</u> | <u>22 (14.4)</u> | <u>7 (4.1)</u> |
| TOTAL       | 203 (46.3)           | 747 (66.8)        | 156 (35.5)          | 293 (26.2)       | 37 (8.4)                 | 35 (3.1)       | 43 (9.8)         | 44 (3.9)       |

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Table 55 (continued)

| Time Period | Northern             |              |                     |              |                          |              |          |              |
|-------------|----------------------|--------------|---------------------|--------------|--------------------------|--------------|----------|--------------|
|             | Education & Research |              | Gov't. & Parastatal |              | Banking & Private Sector |              | Other    |              |
|             | No.                  | (%)          | No.                 | (%)          | No.                      | (%)          | No.      | (%)          |
| 1963-1968   | 6                    | (54.5)       | 5                   | (45.5)       | 0                        | (0.0)        | 0        | (0.0)        |
| 1969-1972   | 1                    | (33.3)       | 1                   | (33.3)       | 0                        | (0.0)        | 1        | (0.0)        |
| 1973-1976   | 10                   | (58.8)       | 7                   | (41.2)       | 0                        | (0.0)        | 0        | (0.0)        |
| 1977-1980   | <u>0</u>             | <u>(0.0)</u> | <u>0</u>            | <u>(0.0)</u> | <u>0</u>                 | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> |
| TOTAL       | 17                   | (54.8)       | 13                  | (41.9)       | 0                        | (0.0)        | 1        | (3.3)        |

  

| Time Period | West Africa/French   |               |                     |               |                          |              |           |               |
|-------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|-----------|---------------|
|             | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other     |               |
|             | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.       | (%)           |
| 1963-1968   | 3                    | (17.6)        | 12                  | (70.6)        | 1                        | (5.9)        | 1         | (5.9)         |
| 1969-1972   | 3                    | (14.3)        | 9                   | (42.9)        | 5                        | (23.8)       | 4         | (19.0)        |
| 1973-1976   | 35                   | (50.0)        | 15                  | (21.4)        | 12                       | (17.2)       | 8         | (11.4)        |
| 1977-1980   | <u>46</u>            | <u>(42.6)</u> | <u>43</u>           | <u>(39.8)</u> | <u>5</u>                 | <u>(4.6)</u> | <u>14</u> | <u>(13.0)</u> |
| TOTAL       | 87                   | (40.3)        | 79                  | (36.6)        | 23                       | (10.6)       | 27        | (12.5)        |

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Table 56 CAREER PLANS OF AFGRAAD FELLOWS BY KIND OF INSTITUTION, SUB-REGION, AND TIME PERIOD

| Eastern     |                      |               |                     |               |                          |              |          |              |
|-------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|----------|--------------|
| Time Period | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other    |              |
|             | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.      | (%)          |
| 1963-1968   | 87                   | (61.3)        | 49                  | (34.5)        | 3                        | (2.1)        | 3        | (2.1)        |
| 1969-1972   | 68                   | (51.1)        | 56                  | (42.1)        | 2                        | (1.5)        | 7        | (5.3)        |
| 1973-1976   | 88                   | (60.7)        | 46                  | (31.7)        | 5                        | (3.5)        | 6        | (4.1)        |
| 1977-1980   | <u>63</u>            | <u>(84.0)</u> | <u>12</u>           | <u>(16.0)</u> | <u>0</u>                 | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> |
| TOTAL       | 306                  | (61.8)        | 163                 | (32.9)        | 10                       | (2.0)        | 16       | (3.3)        |

  

| Southern    |                      |               |                     |               |                          |              |          |              |
|-------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|----------|--------------|
| Time Period | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other    |              |
|             | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.      | (%)          |
| 1963-1968   | 11                   | (57.9)        | 8                   | (42.1)        | 0                        | (0.0)        | 0        | (0.0)        |
| 1969-1972   | 16                   | (80.0)        | 4                   | (20.0)        | 0                        | (0.0)        | 0        | (0.0)        |
| 1973-1976   | 36                   | (58.1)        | 21                  | (33.9)        | 3                        | (4.8)        | 2        | (3.2)        |
| 1977-1980   | <u>37</u>            | <u>(63.8)</u> | <u>17</u>           | <u>(29.3)</u> | <u>2</u>                 | <u>(3.4)</u> | <u>2</u> | <u>(3.4)</u> |
| TOTAL       | 100                  | (62.9)        | 50                  | (31.5)        | 5                        | (3.1)        | 4        | (2.5)        |

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Table 56 (continued)

| West Africa/English |                      |               |                     |               |                          |              |          |               |
|---------------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|----------|---------------|
| Time Period         | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other    |               |
|                     | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.      | (%)           |
| 1963-1968           | 122                  | (77.7)        | 24                  | (15.3)        | 5                        | (3.2)        | 6        | (3.8)         |
| 1969-1972           | 130                  | (77.4)        | 27                  | (16.1)        | 6                        | (3.6)        | 5        | (2.9)         |
| 1973-1976           | 94                   | (72.3)        | 22                  | (16.9)        | 6                        | (4.6)        | 8        | (6.2)         |
| 1977-1980           | <u>24</u>            | <u>(48.0)</u> | <u>18</u>           | <u>(36.0)</u> | <u>3</u>                 | <u>(6.0)</u> | <u>5</u> | <u>(10.0)</u> |
| TOTAL               | 370                  | (73.3)        | 91                  | (18.0)        | 20                       | (4.0)        | 24       | (4.7)         |

  

| Central     |                      |               |                     |               |                          |              |          |               |
|-------------|----------------------|---------------|---------------------|---------------|--------------------------|--------------|----------|---------------|
| Time Period | Education & Research |               | Gov't. & Parastatal |               | Banking & Private Sector |              | Other    |               |
|             | No.                  | (%)           | No.                 | (%)           | No.                      | (%)          | No.      | (%)           |
| 1963-1968   | 12                   | (50.0)        | 10                  | (41.6)        | 1                        | (4.2)        | 1        | (4.2)         |
| 1969-1972   | 24                   | (61.5)        | 11                  | (28.2)        | 2                        | (5.1)        | 2        | (5.1)         |
| 1973-1976   | 27                   | (49.1)        | 15                  | (27.3)        | 9                        | (16.3)       | 4        | (7.3)         |
| 1977-1980   | <u>7</u>             | <u>(20.6)</u> | <u>17</u>           | <u>(50.0)</u> | <u>2</u>                 | <u>(5.9)</u> | <u>8</u> | <u>(23.5)</u> |
| TOTAL       | 70                   | (46.0)        | 53                  | (34.9)        | 14                       | (9.2)        | 15       | (9.9)         |

Table 57 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF WORK AND TIME PERIOD

| Time Period | Teaching<br>& Research |               | Administration<br>& Management |               | Technical<br>Specialist |               | Other     |              | Total <sup>a</sup> |               |
|-------------|------------------------|---------------|--------------------------------|---------------|-------------------------|---------------|-----------|--------------|--------------------|---------------|
|             | No.                    | (%)           | No.                            | (%)           | No.                     | (%)           | No.       | (%)          | No.                | (%)           |
| 1963-1968   | 255                    | (70.1)        | 32                             | (8.8)         | 60                      | (16.5)        | 17        | (4.6)        | 364                | (24.0)        |
| 1969-1972   | 257                    | (67.5)        | 44                             | (11.5)        | 58                      | (15.2)        | 22        | (5.8)        | 381                | (25.1)        |
| 1973-1976   | 301                    | (65.7)        | 59                             | (12.9)        | 73                      | (15.9)        | 25        | (5.5)        | 458                | (30.2)        |
| 1977-1980   | <u>190</u>             | <u>(60.3)</u> | <u>40</u>                      | <u>(12.7)</u> | <u>66</u>               | <u>(21.0)</u> | <u>19</u> | <u>(6.0)</u> | <u>315</u>         | <u>(20.7)</u> |
| TOTAL       | 1,003                  | (66.1)        | 175                            | (11.5)        | 257                     | (16.9)        | 83        | (5.5)        | 1,518              | (100.0)       |

<sup>a</sup> For career plans by kind of institution, n = 1,518. This information is unavailable for 163 AFGRAD fellows (9.7 percent). All tables using this variable have the same n.

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Table 58 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF WORK, GENDER, AND TIME PERIOD

| Time Period | Teaching/Research |                  | Admin./Management |                 | Technical Specialist |                  | Other           |                |
|-------------|-------------------|------------------|-------------------|-----------------|----------------------|------------------|-----------------|----------------|
|             | Men               | Women            | Men               | Women           | Men                  | Women            | Men             | Women          |
|             | No. (%)           | No. (%)          | No. (%)           | No. (%)         | No. (%)              | No. (%)          | No. (%)         | No. (%)        |
| 1963-1968   | 243 (70.0)        | 12 (70.6)        | 31 (9.0)          | 1 (5.9)         | 57 (16.4)            | 3 (17.6)         | 16 (4.6)        | 1 (5.9)        |
| 1969-1972   | 242 (67.1)        | 15 (75.0)        | 42 (11.6)         | 2 (10.0)        | 55 (15.2)            | 3 (15.0)         | 22 (6.1)        | 0 (0.0)        |
| 1973-1976   | 271 (66.7)        | 30 (57.7)        | 51 (12.6)         | 8 (15.4)        | 64 (15.8)            | 9 (17.3)         | 20 (4.9)        | 5 (9.6)        |
| 1977-1980   | <u>162 (60.7)</u> | <u>28 (58.3)</u> | <u>33 (12.3)</u>  | <u>7 (14.6)</u> | <u>56 (21.0)</u>     | <u>10 (20.8)</u> | <u>16 (6.0)</u> | <u>3 (6.3)</u> |
| TOTAL       | 918 (66.5)        | 85 (62.0)        | 157 (11.4)        | 18 (13.1)       | 232 (16.8)           | 25 (18.3)        | 74 (5.3)        | 9 (6.6)        |

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Table 59 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF WORK, LANGUAGE GROUP, AND TIME PERIOD

| Time Period | Teaching/Research |                  | Admin./Management |                  | Technical Specialist |                  | Other          |                 |
|-------------|-------------------|------------------|-------------------|------------------|----------------------|------------------|----------------|-----------------|
|             | English           | French           | English           | French           | English              | French           | English        | French          |
|             | No. (%)           | No. (%)          | No. (%)           | No. (%)          | No. (%)              | No. (%)          | No. (%)        | No. (%)         |
| 1963-1968   | 223 (72.6)        | 32 (56.1)        | 25 (8.1)          | 7 (12.3)         | 45 (14.7)            | 15 (26.3)        | 14 (4.6)       | 3 (5.3)         |
| 1969-1972   | 221 (68.9)        | 36 (60.0)        | 35 (10.9)         | 9 (15.0)         | 47 (14.6)            | 11 (18.3)        | 18 (5.6)       | 4 (6.7)         |
| 1973-1976   | 200 (64.1)        | 101 (69.2)       | 42 (13.4)         | 17 (11.6)        | 52 (16.7)            | 21 (14.4)        | 18 (5.8)       | 7 (4.8)         |
| 1977-1980   | <u>114 (66.7)</u> | <u>76 (52.8)</u> | <u>13 (7.6)</u>   | <u>27 (18.8)</u> | <u>37 (21.6)</u>     | <u>29 (20.1)</u> | <u>7 (4.1)</u> | <u>12 (8.3)</u> |
| TOTAL       | 758 (68.2)        | 245 (60.2)       | 115 (10.4)        | 60 (14.7)        | 181 (16.3)           | 76 (18.7)        | 57 (5.1)       | 26 (6.4)        |

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Table 60 CAREER PLANS OF AFGRAD FELLOWS BY KIND OF WORK, SUB-REGION AND TIME PERIOD

| Eastern     |                       |               |                               |              |                         |               |          |              |
|-------------|-----------------------|---------------|-------------------------------|--------------|-------------------------|---------------|----------|--------------|
| Time Period | Teaching/<br>Research |               | Administration/<br>Management |              | Technical<br>Specialist |               | Other    |              |
|             | No.                   | (%)           | No.                           | (%)          | No.                     | (%)           | No.      | (%)          |
| 1963-1968   | 98                    | (72.1)        | 16                            | (11.8)       | 15                      | (11.0)        | 7        | (5.1)        |
| 1969-1972   | 81                    | (61.8)        | 22                            | (16.8)       | 20                      | (15.3)        | 8        | (6.1)        |
| 1973-1976   | 97                    | (68.8)        | 18                            | (12.8)       | 21                      | (14.9)        | 5        | (3.5)        |
| 1977-1980   | <u>63</u>             | <u>(84.0)</u> | <u>3</u>                      | <u>(4.0)</u> | <u>8</u>                | <u>(10.7)</u> | <u>1</u> | <u>(1.3)</u> |
| TOTAL       | 339                   | (70.2)        | 59                            | (12.2)       | 64                      | (13.3)        | 21       | (4.3)        |

| Southern    |                       |               |                               |              |                         |               |          |              |
|-------------|-----------------------|---------------|-------------------------------|--------------|-------------------------|---------------|----------|--------------|
| Time Period | Teaching/<br>Research |               | Administration/<br>Management |              | Technical<br>Specialist |               | Other    |              |
|             | No.                   | (%)           | No.                           | (%)          | No.                     | (%)           | No.      | (%)          |
| 1963-1968   | 9                     | (47.4)        | 1                             | (5.3)        | 7                       | (36.8)        | 2        | (10.5)       |
| 1969-1972   | 13                    | (65.0)        | 3                             | (15.0)       | 2                       | (10.0)        | 2        | (10.0)       |
| 1973-1976   | 37                    | (60.7)        | 11                            | (18.0)       | 12                      | (19.7)        | 1        | (1.6)        |
| 1977-1980   | <u>34</u>             | <u>(58.6)</u> | <u>4</u>                      | <u>(6.9)</u> | <u>18</u>               | <u>(31.0)</u> | <u>2</u> | <u>(3.5)</u> |
| TOTAL       | 93                    | (58.9)        | 19                            | (12.0)       | 39                      | (24.7)        | 7        | (4.4)        |

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Table 60 (continued)

| West Africa/English |                       |               |                               |               |                         |               |          |              |
|---------------------|-----------------------|---------------|-------------------------------|---------------|-------------------------|---------------|----------|--------------|
| Time Period         | Teaching/<br>Research |               | Administration/<br>Management |               | Technical<br>Specialist |               | Other    |              |
|                     | No.                   | (%)           | No.                           | (%)           | No.                     | (%)           | No.      | (%)          |
| 1963-1968           | 121                   | (76.6)        | 8                             | (5.0)         | 24                      | (15.2)        | 5        | (3.2)        |
| 1969-1972           | 127                   | (74.7)        | 10                            | (5.9)         | 25                      | (14.7)        | 8        | (4.7)        |
| 1973-1976           | 84                    | (63.2)        | 13                            | (9.8)         | 22                      | (16.5)        | 14       | (10.5)       |
| 1977-1980           | <u>24</u>             | <u>(49.0)</u> | <u>6</u>                      | <u>(12.2)</u> | <u>15</u>               | <u>(30.6)</u> | <u>4</u> | <u>(8.2)</u> |
| TOTAL               | 356                   | (69.8)        | 37                            | (7.2)         | 86                      | (16.9)        | 31       | (6.1)        |

  

| Central     |                       |               |                               |               |                         |               |          |               |
|-------------|-----------------------|---------------|-------------------------------|---------------|-------------------------|---------------|----------|---------------|
| Time Period | Teaching/<br>Research |               | Administration/<br>Management |               | Technical<br>Specialist |               | Other    |               |
|             | No.                   | (%)           | No.                           | (%)           | No.                     | (%)           | No.      | (%)           |
| 1963-1968   | 14                    | (60.9)        | 2                             | (8.7)         | 6                       | (26.1)        | 1        | (4.3)         |
| 1969-1972   | 26                    | (70.3)        | 2                             | (5.4)         | 6                       | (16.2)        | 3        | (8.1)         |
| 1973-1976   | 29                    | (70.7)        | 4                             | (9.8)         | 7                       | (17.1)        | 1        | (2.4)         |
| 1977-1980   | <u>11</u>             | <u>(37.9)</u> | <u>3</u>                      | <u>(10.4)</u> | <u>9</u>                | <u>(31.0)</u> | <u>6</u> | <u>(20.7)</u> |
| TOTAL       | 80                    | (61.5)        | 11                            | (8.5)         | 28                      | (21.5)        | 11       | (8.5)         |

Table 60 (continued)

| Time Period | Northern              |              |                               |              |                         |              |          |              |
|-------------|-----------------------|--------------|-------------------------------|--------------|-------------------------|--------------|----------|--------------|
|             | Teaching/<br>Research |              | Administration/<br>Management |              | Technical<br>Specialist |              | Other    |              |
|             | No.                   | (%)          | No.                           | (%)          | No.                     | (%)          | No.      | (%)          |
| 1963-1968   | 7                     | (58.3)       | 1                             | (8.3)        | 4                       | (33.3)       | 0        | (0.0)        |
| 1969-1972   | 2                     | (66.7)       | 1                             | (33.3)       | 0                       | (0.0)        | 0        | (0.0)        |
| 1973-1976   | 11                    | (68.7)       | 1                             | (6.3)        | 4                       | (25.0)       | 0        | (0.0)        |
| 1977-1980   | <u>0</u>              | <u>(0.0)</u> | <u>0</u>                      | <u>(0.0)</u> | <u>0</u>                | <u>(0.0)</u> | <u>0</u> | <u>(0.0)</u> |
| TOTAL       | 20                    | (64.5)       | 3                             | (9.7)        | 8                       | (25.8)       | 0        | (0.0)        |

  

| Time Period | West Africa/French    |               |                               |               |                         |               |          |              |
|-------------|-----------------------|---------------|-------------------------------|---------------|-------------------------|---------------|----------|--------------|
|             | Teaching/<br>Research |               | Administration/<br>Management |               | Technical<br>Specialist |               | Other    |              |
|             | No.                   | (%)           | No.                           | (%)           | No.                     | (%)           | No.      | (%)          |
| 1963-1968   | 6                     | (37.5)        | 4                             | (25.0)        | 4                       | (25.0)        | 2        | (12.5)       |
| 1969-1972   | 8                     | (40.0)        | 6                             | (30.0)        | 5                       | (25.0)        | 1        | (5.0)        |
| 1973-1976   | 43                    | (65.1)        | 12                            | (18.2)        | 7                       | (10.6)        | 4        | (6.1)        |
| 1977-1980   | <u>58</u>             | <u>(55.8)</u> | <u>24</u>                     | <u>(23.1)</u> | <u>16</u>               | <u>(15.3)</u> | <u>6</u> | <u>(5.8)</u> |
| TOTAL       | 115                   | (55.9)        | 46                            | (22.3)        | 32                      | (15.5)        | 13       | (6.3)        |

Table 61 AFGRAD DEGREE PROGRAMS

| Degree                    | No.         | (%)           |
|---------------------------|-------------|---------------|
| Masters Only              | 992         | (59.0)        |
| Doctorates Only           | 347         | (20.6)        |
| Masters and<br>Doctorates | 276         | (16.4)        |
| Still in Program          | 66          | (3.9)         |
|                           | <hr/> 1,681 | <hr/> (100.0) |
| All Masters Degrees       | 1,268       | (75.4)        |
| All Doctorate Degrees     | 623         | (37.1)        |
| Any Degree Program        | 1,615       | (96.1)        |

Table 62 ALL GRADUATE DEGREES: FIELDS OF STUDY

| Field                   | MA    |         | Ph.D |         |
|-------------------------|-------|---------|------|---------|
|                         | No.   | (%)     | No.  | (%)     |
| Agriculture             | 177   | (12.7)  | 112  | (16.0)  |
| Engineering             | 240   | (17.3)  | 103  | (14.7)  |
| Education               | 119   | (8.6)   | 66   | (9.4)   |
| Math/Science            | 161   | (11.6)  | 133  | (19.0)  |
| Economics               | 192   | (13.8)  | 93   | (13.3)  |
| Business                | 189   | (13.6)  | 21   | (3.0)   |
| Health                  | 52    | (3.7)   | 30   | (4.3)   |
| Public Admin/Planning   | 99    | (7.2)   | 35   | (5.0)   |
| Int. Rel./Law/<br>Other | 162   | (11.7)  | 106  | (15.2)  |
| TOTAL                   | 1,391 | (100.0) | 699  | (100.0) |

Table 63 MASTER DEGREES: FIELDS OF STUDY BY LANGUAGE

| Field                      | English |         | French |         | Total |         |
|----------------------------|---------|---------|--------|---------|-------|---------|
|                            | No.     | (%)     | No.    | (%)     | No.   | (%)     |
| Agriculture                | 118     | (12.6)  | 59     | (13.0)  | 177   | (12.7)  |
| Engineering                | 163     | (17.4)  | 77     | (17.0)  | 240   | (17.3)  |
| Education                  | 88      | (9.4)   | 31     | (6.8)   | 119   | (8.6)   |
| Math/Science               | 120     | (12.8)  | 41     | (9.0)   | 161   | (11.6)  |
| Economics                  | 116     | (12.4)  | 76     | (16.7)  | 192   | (13.8)  |
| Business                   | 97      | (10.4)  | 92     | (20.3)  | 189   | (13.6)  |
| Health                     | 37      | (3.9)   | 15     | (3.3)   | 52    | (3.7)   |
| Public Admin/<br>Planning  | 72      | (7.7)   | 27     | (5.9)   | 99    | (7.2)   |
| Int. Rel./Law/126<br>Other |         | (10.8)  | 36     | (19.0)  | 162   | (11.7)  |
| TOTAL                      | 1,254   | (100.0) | 137    | (100.0) | 1,391 | (100.0) |

Table 64 MASTERS DEGREES: FIELD OF STUDY BY GENDER

| Field                     | Males |         | Females |         | Total |        |
|---------------------------|-------|---------|---------|---------|-------|--------|
|                           | No.   | (%)     | No.     | (%)     | No.   | (%)    |
| Agriculture               | 166   | (13.2)  | 11      | (8.0)   | 177   | (12.7) |
| Engineering               | 237   | (18.8)  | 3       | (2.2)   | 240   | (17.3) |
| Education                 | 90    | (7.2)   | 29      | (21.2)  | 119   | (8.6)  |
| Maths & Science           | 144   | (11.5)  | 17      | (12.4)  | 161   | (11.6) |
| Economics                 | 175   | (14.0)  | 17      | (12.4)  | 192   | (13.8) |
| Business                  | 170   | (13.6)  | 19      | (13.9)  | 189   | (13.6) |
| Health                    | 40    | (3.2)   | 12      | (8.8)   | 52    | (3.7)  |
| Public Admin/<br>Planning | 96    | (7.7)   | 3       | (2.2)   | 99    | (7.2)  |
| Int. Rel./Law/<br>Other   | 136   | (10.0)  | 26      | (19.0)  | 162   | (11.7) |
| TOTAL                     | 1,254 | (100.0) | 137     | (100.0) | 1,391 | (100.) |

Table 65 DOCTORAL DEGREES: FIELDS OF STUDY BY LANGUAGE GROUPS

| Field                     | English |         | French |         | Total |        |
|---------------------------|---------|---------|--------|---------|-------|--------|
|                           | No.     | (%)     | No.    | (%)     | No.   | (%)    |
| Agriculture               | 87      | (16.4)  | 25     | (14.8)  | 112   | (16.0) |
| Engineering               | 85      | (16.0)  | 18     | (10.7)  | 103   | (14.7) |
| Education                 | 46      | (8.7)   | 20     | (11.8)  | 66    | (9.4)  |
| Math/Science              | 99      | (18.7)  | 34     | (20.1)  | 133   | (19.0) |
| Economics                 | 60      | (11.3)  | 33     | (19.5)  | 93    | (13.3) |
| Business                  | 19      | (3.6)   | 2      | (1.2)   | 21    | (3.0)  |
| Health                    | 21      | (4.0)   | 9      | (5.3)   | 30    | (4.3)  |
| Public Admin/<br>Planning | 30      | (5.6)   | 35     | (3.0)   | 65    | (5.0)  |
| Int. Rel./Law/<br>Other   | 88      | (15.7)  | 23     | (13.6)  | 106   | (15.2) |
| TOTAL                     | 530     | (100.0) | 199    | (100.0) | 729   | (100.) |

Table 66 DOCTORAL DEGREES: FIELD OF STUDY BY GENDER

| Field                     | Males      |                | Females   |                | Total      |                |
|---------------------------|------------|----------------|-----------|----------------|------------|----------------|
|                           | No.        | (%)            | No.       | (%)            | No.        | (%)            |
| Agriculture               | 109        | (16.3)         | 3         | (10.0)         | 112        | (16.2)         |
| Engineering               | 101        | (15.1)         | 2         | (6.7)          | 103        | (14.9)         |
| Education                 | 58         | (8.7)          | 8         | (26.7)         | 66         | (9.5)          |
| Math/Science              | 124        | (18.5)         | 9         | (39.0)         | 133        | (19.2)         |
| Economics                 | 92         | (13.8)         | 1         | (3.3)          | 93         | (13.4)         |
| Business                  | 21         | (3.1)          | 0         | (0.0)          | 21         | (3.0)          |
| Health                    | 30         | (4.5)          | 0         | (0.0)          | 30         | (4.3)          |
| Public Admin/<br>Planning | 28         | (4.2)          | 1         | (3.3)          | 29         | (4.2)          |
| Int. Rel./Law,<br>Other   | 100        | (14.9)         | 6         | (20.0)         | 106        | (15.3)         |
| <b>TOTAL</b>              | <b>663</b> | <b>(100.0)</b> | <b>30</b> | <b>(100.0)</b> | <b>693</b> | <b>(100.0)</b> |

Table 67 LENGTH OF TIME TO COMPLETE MASTERS DEGREE

| Gender  | Average Months<br>to Completion | Standard<br>Deviation | (n)   |
|---------|---------------------------------|-----------------------|-------|
| Males   | 19.9                            | 10.1                  | 1,012 |
| Females | 19.2                            | 9.3                   | 100   |
| TOTAL   | 19.9                            | 10.0                  | 1,112 |

Table 68 MONTHS TO COMPLETE MASTERS DEGREE BY LANGUAGE GROUP

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| Language Group | Mean | Standard Deviation | (n)   | (%)     |
|----------------|------|--------------------|-------|---------|
| English        | 18.2 | 9.3                | 329   | (70.4)  |
| French         | 23.6 | 10.4               | 783   | (29.6)  |
| TOTAL          | 19.9 | 10.0               | 1,112 | (100.0) |

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Table 69 MONTHS TO COMPLETE MASTERS DEGREE BY FAMILY STATUS

| Family Status   | Mean | Standard Deviation | (n)   | (%)     |
|-----------------|------|--------------------|-------|---------|
| Single          | 20.1 | 9.1                | 775   | (71.0)  |
| Married         | 21.3 | 13.9               | 92    | (8.4)   |
| Married w/child | 18.5 | 10.7               | 225   | (20.6)  |
| TOTAL           | 19.9 | 10.0               | 1,112 | (100.0) |

Table 70 MONTHS TO COMPLETE MASTERS DEGREE BY FIELD OF STUDY

| Field of Study         | Mean | Standard Deviation | (n)   |
|------------------------|------|--------------------|-------|
| Agriculture            | 22.0 | 8.6                | 123   |
| Engineering            | 20.3 | 9.7                | 198   |
| Education              | 15.6 | 7.4                | 105   |
| Math/Science           | 21.2 | 12.2               | 122   |
| Economics              | 22.5 | 13.0               | 148   |
| Business               | 19.0 | 6.3                | 160   |
| Health                 | 20.8 | 12.6               | 38    |
| Social Science         | 19.0 | 9.3                | 50    |
| Humanities             | 17.8 | 8.9                | 70    |
| Misc.                  | 16.5 | 0.7                | 2     |
| Pub. Adm./<br>Planning | 19.6 | 8.2                | 56    |
| Int. Rel./Law          | 14.9 | 11.8               | 28    |
| MD/Vet/DDS             | 19.0 | 7.9                | 12    |
| TOTAL                  | 19.9 | 10.0               | 1,112 |

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Table 71 MONTHS TO COMPLETE DOCTORAL DEGREE BY GENDER

| Gender | Mean | Standard<br>Deviation | (n) | (%)     |
|--------|------|-----------------------|-----|---------|
| Male   | 50.7 | 17.4                  | 458 | (96.2)  |
| Female | 54.9 | 15.0                  | 18  | (3.8)   |
| TOTAL  | 50.9 | 17.3                  | 476 | (100.0) |

Table 72 MONTHS TO COMPLETE DOCTORAL DEGREE BY LANGUAGE GROUP

| Language Group | Mean | Standard Deviation | (n) | (%)     |
|----------------|------|--------------------|-----|---------|
| English        | 49.3 | 17.0               | 372 | (78.2)  |
| French         | 56.3 | 17.7               | 104 | (21.8)  |
| TOTAL          | 50.9 | 17.3               | 476 | (100.0) |

Table 73 MONTHS TO COMPLETE DOCTORAL DEGREE BY FAMILY STATUS

| Family Status   | Mean | Standard Deviation | (n) | (%)     |
|-----------------|------|--------------------|-----|---------|
| Single          | 53.5 | 16.8               | 298 | (63.3)  |
| Married         | 46.4 | 15.0               | 45  | (9.6)   |
| Married w/child | 45.5 | 17.7               | 128 | (27.2)  |
| TOTAL           | 50.9 | 17.3               | 476 | (100.0) |

Table 74 MONTHS TO COMPLETE DOCTORAL DEGREE BY FIELD OF STUDY

| Field of Study         | Mean | Standard Deviation | (n) |
|------------------------|------|--------------------|-----|
| Agriculture            | 51.5 | 16.1               | 73  |
| Engineering            | 53.0 | 17.4               | 63  |
| Education              | 47.9 | 15.9               | 51  |
| Math/Science           | 51.3 | 18.2               | 100 |
| Economics              | 57.8 | 16.4               | 54  |
| Business               | 43.5 | 18.8               | 8   |
| Health                 | 56.0 | 19.4               | 22  |
| Social Sciences        | 50.5 | 18.9               | 30  |
| Humanities             | 45.6 | 15.4               | 20  |
| Pub. Adm./<br>Planning | 55.0 | 16.0               | 21  |
| Int. Rel./Law          | 20.3 | 10.8               | 3   |
| MD/Vet/DNS             | 38.8 | 9.3                | 31  |
| TOTAL                  | 50.9 | 17.3               | 476 |

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Table 75 TYPES OF TOPICS ANALYZED IN ALUMNI THESES

| Topic                                       | No. | (%)    |
|---|-----|--------|
| On African Related Topic                    | 257 | (46.3) |
| On Development Related Topic                | 373 | (67.2) |
| On Content Related to Alumni's Home Country | 368 | (66.3) |
| Number of Thesis Reports                    | 555 | -      |

Table 76 THESIS RESEARCH: PUBLICATIONS AND LOCATION OF RESEARCH

|  | No. | (%)    |
|--|-----|--------|
| Thesis Research Conducted<br>in Home Country | 94  | (16.9) |
| Thesis Research Resulting<br>in Publications | 199 | (35.9) |
| Number of Thesis Reports                     | 555 | -      |

Table 77 RATES OF WITHDRAWAL BY LANGUAGE GROUP

| Language Group                               | English      | French       | Total        |
|--|--------------|--------------|--------------|
| Masters Withdrawals<br>% of Masters Degree   | 41<br>(6.2)  | 39<br>(11.6) | 80<br>(8.1)  |
| Doctoral Withdrawals<br>% of Doctoral Degree | 60<br>(12.5) | 20<br>(13.9) | 80<br>(12.8) |

Table 78 NUMBER OF ALUMNI RETURNING TO AFRICAN COUNTRIES

|                       | No.   | (%)     |
|-----------------------|-------|---------|
| Returned Home         | 1,439 | (89.1)  |
| Did not Return Home * | 176   | (10.9)  |
| Total                 | 1,615 | (100.0) |
| Still in Program      | 66    | -       |

\*Within 6 months of completing entire program, including internships and other Post-academic training. Figures are not available to represent the large number of these students who returned to Africa after more than 6 months.

Table 79 POST-ACADEMIC PROGRAM ACTIVITIES

|   | Completed<br>Master's Only<br>(n=912) |        | Completed<br>Doctorate or<br>Masters and Doctorate<br>(n=518) |        |
|---|---------------------------------------|--------|---|--------|
|   | No.                                   | (%)    | No.   | (%)    |
| Stayed in U.S. After<br>Graduation      | 295                                   | (32.4) | 155   | (29.9) |
| Pursued Other Degrees<br>Outside AFGRAD | 65                                    | (7.1)  | 9   | (1.7)  |
| Practical Training                      | 200                                   | (21.9) | 87  | (16.8) |
| Other Reasons                           | 30                                    | (3.3)  | 59  | (11.4) |
| Continued Studies<br>In Other Country   | 10                                    | (1.1)  | 0   | -      |

Table 80 LOCATION OF CURRENT JOB

| Location                    | No. | (%)     |
|-----------------------------|-----|---------|
| Home Country - Capital      | 420 | (53.7)  |
| Home Country - Regional     | 126 | (16.1)  |
| Home Country - Rural        | 79  | (10.1)  |
| Other African Country       | 48  | (6.1)   |
| Total (African Countries)   | 673 | (86.1)  |
| International Organizations | 22  | (2.8)   |
| Other Locations             | 87  | (11.1)  |
| Total                       | 782 | (100.0) |

Table 81 JOBS OBTAINED AFTER PROGRAM COMPLETION BY TYPE OF INSTITUTION

| Institution                | No.        | (%)            |
|----------------------------|------------|----------------|
| University                 | 354        | (45.4)         |
| Secondary Educ.            | 37         | (4.7)          |
| Other Higher Educ.         | 31         | (4.0)          |
| Research Inst.             | 45         | (5.8)          |
| Govt.-Civil Service        | 141        | (18.1)         |
| Banking Institution        | 30         | (3.8)          |
| Parastatal                 | 53         | (6.8)          |
| International Organization | 27         | (3.5)          |
| Small Private Firm         | 17         | (2.2)          |
| Self-Employed              | 3          | (0.4)          |
| Large Private Firm         | 36         | (4.6)          |
| Other                      | 4          | (0.5)          |
| Unemployed                 | 2          | (0.3)          |
| Total                      | <u>780</u> | <u>(100.0)</u> |
| Unknown                    | 2          | -              |

Table 82 PROBLEMS ENCOUNTERED UPON RETURN TO HOME COUNTRY

| Problems   | No.        | (%)          |
|--|------------|--------------|
| Logistical problems (e.g., delayed or irregular salary payments, finding living accommodations, transportation, etc.)              | 305        | (39)         |
| Difficulty in finding a job that provided an opportunity to use graduate training  | 89         | (11)         |
| Deficiencies in infrastructure for professional work (e.g., heavy teaching load, lack of transportation, lack of research support) | 336        | (43)         |
| Poor acceptance by colleagues and superiors who remained in home country   | 133        | (17)         |
| Re-adjusting to bureaucratic procedures  | 289        | (37)         |
| Re-adjusting to tempo and style of life in home country (hours, meals, etc.)   | 141        | (18)         |
| Re-adjusting to cultural norms and attitudes in home country   | 86         | (11)         |
| Re-adjusting to family expectations  | 117        | (15)         |
| Economic problems  | 133        | (17)         |
| Respondent reports no difficulties or problems   | 125        | (16)         |
| <b>TOTAL</b>   | <b>782</b> | <b>(100)</b> |

Table 83 ARE AFGRAD ALUMNI WORKING IN FIELD IN WHICH THEY WERE TRAINED

|         | No.        | (%)            |
|---------|------------|----------------|
| Yes     | 645        | (84.8)         |
| No      | 116        | (15.2)         |
| Missing | 21         | -              |
| Total   | <u>782</u> | <u>(100.0)</u> |

Table 84 CAREER PATTERNS IN THE 1ST 10 YEARS/INITIAL DISTRIBUTION BY CURRENT INSTITUTION

|   | No. | (%)     |
|---|-----|---------|
| Current Job in Same Institution as First Job        | 173 | (55.1)* |
| Current Job in Different Institution from First Job | 141 | (44.9)  |

\*For this table and subsequent tables in this section, the base upon which the percents are calculated is equal to the valid (non-missing) sample for that item.

Table 85 CURRENT JOB BY INSTITUTION - GIVEN THAT THE FIRST JOB WAS  
IN THE SAME INSTITUTION

| Institution            | Same Institution as First Job |        |
|------------------------|-------------------------------|--------|
|                        | No.                           | (%)    |
| Education/Research     | 127                           | (65.5) |
| Government/Parastatal  | 30                            | (40.0) |
| Banking/Private Sector | 7                             | (23.3) |
| Intl. Organization     | 9                             | (75.0) |

Table 86 KIND OF INSTITUTION FOR FIRST AND CURRENT JOBS OF ALUMNI  
TRAINED IN FIRST TEN YEARS

| Institution             | First Job |         | Current Job |         |
|-------------------------|-----------|---------|-------------|---------|
|                         | No.       | (%)     | No.         | (%)     |
| Education/Research      | 220       | (62.7)  | 185         | (53.0)  |
| Governmental/Parastatal | 82        | (23.4)  | 64          | (18.3)  |
| Banking/Private Sector  | 37        | (10.5)  | 66          | (18.9)  |
| Intl. Organization      | 12        | (3.4)   | 34          | (9.7)   |
| Total                   | 351       | (100.0) | 349         | (100.0) |

Table 87 KIND OF INSTITUTION OF CURRENT JOB BY LANGUAGE GROUP OF ALUMNI TRAINED IN FIRST TEN YEARS

| Current Job Institution | English |        | French |        |
|-------------------------|---------|--------|--------|--------|
|                         | No.     | (%)    | No.    | (%)    |
| Education/Research      | 140     | (56.9) | 24     | (35.3) |
| Government/Parastatal   | 46      | (18.7) | 16     | (23.5) |
| Banking/Private Sector  | 22      | (9.7)  | 25     | (16.5) |
| Intl. Organization      | 8       | (3.5)  | 13     | (8.6)  |

Table 88 LEVEL OF RESPONSIBILITY IN FIRST AND CURRENT JOBS OF ALUMNI TRAINED IN FIRST TEN YEARS

| Level of Responsibility       | First Job |         | Current Job |         |
|-------------------------------|-----------|---------|-------------|---------|
|                               | No.       | (%)     | No.         | (%)     |
| Managerial/<br>Administrative | 60        | (20.0)  | 162         | (52.3)  |
| Professional/<br>Technical    | 240       | (80.0)  | 148         | (47.7)  |
| Total                         | 300       | (100.0) | 310         | (100.0) |

Table 89 LEVEL OF RESPONSIBILITY IN CURRENT JOBS BY LANGUAGE GROUP OF ALUMNI TRAINED IN FIRST TEN YEARS

| Level of Responsibility       | English |         | French |         |
|-------------------------------|---------|---------|--------|---------|
|                               | No.     | (%)     | No.    | (%)     |
| Managerial/<br>Administrative | 126     | (51.4)  | 44     | (64.7)  |
| Professional/<br>Technical    | 119     | (48.6)  | 24     | (35.3)  |
| Total                         | 245     | (100.0) | 68     | (100.0) |

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Table 90 LEVEL OF RESPONSIBILITY IN CURRENT JOB BY TYPE OF DEGREE  
OF ALLMNI TRAINED IN FIRST TEN YEARS

| Level of<br>Responsibility    | Masters Only |         | Doctorate |         |
|-------------------------------|--------------|---------|-----------|---------|
|                               | No.          | (%)     | No.       | (%)     |
| Managerial/<br>Administrative | 97           | (62.2)  | 59        | (45.7)  |
| Professional/<br>Technical    | 59           | (37.8)  | 70        | (54.3)  |
| Total                         | 156          | (100.0) | 129       | (100.0) |

Table 91 FELLOWS PARTICIPATION IN RESEARCH PROJECTS BY CHARACTERISTIC

| Category                      | No.<br>in Category | % in Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 188                | (60.5)        |
| Professional/<br>Technical    | 278                | (72.6)        |
| Males                         | 419                | (66.8)        |
| Females                       | 47                 | (70.1)        |
| English                       | 366                | (74.9)        |
| French                        | 100                | (48.8)        |
|                               | —                  | —             |
| Total                         | 466                | (67.2)        |

Table 92 FELLOWS WHO DIRECTED RESEARCH EFFORTS

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 142                | (45.7)        |
| Professional/<br>Technical    | 159                | (41.5)        |
| Males                         | 285                | (45.5)        |
| Females                       | 16                 | (23.9)        |
| English                       | 243                | (49.7)        |
| French                        | 58                 | (28.3)        |
| Total                         | 301                | (43.4)        |

Table 93 FELLOWS WHO SUBMITTED PROPOSALS FOR RESEARCH

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 133                | (42.8)        |
| Professional/<br>Technical    | 210                | (54.8)        |
| Males                         | 317                | (50.6)        |
| Females                       | 26                 | (38.8)        |
| English                       | 273                | (55.8)        |
| French                        | 70                 | (34.2)        |
| Total                         | 343                | (49.4)        |

Table 94 FELLOWS WHO WERE PUBLISHED IN A PROFESSIONAL JOURNAL

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 120                | (38.6)        |
| Professional/<br>Technical    | 175                | (45.7)        |
| Males                         | 282                | (45.5)        |
| Females                       | 13                 | (19.4)        |
| English                       | 249                | (50.9)        |
| French                        | 46                 | (22.4)        |
| Total                         | 295                | (42.5)        |

Table 95 FELLOWS WHO DEVELOPED OR REVISED POLICIES IN GOVERNMENT,  
UNIVERSITY, OR BUSINESS

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 207                | (66.8)        |
| Professional/<br>Technical    | 205                | (53.7)        |
| Males                         | 382                | (61.1)        |
| Females                       | 30                 | (44.8)        |
| English                       | 316                | (64.9)        |
| French                        | 96                 | (46.8)        |
| Total                         | 412                | (59.5)        |

Table 96 FELLOWS WHO INITIATED NEW SERVICES OR PROGRAMS

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 162                | (52.1)        |
| Professional/<br>Technical    | 156                | (47.9)        |
| Males                         | 293                | (46.8)        |
| Females                       | 25                 | (37.3)        |
| English                       | 226                | (46.3)        |
| French                        | 92                 | (44.9)        |
| Total                         | 318                | (45.9)        |

Table 97 FELLOWS WHO DEVELOPED AND PRESENTED A NEW COURSE

| Category                      | No.<br>in Category | % of Category |
|-------------------------------|--------------------|---------------|
| Managerial/<br>Administrative | 164                | (52.7)        |
| Professional/<br>Technical    | 231                | (60.5)        |
| Males                         | 364                | (58.1)        |
| Females                       | 31                 | (46.3)        |
| English                       | 297                | (60.9)        |
| French                        | 98                 | (47.8)        |
| Total                         | 395                | (57.0)        |

Table 98 ALUMNI NETWORKING DURING PAST YEAR

|   | No.        | (%)            |
|---|------------|----------------|
| Worked with AFGRAD Fellows from home country  | 166        | (21.2)         |
| Wrote letters to American professors regarding professional matters                         | 402        | (51.1)         |
| Received letters from American professors regarding professional matters                    | 399        | (51.0)         |
| Wrote letters to American graduate students regarding professional matters                  | 171        | (21.9)         |
| Received letters from American graduate students regarding professional matters             | 170        | (21.9)         |
| Wrote letters to graduate students from other countries regarding professional matters      | 186        | (21.8)         |
| Received letters from graduate students from other countries regarding professional matters | 189        | (23.6)         |
| Wrote letters to American friends   | 556        | (71.1)         |
| Received letters from American friends  | 549        | (70.1)         |
| Received correspondence from American universities  | 495        | (63.3)         |
| <b>Total</b>  | <b>782</b> | <b>(100.0)</b> |

Table 99 ALUMNI NETWORKING SINCE PROGRAM ENDED

|  | No. | (%)   |
|--|-----|-------|
| Worked in professional capacity with AFGRAD Fellows from other countries   | 102 | (13)  |
| Arranged for a professor from your American university to visit your home country in a professional capacity     | 104 | (13)  |
| Arranged for a nonacademic colleague to visit your home country in a professional capacity                       | 96  | (12)  |
| Arranged for fellow American graduate students to visit your home country in a professional capacity             | 73  | (9)   |
| Arranged for fellow graduate students from other countries to visit your home country in a professional capacity | 85  | (11)  |
| Visited with American friends who were visiting your home country for either personal or professional reasons    | 370 | (47)  |
| Engaged in research and /or publication activities with professors from your American professors                 | 180 | (23)  |
| Engaged in research and /or publication activities with fellow American graduate students                        | 78  | (10)  |
| Engaged in research and /or publication activities with fellow graduate students from other countries            | 121 | (15)  |
| Met professors and fellow graduate students from your American university at conferences                         | 234 | (30)  |
| Visited the U.S. for professional reasons  | 267 | (34)  |
| Total  | 782 | (100) |

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Table 100 KIND OF CONTACTS WITH USAID IN FELLOWS' HOME COUNTRY

| Kind of Contact  | No. | (%)     |
|--|-----|---------|
| Provided professional/technical advice                           | 92  | (11.8)  |
| Received funds for research                                      | 77  | (9.8)   |
| Received travel funds  | 93  | (11.9)  |
| Consulted for USAID in home country                              | 110 | (14.1)  |
| Consulted for USAID in another African country                   | 53  | (6.8)   |
| Invited to social receptions                                     | 209 | (26.7)  |
| Invited to special events  | 166 | (21.2)  |
| Received funds to organize workshops or seminars in home country | 78  | (10.0)  |
| Developed friendships with staff members                         | 208 | (26.6)  |
| Other  | 59  | (7.5)   |
| Total  | 732 | (100.0) |

Table 101 WHAT KIND OF CONTACTS WOULD ALUMNI LIKE TO HAVE WITH USAID  
IN THE FUTURE

|   | No. | (%)     |
|---|-----|---------|
| Provide informal professional/technical advice to USAID office            | 371 | (47.4)  |
| Receive funds for research  | 403 | (51.3)  |
| Receive funds to travel to another country to attend professional meeting | 452 | (57.8)  |
| Consult for USAID in your home country                                    | 344 | (43.4)  |
| Consult for USAID in another African country                              | 224 | (28.6)  |
| Receive invitations to social events                                      | 279 | (35.7)  |
| Receive invitations to special events                                     | 345 | (44.1)  |
| Receive funds to organize workshops or seminars in your home country      | 376 | (48.1)  |
| Develop friendships with staff members                                    | 355 | (45.4)  |
| Total   | 782 | (100.0) |

## APPENDIX 2: Interviews

### Objectives:

The data under review in this appendix section were collected during a series of visits to five African countries, each of which represents one of the previously categorized regions or sub-regions of East, North, West (Anglophone and Francophone), Central and Southern Africa. The interviewer selected the particular countries in question to verify longitudinal trends noted within the AFGRAD program, because each of them has participated continually since the inception of the program. In addition, each of these countries had a significant number of AFGRAD participants (at least 45) and each of them included women.

Of the total of 104 interviews, 73 focused on AFGRAD alumni; the remaining 31 were with African government officials, USAID officials, AAI Representatives and others too diverse to classify in any single separate category (Tables 1 and 2). Although only eight women were interviewed, this was roughly 25% of the total female representation from the five countries in question.

The major constraint encountered was the difficulty of contacting and meeting AFGRAD alumni outside the major urban centers. Thus, the sample could not be totally representative, as it concentrated on those working and living in or near the capital city and it ignored those alumni in rural areas.

A second constraint concerned the objective of interviewing supervisors of AFGRAD alumni. In the first place, most AFGRAD alumni were so highly placed in their respective institutions that they were the supervisors. And in the second place, the notion of having easy access to a "supervisor" is essentially a western one that conflicts with African reality. In some countries, a supervisor can easily have a lower social status than the person being supervised, which automatically makes any meaningful commentary impossible. What is more, for all its immense variety, African culture as a whole generally discourages public criticism or commentary of the sort looked for in an interview. Simply put, it was socially awkward for supervisors to offer any observation. This explains the absence of such interviews in our sample.

Methodology:

The people interviewed were asked a long and rather complex series of questions, which we list at the end of this section. We divided the questions according to the target groups of AFGRAD alumni and the various other groups referred to above. All those interviewed were questioned in terms of the basic study questions asked by AID. The purpose was to verify as closely as possible the information obtained from the basic database of alumni files and questionnaires. By correlating the interview responses with those of the questionnaire and information from student files, AAI has been able to corroborate

the findings of the study.

As with the questionnaire, the interview questions were designed to provide interpretive and often non-quantifiable responses to the basic study questions. Some questions, such as number 11, were divided into categories of response: highly satisfactory, satisfactory, somewhat satisfactory, unsatisfactory. At other times, some questions with multiple subsets have been collapsed into one.

### Results:

It came as no surprise to the study authors that the interviews mirrored the broad range of responses of the study. Most AFGRAD alumni revealed themselves to be in positions of responsibility and had drawn upon their training to accede to even higher levels of responsibility than their training might have originally suggested. These alumni expressed strong approval of the AFGRAD program and also pointed to areas of frustration involving the implementation of policy.

Women found greater difficulty than men in using their training. Traditional resistance to women occupying roles of authority, at least within a non-traditional public context, was their major complaint. In spite of that resistance, women were increasingly recognized within their professional contexts as equal to their male colleagues.

Nearly all alumni would have liked more of a link with USAID,

especially in terms of applying their professional skills to areas outside of or beyond their immediate areas of responsibility. This interest was strong enough to be a major point of agreement among alumni about opportunities that had not been fully explored.

Finally, the interviews confirmed the broad and deep sense of satisfaction with the AFGRAD program felt by most participants.

Interview Questions:

A. AFGRAD Alumni

1. Brief description of career development since AFGRAD (positions, institutions, additional training, AFGRAD degree).
2. Have you been placed in positions for which you have been prepared by your AFGRAD training?
3. Did your AFGRAD training give you knowledge and skills that have been useful to you in your professional positions? How relevant are the knowledge and skill to your working conditions here? What constraints/difficulties do you face in trying to adapt what you have learned to your working conditions here?
4. Describe your three most substantial accomplishments since AFGRAD. Why do you consider these

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substantial/important?

5. To what extent have you been involved in formulating policies, procedures, long-term plans in your position? Give examples.
6. In addition to the above, have you been involved in any other ways in strengthening the institutions in which you work or have worked? Give examples.
7. Have you been engaged in any research since your return? What kind, for whom, what publications?
8. Have you undertaken any consultancies for other agencies here or in other countries? Describe and give examples.
9. Have you represented your government/institution at international meetings? What kind, when, describe, give examples.
10. What factors make it difficult to carry out your professional responsibilities? Describe and give examples.
11. What kinds of satisfaction do you find in your professional work? Describe.
12. Besides professional knowledge/skills, are there other aspects of your experience in the United States that

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you value? Did you learn other things that have been useful to you since your return? Describe and give examples.

13. Besides your job, are you involved in other kinds of professional activities (professional associations, boards, or other groups)? Describe.
14. How do you compare yourself to your colleagues who have not gone abroad for training in relation to: opportunities for professional responsibilities/advancement; economic rewards; social status? Are you better off, the same, less well off?
15. If all goes as you plan, what do you expect to be doing in five years? (Position, institution, responsibilities)
16. Have you maintained contact with other AFGRAD alumni here or in other countries? How often do you see them and in what context? (Professional, personal, both)
17. Have you had much contact with AAI since your return? Would you like more? What kind? In what ways could AAI support your professional work, especially when you first return home?
18. Why have so few women been selected for AFGRAD? Give

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as many reasons as you think relevant. Which are most important?

(FOR WOMEN ONLY):

19. Is this pattern changing? How? In what fields?  
Should it be changed? What role might AAI play?
  20. Was your readjustment (personal/professional) here after AFGRAD easier/more difficult than for male alumni? Explain.
  21. What problems (personal/professional) do women here face when they have high aspirations for professional advancement?
  22. Have your views about women and their roles in society changed because of your experience in the United States? How? Are these views accepted here?
- B. Officials, AAI Country Representatives, Others:
1. Have you had any involvement in AFGRAD? What; when; describe.
  2. What role have AFGRAD and other overseas (graduate-level) scholarships played here over the years in training high-level manpower? What have been their major contributions? Is there anything that makes AFGRAD unique?
  3. What have been the disadvantages of AFGRAD and other

overseas graduate-level scholarships? Any unique to AFGRAD?

4. How does the government here determine how many people should be trained beyond the Bachelor's level? By fields? In what areas will the needs be most critical in the next 5-10 years?
5. What proportion of the training (graduate-level) is done here or in the region? What countries offer graduate-level training opportunities? Fields? Are opportunities increasing/decreasing?
6. In comparison to people with local graduate-level training, do those with overseas training have greater, the same, or fewer opportunities for: professional responsibilities/advancement; economic rewards; social status?
7. Is the "Brain Drain" a serious concern/problem here? Are there any data on its proportions? Does it seem to be increasing/decreasing? What seem to be the major reasons for it? What efforts, if any, are being made to reduce it? Are nationals working in international organizations considered part of the "Brain Drain" problem?
8. What advice do you have for AAI regarding: emphasis on MA or Ph.D degrees; variety of fields vs. small number

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of fields; individuals from many institutions vs. selected institutions; role for AAI in support to alumni upon their return; role for AAI in development of local institutions?

9. Why have so few women been selected for AFGRAD and other overseas scholarships? Is the pattern changing? How can it be changed? Role for AAI?

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TABLE 1

AFGRAD Alumni by Interviews and Time Period

|           | <u>Interviewed</u> |          | <u>Total</u> |          |
|-----------|--------------------|----------|--------------|----------|
|           | <u>No.</u>         | <u>%</u> | <u>No.</u>   | <u>%</u> |
| 1963-1968 | 12                 | (16.4)   | 389          | (25.8)   |
| 1969-1972 | 18                 | (24.7)   | 404          | (26.8)   |
| 1973-1976 | 28                 | (38.4)   | 485          | (32.1)   |
| 1977-1980 | 15                 | (20.5)   | 230          | (15.3)   |
| TOTAL     | 73                 | (100.0)  | 1,508        | (100.0)  |

TABLE 2

Other Interviews by Kind of Person and Country

|                     | <u>African Govt</u> |          | <u>USAID</u> |          | <u>AAI</u> |          | <u>Other</u> |          | <u>Total</u> |          |
|---------------------|---------------------|----------|--------------|----------|------------|----------|--------------|----------|--------------|----------|
|                     | <u>No.</u>          | <u>%</u> | <u>No.</u>   | <u>%</u> | <u>No.</u> | <u>%</u> | <u>No.</u>   | <u>%</u> | <u>No.</u>   | <u>%</u> |
| <u>Cameroon</u>     | 1                   | (25)     | 2            | (50)     | 1          | (25)     | -            | -        | 4            | (13.3)   |
| <u>Mali</u>         | 2                   | (50)     | 1            | (25)     | 1          | (25)     | -            | -        | 4            | (13.3)   |
| <u>Sierra Leone</u> | 2                   | (25)     | 2            | (25)     | 1          | (12.5)   | 3            | (37.5)   | 8            | (26.7)   |
| <u>Tanzania</u>     | 3                   | (37.5)   | 2            | (25)     | 1          | (12.5)   | 2            | (25)     | 8            | (26.7)   |
| <u>Zambia</u>       | 1                   | (16.7)   | 2            | (33.3)   | 1          | (16.7)   | 2            | (33.3)   | 6            | (20)     |
| <u>Total</u>        | 9                   | (30.0)   | 9            | (30.0)   | 5          | (16.7)   | 7            | (23.3)   | 30           | (100)    |

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Name \_\_\_\_\_  
Mailing \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# STUDY OF AFGRAD ALUMNI

Dear AFGRAD Alumni:

*The African-American Institute has initiated a study to learn more about how our AFGRAD Alumni have used their graduate training to contribute to the development of African institutions. An additional purpose of the study is to determine how AFGRAD and other similar training programs might be improved.*

*We will be contacting all AFGRAD Alumni—some 1,400 men and women from over 30 African countries—to seek the widest possible participation in this study. As an AFGRAD Alumnus, we know you will have a special interest in our efforts and in the results. Your participation is vital to the study's success. In particular, we would be very grateful for your completion of this questionnaire.*

*Please be assured of the confidentiality with which your completed questionnaire will be treated. Your individual responses to the questionnaire will be analyzed as part of the aggregate data of the study. The form itself will remain a part of the AFGRAD/AAI archives, available to AFGRAD/AAI staff only.*

*I am pleased to inform you that AFGRAD is now in its 20th year of operations. At present, we have 230 Fellows studying in universities across the United States. The most popular fields of study for our current Fellows include agriculture, economics, business administration, engineering and education.*

*Many of you will remember some of AAI's staff members who are now responsible for AFGRAD operations. AFGRAD is directed by Heather Monroe. Gail Baker and Cynthia Wise manage the placement activities for students from, respectively, English-speaking and French-speaking countries. Aice Robinson, Susan Votaw and Elizabeth Ward administer the office of student counseling services; and David Hendricks manages student financial matters.*

*Thank you in advance for your participation in the study. A summary of the results will be sent to you upon its completion.*

*All best wishes.*

Sincerely,

A handwritten signature in black ink, appearing to read 'Calvin H. Raullerson'.

Calvin H. Raullerson  
Vice President and  
Director, Division of Education

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# Instructions for Questionnaire

- Please complete your name and current mailing address on the cover
- Please use blue or black ink to fill out the questionnaire and write as legibly as possible.
- Please read each question completely before providing an answer. Some of the questions or items are similar.
- Please answer **all** questions. Most questions have specific instructions.
- You will find three types of questions

(1) Questions with numbers to indicate the answer. These should be answered by circling the appropriate **number**. It is important that your circle be complete and not overlap another number.

For example:

Is your present job in the same field for which you were trained under the AFGRAD program?

**PLEASE CIRCLE ONE ANSWER.**

|     |   |
|-----|---|
| Yes | 1 |
| No  | 2 |

Please do not circle more than one number for each question, **unless otherwise instructed**

(2) Questions that require you to supply a number or a name in the space provided.

For example:

Since completing your AFGRAD program, estimate the number of times you:

**PLEASE GIVE  
A NUMBER  
FOR EACH ITEM.**

|                         |       |
|-------------------------|-------|
| Gave a lecture .....    | _____ |
| Completed a study ..... | _____ |

(3) Essay questions for which you are to supply an answer in your own words.

For example:

Besides acquiring new knowledge and skills, were there any other benefits from your AFGRAD experience in the United States? **PLEASE EXPLAIN**

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- If you wish to respond to the essay questions in French, please feel free to do so.
- If your answer is longer than the space provided on the questionnaire, please continue it in the space provided at the end of the questionnaire. If even more space is needed, please use a sheet of paper to be attached to the back of the questionnaire. Be sure to indicate the number of the item for which the addendum is a continuation.

**I. JOB HISTORY**

1. What is your **present** job?

Title of position \_\_\_\_\_

Name of institution \_\_\_\_\_

Number of years in position \_\_\_\_\_

2. In what kind of institution is your present job located?

**PLEASE CIRCLE ONE ANSWER.**

- University ..... 1
- Secondary level educational institution ..... 2
- Other kind of educational institution ..... 3
- Research institution ..... 4
- Central government office ..... 5
- Regional or provincial government office ..... 6
- Local government office ..... 7
- Parastatal organization ..... 8
- International organization ..... 9
- Private firm ..... 10
- Self-employed ..... 11
- Other (Specify) \_\_\_\_\_ 12

3. Where is your present job?

**PLEASE CIRCLE ONE ANSWER.**

- Home country, capital city ..... 1
- Home country, regional or provincial center ..... 2
- Home country, small town or rural area ..... 3
- Other African country (Specify) \_\_\_\_\_ 4
- Other location (Specify) \_\_\_\_\_ 5

4. Is your present job in the same field for which you were trained under the AFGRAD program?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

a) **IF NO**, Please explain:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. What was your **first** full-time job after completing your AFGRAD program?

Title of position \_\_\_\_\_

Name of institution \_\_\_\_\_

Number of years in that position \_\_\_\_\_

6. In what kind of institution was your first full-time job after AFGRAD?

PLEASE CIRCLE ONE ANSWER.

- University ..... 1
- Secondary level educational institution ..... 2
- Other kind of educational institution ..... 3
- Research institution ..... 4
- Central government office ..... 5
- Regional or provincial government office ..... 6
- Local government office ..... 7
- Parastatal organization ..... 8
- International organization ..... 9
- Private firm ..... 10
- Self-employed ..... 11
- Other (Specify) \_\_\_\_\_ 12

7. Where was your first full-time job after AFGRAD?

PLEASE CIRCLE ONE ANSWER.

- Home country, capital city ..... 1
- Home country, regional or provincial center ..... 2
- Home country, small town or rural area ..... 3
- Other African country ..... 4
- Other (Specify) \_\_\_\_\_ 5

8. Was your first full-time job after AFGRAD the position for which you had been nominated before beginning the program?

PLEASE CIRCLE ONE ANSWER.

- Yes ..... 1
- No ..... 2

a) IF NO, Please explain:

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9. To what extent did your first full-time job after AFGRAD give you an opportunity to use your AFGRAD graduate training?  
**PLEASE EXPLAIN.**

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**II. PROFESSIONAL EXPERIENCE**

12. Since completing your AFGRAD program, estimate the number of times you have engaged in the following activities, either alone or in collaboration with colleagues.
- PLEASE GIVE A NUMBER FOR EACH ITEM.**
- Developed or revised a policy in a government institution, university or business .....
  - Developed or revised operating procedures in a government institution, university or business .....
  - Developed and presented a new course .....
  - Participated in inter-agency planning committees .....
  - Initiated a new service or program .....
  - Raised standards of products or services provided .....
  - Improved or expanded extension programs .....

13. Since completing your AFGRAD program, estimate the number of times you have engaged in the following activities.
- PLEASE GIVE A NUMBER FOR EACH ITEM.**
- Planned a workshop or seminar for professional colleagues .....
  - Participated in a workshop, seminar or conference with professional colleagues in home country .....
  - Participated in a workshop, seminar or conference outside home country .....
  - Served as a consultant for your own government .....
  - Served as a consultant for an international agency .....
  - Served as a consultant for a private firm .....

14. Since completing your AFGRAD program, estimate the number of times you have engaged in the following activities, either alone or in collaboration with colleagues.
- PLEASE GIVE A NUMBER FOR EACH ITEM.**
- Directed research for a government agency, university or business .....
  - Participated in research activities .....
  - Submitted proposals for research funding .....
  - Published an original article in a professional journal .....
  - Published a book review in a professional journal .....
  - Published a book or monograph .....
  - Published works (including translations) used as teaching materials .....

15. Are you a member of any professional organizations or associations?
- PLEASE CIRCLE AS MANY AS APPLY.**
- Based in your home country ..... 1
  - Based in another African country ..... 2
  - Based in the United States ..... 3
  - Based elsewhere ..... 4
  - No professional memberships ..... 5

16. Are you an officer of any professional organization or association?
- PLEASE CIRCLE ONE ANSWER.**
- Yes ..... 1
  - No ..... 2

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17. Do you have access to professional journals?

PLEASE CIRCLE AS MANY AS APPLY.

- Published in your home country ..... 1
- Published in another African country ..... 2
- Published in the United States ..... 3
- Published elsewhere ..... 4
- Very limited access to journals ..... 5
- No access to journals ..... 6

18. Since AFGRAD have you experienced major constraints or problems in carrying out your job tasks and responsibilities?

(In Column 1, please circle **all** the areas in which you have had problems.  
In Column 2, please circle the **three** areas in which you have had the most serious problems.)

|  | <u>COLUMN 1</u><br>(Circle <b>all</b><br>problem areas) | <u>COLUMN 2</u><br>(Circle <b>three</b><br>most serious<br>problem areas) |
|--|---|---|
| Equipment and supplies .....   | 1   | 1   |
| Transportation for job-related travel .....  | 2   | 2   |
| Funds for research .....   | 3   | 3   |
| Travel opportunities for conferences and professional meetings abroad or in Africa ..... | 4   | 4   |
| Facilities and funding for workshops and conferences in home country .....               | 5   | 5   |
| Opportunities for additional training .....  | 6   | 6   |
| Availability of foreign journals, books, etc. ....                                       | 7   | 7   |
| Local outlets (journals, etc.) for local research products .....                         | 8   | 8   |
| Too many professional responsibilities .....   | 9   | 9   |
| Policies and procedures related to my job .....  | 10  | 10  |
| Economic rewards for my professional work .....  | 11  | 11  |
| Social status for my professional work .....   | 12  | 12  |
| Other (Specify) .....  | 13  | 13  |

19. Did you encounter any difficulty in having your U.S. degree recognized at the appropriate level as compared to graduate degrees from other countries?

PLEASE CIRCLE ONE ANSWER.

- Yes ..... 1
- No ..... 2

a) IF YES, Please explain:

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20. From the perspective of your professional goals for the next five years, what additional skills, training, professional experience, etc. do you feel you need? **PLEASE EXPLAIN.**

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a) Is this type of training or experience available in your home country? **PLEASE EXPLAIN.**

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b) In what form should this further training or experience be implemented? (Seminars, formal graduate courses, intensive short courses, actual experience, bringing foreign visiting specialists, etc.?) **PLEASE EXPLAIN.**

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c) What problems or constraints do you face in getting the training indicated?

**PLEASE CIRCLE AS MANY AS APPLY.**

- |                                 |   |
|---------------------------------|---|
| Lack of financial support ..... | 1 |
| Unable to get leave .....       | 2 |
| Family constraints .....        | 3 |
| Other (Specify) .....           | 4 |

**III. AFGRAD PROGRAM EXPERIENCE**

21. What degree(s) did you complete in your AFGRAD study program?

**PLEASE CIRCLE AS MANY AS APPLY.**

- Masters ..... 1
- Doctorate ..... 2
- Other (Specify) \_\_\_\_\_ 3

a) What was your field of study?

\_\_\_\_\_

22. During your AFGRAD study program and university life in the United States, how satisfied were you with the:

**FOR EACH ITEM, PLEASE CIRCLE THE NUMBER WHICH DESCRIBES YOUR EXPERIENCE BEST.**

|  | Very Satisfied | Somewhat Satisfied | Not too Satisfied | Not at all Satisfied |
|--|----------------|--------------------|-------------------|----------------------|
| Range and quality of courses offered   | 1              | 2                  | 3                 | 4                    |
| Quality of courses in your field of specialization   | 1              | 2                  | 3                 | 4                    |
| Range and quality of courses relevant to the conditions in your home country   | 1              | 2                  | 3                 | 4                    |
| Faculty having African or other international experience   | 1              | 2                  | 3                 | 4                    |
| Availability of professors for academic help and consultation  | 1              | 2                  | 3                 | 4                    |
| Guidance in planning your academic program   | 1              | 2                  | 3                 | 4                    |
| Availability of foreign student advisor  | 1              | 2                  | 3                 | 4                    |
| Help given by your dissertation supervisors in planning and carrying out your dissertation, thesis or other major research | 1              | 2                  | 3                 | 4                    |
| Facilities: library, reference materials, laboratories, etc.   | 1              | 2                  | 3                 | 4                    |
| Professional meetings, conferences, symposia, etc.   | 1              | 2                  | 3                 | 4                    |

23. In considering your AFGRAD program in the United States, please indicate the extent to which you had opportunities, either because of course requirements or your own initiative, to develop skills in the following areas.

**FOR EACH ITEM, PLEASE CIRCLE THE NUMBER WHICH DESCRIBES YOUR EXPERIENCE BEST.**

|   | Many Oppor-tunities | Some Oppor-tunities | Rare Oppor-tunities | No Oppor-tunities |
|---|---------------------|---------------------|---------------------|-------------------|
| Research  | 1                   | 2                   | 3                   | 4                 |
| Teaching  | 1                   | 2                   | 3                   | 4                 |
| Laboratory experimentation                      | 1                   | 2                   | 3                   | 4                 |
| Quantitative data collection                    | 1                   | 2                   | 3                   | 4                 |
| Computer processing and analysis of data        | 1                   | 2                   | 3                   | 4                 |
| Management and administration                   | 1                   | 2                   | 3                   | 4                 |
| Project planning, implementation and evaluation | 1                   | 2                   | 3                   | 4                 |

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24. Did the degree requirements in your AFGRAD program include a thesis or dissertation?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

a) **IF YES**, did you conduct your research on a problem related to your home country?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

b) **IF YES**, did you conduct your research in your home country?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

c) If your thesis or dissertation was related to your home country and your research was not conducted in your home country, **PLEASE EXPLAIN.**

.....  
.....

25. If you wrote a master's thesis, **please give the title.**

.....  
.....

26. If you wrote a doctoral dissertation, **please give the title.**

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.....  
.....

27. Have any publications resulted from your research, thesis or dissertation? **Please specify title, year and publishing company.**

.....  
.....  
.....

28. As an AFGRAD Fellow in the United States, did you participate in any practical training experiences or work experiences related to your field of study?
- |                                       |   |
|---------------------------------------|---|
| Yes, for less than three months ..... | 1 |
| Yes, for 3-6 months .....             | 2 |
| Yes, for 6-12 months .....            | 3 |
| Yes, for more than one year .....     | 4 |
| No .....                              | 5 |

PLEASE CIRCLE ONE ANSWER.

- a) IF YES, to what extent was this experience useful to you in your profession?
- |                         |   |
|-------------------------|---|
| Very useful .....       | 1 |
| Somewhat useful .....   | 2 |
| Not very useful .....   | 3 |
| Not at all useful ..... | 4 |

PLEASE CIRCLE ONE ANSWER.

29. From the perspective of your past and present professional job responsibilities what particular skills do you now wish you had given more time to developing in your AFGRAD program? (E.g., additional skills in your field of study, problem analysis, management, etc.) **PLEASE EXPLAIN.**

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30. Was mastery of English a problem for you in your AFGRAD program?
- |                               |   |
|-------------------------------|---|
| Yes, a serious problem .....  | 1 |
| Yes, a moderate problem ..... | 2 |
| Yes, a slight problem .....   | 3 |
| No problem .....              | 4 |

PLEASE CIRCLE ONE ANSWER.

31. a) IF YES, for how long after your arrival in the United States was it a problem?
- |                         |   |
|-------------------------|---|
| One academic term ..... | 1 |
| Six months .....        | 2 |
| One year .....          | 3 |
| Over one year .....     | 4 |

PLEASE CIRCLE ONE ANSWER.

- b) IF YES, in what ways was it a problem?
- |   |   |
|---|---|
| Understanding lectures .....                        | 1 |
| Writing papers .....                                | 2 |
| Writing exams within time limits .....              | 3 |
| Participating in class discussions .....            | 4 |
| Communicating with friends or fellow students ..... | 5 |
| Other (Specify) .....                               | 6 |

PLEASE CIRCLE AS MANY NUMBERS AS APPLY.

2.17

32. Could any changes have been made in your AFGRAD program to reduce the time it took for you to complete it?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

a) **IF YES**, please explain:

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33. In what ways, if any, has the AFGRAD program helped you to advance in your profession or to take on greater responsibility in your job? **PLEASE SPECIFY.**

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34. In what ways, if any, has your participation in the AFGRAD program been detrimental to your professional development? **PLEASE SPECIFY.**

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35. Besides acquiring new knowledge and skills, were there any other benefits from your AFGRAD experience in the United States? **PLEASE EXPLAIN.**

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36. In retrospect, how would you assess the usefulness or helpfulness of your contacts with AFGRAD staff in New York regarding the following:

FOR EACH ITEM, PLEASE CIRCLE THE NUMBER WHICH DESCRIBES YOUR EXPERIENCE BEST.

|                                | Very Useful | Somewhat Useful | Limited Usefulness | Not Useful At All |
|--------------------------------|-------------|-----------------|--------------------|-------------------|
| Academic advice . . . . .      | 1           | 2               | 3                  | 4                 |
| Personal adjustment . . . . .  | 1           | 2               | 3                  | 4                 |
| Family problems . . . . .      | 1           | 2               | 3                  | 4                 |
| Financial payments . . . . .   | 1           | 2               | 3                  | 4                 |
| Immigration problems . . . . . | 1           | 2               | 3                  | 4                 |
| Travel arrangements . . . . .  | 1           | 2               | 3                  | 4                 |
| Health problems . . . . .      | 1           | 2               | 3                  | 4                 |
| Other (Specify) . . . . .      |             |                 |                    |                   |

Comments, if any: **PLEASE SPECIFY.**

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37. Please give details regarding your main criticisms, if any, of the administration of the AFGRAD program. In what specific ways could it be improved?

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38. Please give your suggestions, if any, for improving the process for selecting AFGRAD Fellows.

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39. Which of the following criteria for selecting Fellows for overseas training do you consider most important?

**PLEASE CIRCLE ONE ANSWER.**

- Select those individuals with high grades on the assumption that good scholarship leads to high achievement later in life ..... 1
- Select those individuals who have demonstrated considerable achievement in their current position ..... 2
- Select those individuals who have worked to improve conditions in their local communities ..... 3
- Select those individuals who have shown strong interest in the priorities of national development ... 4
- Other (Specify: ..... ) ..... 5

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40. If you were provided appropriate instructions and materials, would you be willing to assist in the orientation of new AFGRAD Fellows before they leave for the United States?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

41. What advice would you give to new AFGRAD Fellows in your home country before they leave for the United States? What are some of the things you wish you had been told ahead of time?

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42. Could the AFGRAD program have done more to assist you in preparation for your return home? **PLEASE EXPLAIN.**

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43. Upon your return to your home country, did you encounter any of the following problems?

**PLEASE CIRCLE AS MANY AS APPLY.**

- Logistical problems (e.g., delayed or irregular salary payments, finding living accommodations, transportation, etc.) ..... 1
- Difficulty in finding a job that provided an opportunity to use your graduate training ..... 2
- Deficiencies in infrastructure for your professional work (e.g., heavy teaching load, lack of transportation, lack of research support, etc.) ..... 3
- Poor acceptance by colleagues and superiors who remained in home country ..... 4
- Re-adjusting to bureaucratic procedures ..... 5
- Re-adjusting to tempo and style of life in home country (hours, meals, etc.) ..... 6
- Re-adjusting to cultural norms and attitudes in home country ..... 7
- Re-adjusting to family expectations ..... 8
- Other (Specify: \_\_\_\_\_) ..... 9
- No difficulties or problems encountered ..... 10

44. Since completing your AFGRAD program, estimate the number of times you:

**PLEASE GIVE A NUMBER FOR EACH ITEM.**

- Worked in a professional capacity with AFGRAD Fellows from other countries ..... \_\_\_\_\_
- Arranged for a professor from your American university to visit your home country in a professional capacity ..... \_\_\_\_\_
- Arranged for a nonacademic colleague to visit your home country in a professional capacity ..... \_\_\_\_\_
- Arranged for fellow American graduate students to visit your home country in a professional capacity ..... \_\_\_\_\_
- Arranged for fellow graduate students from other countries to visit your home country in a professional capacity ..... \_\_\_\_\_
- Visited with American friends who were visiting your home country for either personal or professional reasons ..... \_\_\_\_\_
- Engaged in research and/or publication activities with professors from your American university ..... \_\_\_\_\_
- Engaged in research and/or publication activities with fellow American graduate students ..... \_\_\_\_\_
- Engaged in research and/or publication activities with fellow graduate students from other countries ..... \_\_\_\_\_
- Met professors and fellow graduate students from your American university at conferences ..... \_\_\_\_\_
- Visited the U.S. for professional reasons ..... \_\_\_\_\_

45. During the last twelve months, estimate the number of times you:

**PLEASE GIVE  
A NUMBER  
FOR EACH ITEM.**

- Worked in a professional capacity with other AFGRAD Fellows from your home country . . . . . \_\_\_\_\_
- Wrote letters to professors at your American university or to other professional contacts regarding professional matters . . . . . \_\_\_\_\_
- Received letters from professors from your American university or other professional contacts established in the U.S. regarding professional matters . . . . . \_\_\_\_\_
- Wrote letters to fellow American graduate students regarding professional matters . . . . . \_\_\_\_\_
- Received letters from fellow American graduate students regarding professional matters . . . . . \_\_\_\_\_
- Wrote letters to fellow graduate students from other countries regarding professional matters . . . . . \_\_\_\_\_
- Received letters from fellow graduate students from other countries regarding professional matters . . . . . \_\_\_\_\_
- Wrote letters to American friends . . . . . \_\_\_\_\_
- Received letters from American friends . . . . . \_\_\_\_\_
- Received correspondence from your American university (letters, newsletters, bulletins, etc.) . . . . . \_\_\_\_\_

46. Since AFGRAD, have you earned any additional graduate degrees?

**PLEASE CIRCLE ONE ANSWER.**

- Yes . . . . . 1
- No . . . . . 2

a) **IF YES**, please provide:

- Name of institution that granted degree \_\_\_\_\_
- Location of that institution \_\_\_\_\_
- Degree \_\_\_\_\_
- Major field of study \_\_\_\_\_
- Minor field of study \_\_\_\_\_
- Year degree granted \_\_\_\_\_

47. During the past 3-5 years, what kinds of contact have you had with the USAID office in your home country?

**PLEASE CIRCLE AS  
MANY NUMBERS  
AS APPLY.**

- Requested to provide informal professional/technical advice . . . . . 1
- Received funds for research . . . . . 2
- Received funds to travel to another country to attend professional meeting . . . . . 3
- Consulted for USAID in your home country . . . . . 4
- Consulted for USAID in another African country . . . . . 5
- Invited to social receptions . . . . . 6
- Invited to special events . . . . . 7
- Received funds to organize workshops or seminars in your home country . . . . . 8
- Developed friendships with staff members . . . . . 9
- Other (Specify: \_\_\_\_\_) . . . . . 10

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48. For the future, what kinds of contact with the USAID office in your home country might be appropriate and useful to you?

**PLEASE CIRCLE AS MANY NUMBERS AS APPLY.**

- Provide informal professional/technical advice to USAID office ..... 1
- Receive funds for research ..... 2
- Receive funds to travel to another country to attend professional meeting ..... 3
- Consult for USAID in your home country ..... 4
- Consult for USAID in another African country ..... 5
- Receive invitations to social events ..... 6
- Receive invitations to special events ..... 7
- Receive funds to organize workshops or seminars in your home country ..... 8
- Develop friendships with staff members ..... 9
- Other (Specify: \_\_\_\_\_) ..... 10

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**IV. BACKGROUND INFORMATION**

49. In what kind of area did you spend most of your time before entering secondary school? **PLEASE CIRCLE ONE ANSWER.**
- A city of more than 20,000 ..... 1
  - A city of between 10,000 and 20,000 ..... 2
  - A town of between 5,000 and 10,000 ..... 3
  - A town or village of less than 5,000 ..... 4

50. What was the highest level of formal education that your mother and father achieved? **PLEASE CIRCLE ONE ANSWER FOR EACH PARENT.**
- |  | <b>Mother</b> | <b>Father</b> |
|--|---------------|---------------|
| No formal education                    | 1             | 1             |
| 1-4 years                              | 2             | 2             |
| 5-8 years                              | 3             | 3             |
| Some secondary                         | 4             | 4             |
| Completed secondary                    | 5             | 5             |
| Post-secondary (other than university) | 6             | 6             |
| Some university                        | 7             | 7             |
| University graduate                    | 8             | 8             |
| Post-graduate university               | 9             | 9             |

51. How many of your brothers, sisters, aunts and uncles have completed secondary school? **PLEASE GIVE A NUMBER FOR EACH ITEM.**
- Brothers: .....
  - Sisters: .....
  - Aunts: .....
  - Uncles: .....

52. What were the occupations of your mother and father when you were growing up? **PLEASE BE AS SPECIFIC AS POSSIBLE** (e.g., small business owner, farmer, clerk, teacher, etc.)
- Father: .....
- Mother: .....

We appreciate your participation in the AFGRAD Alumni Study. We plan to publish a directory of AFGRAD Alumni which will list name, country of origin, AFGRAD years, professional position, institution and mailing address for each participant. To facilitate the publication of the directory and its circulation, please complete the following:

I wish  to be included in the directory of AFGRAD Alumni

I do not wish  to be included in the directory of AFGRAD Alumni

I wish  to receive a copy of the directory of AFGRAD Alumni

I do not wish  to receive a copy of the directory of AFGRAD Alumni

THANK YOU VERY MUCH FOR YOUR PARTICIPATION IN THE AFGRAD ALUMNI STUDY.

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# STUDY OF AFGRAD WOMEN

## TO BE COMPLETED BY WOMEN AFGRAD ALUMNAE.

In an effort to increase women's participation in AFGRAD, the African-American Institute is seeking ways to increase the recruitment of qualified women. We are hoping that your response to these questions will guide our future efforts in fulfilling the commitment we have towards providing more opportunities for women.

53. In what years did you participate in AFGRAD? 19\_\_\_\_ to 19\_\_\_\_

54. To your knowledge, how many women from your country participated in AFGRAD the year you were awarded your fellowship? **PLEASE GIVE A NUMBER.** \_\_\_\_\_

55. How did you hear about AFGRAD?

**PLEASE CIRCLE ONE ANSWER.**

- From former AFGRAD participants ..... 1
- From the Ministry of Education ..... 2
- From the USAID Mission ..... 3
- From the United States Information Agency ..... 4
- From the Program Representative of the African-American Institute ..... 5
- From an announcement in the media ..... 6
- Other (Specify: \_\_\_\_\_) ..... 7

56. Do you think that it is difficult for women from your country to be selected as AFGRAD participants?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

a) **PLEASE EXPLAIN:**

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57. Did you have family obligations (spouse, children) when you applied for AFGRAD?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

a) **IF YES,** what arrangements did you make for your family when you left home?

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b) **IF NO,** do you think you would have participated in AFGRAD if you had family responsibilities?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

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58. In your opinion, how difficult is it for women with family responsibilities to travel abroad for graduate studies?

- Extremely difficult ..... 1
- Moderately difficult ..... 2
- Slightly difficult ..... 3
- Not difficult at all ..... 4

59. In particular, do you believe that study abroad is more difficult for women with family responsibilities than for men with family responsibilities?

**PLEASE CIRCLE ONE ANSWER.**

- Yes ..... 1
- No ..... 2

60. Do you believe you had a more difficult adjustment to the United States than your male counterparts in the following ways?

**PLEASE CIRCLE ONE ANSWER FOR EACH ITEM.**

- |                      | YES | NO |
|----------------------|-----|----|
| Academically.....    | 1   | 2  |
| Socially.....        | 1   | 2  |
| Psychologically..... | 1   | 2  |

a) **IF YES**, for any of the above listed items, **PLEASE EXPLAIN:**

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61. Upon completion of your AFGRAD program in the United States, was readjustment to your country easier or harder than for your male counterparts?

**PLEASE CIRCLE ONE ANSWER.**

- Easier ..... 1
- Harder ..... 2

a) **PLEASE EXPLAIN:**

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62. What do you think AAI should do to increase the participation of women from your country in the AFGRAD program?  
**PLEASE EXPLAIN IN DETAIL.**

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.....  
.....  
.....  
.....  
.....

63. Do you believe that AAI is responsive to the needs of women?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

a) **PLEASE EXPLAIN WHY.**

.....  
.....  
.....  
.....

64. Do you recommend AFGRAD to other women from your country?

**PLEASE CIRCLE ONE ANSWER.**

Yes ..... 1  
No ..... 2

a) **PLEASE EXPLAIN WHY.**

.....  
.....  
.....

Thank you for your kind participation in the Study of AFGRAD Women. Your responses will help us to improve the program for women participant .

2017



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

| <u>NAME/COUNTRY</u>  | <u>UNIVERSITY/FIELD OF STUDY</u>                   |
|--|--|
| <u>BENIN</u>   |  |
| JEAN DETONGNON   | Oregon State University 1984<br>Horticulture       |
| "Inheritance of Stem Elongation Tendency in Determinate Forms of<br>Phaseolus Vulgaris(L.)                                   |  |
| FABIEN JOSSE   | University of Maine 1982<br>Electrical Engineering |
| "Analysis of the Generation, Interaction and Detection of Surface and<br>Bulk Acoustic Waves on Piezo-Electric Substrates"   |  |
| KOHOUNKO KOSSOU  | Kansas State University 1981<br>Field Crops        |
| "Factors Affecting the Storage of Pearl Millet (Pennisetum<br>Americanum (L.)K. Schum)                                       |  |
| YVES COFFI PRUDENCIO   | University of Arizona 1983<br>Agric. Economics     |
| "A Village Study of Soil Fertility, Management and Food Crop<br>Production in Upper Volta - Technical and Economic Analysis" |  |
| BOURAHIM YEKINI  | University of Florida 1980<br>Soil Science         |
| "Interactions of Orthophosphate with Iron Oxyhydroxide Minerals<br>Found in Soils"   |  |

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

BURKINA FASO

- GOMTIBO BONKOUNGOU  
SUNY/Coll. of Forestry 1979  
Biology  
"Tree Population Dynamics in Relation to Climate and Forest History  
in the Oswegatchie Plains, Northern New York"
- MICHEL KABORE  
University of Texas 1983  
English/TESL  
"Syntactic Transfer in Third Language Learning: Pedagogical  
Implications"
- NORBERT NIKIEMA  
Indiana University 1976  
Linguistics  
"On the Linguistic Bases of Moore Orthography"
- ALASSANE OUATTARA  
University of Pennsylvania 1972  
Economics  
"Trade Effects of the Association of African Countries with the  
Common Market"
- FERNAND SANOU  
Univ. of Southern California 1982  
Education Administration  
"African Universities in Search of Their Identities: A Study of the  
Culture of Careerism at the University of Ouagadougou"
- BOUKARY SAVADOGO  
University of Iowa 1983  
Education Administration  
"Management Theory and Socio-Economic Development/An Exploratory  
Framework for the Study of Development from a Macromanagerial  
Perspective"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

EDOUARD TAPSOBA

Michigan State University 1981  
Agricultural Economics

"An Economic and Institutional Analysis of Formal and Informal Credit  
in Eastern Upper Volta: Empirical Evidence and Policy Implications"

CAMEROON

THERESE ATCHAM

University of Minnesota  
Plant Pathology

"Dual Transmission of and Interference Between the Aster Yellows  
Mycoplasmalike Organism and the Oat Blue Dwarf Virus in the Aster  
Leafhopper, *Macrosteles Fascifrons* (Stal.)"

ALARIC BOMA

Cornell University 1971  
Agricultural Education

"Problems and Proposed Solutions of Agricultural Education at the  
Elementary School Level in West Cameroon"

TABI MOSES EBOT

University of Iowa 1978  
Geography

"Effects of Access to Social Services on Differential  
Fertility in Three Types of Agriculture"

LAURE PAULINE FOTSO

Rensselaer Polytechnic Inst. 1981  
Computer Science

"Multiple Objective Programming"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- ROBERT GHOGOMU  
No. Illinois University 1976  
Economics  
"Foreign Exchange Availability and Economic Development in Cameroon:  
Retrospect and Prospects"
- SOLOMON GWEI  
University of Michigan 1975  
Educational Administration  
"Education In Cameroon: Western Pre-Colonial and Colonial  
Antecedents and the Development of Higher Education"
- JOHNSON JATO  
University of Wisconsin 1973  
Pharmacy  
"5-Fluorouracil and Derivatives in Cancer Chemotherapy:  
Possible In Vivo Formation and Stabilization of 5-Fluoro-2-  
Deoxyuridine."
- FRANCOIS MKANKAM KAMGA  
University of Rochester 1981  
Physics  
"Coherent Anti-Stokes Roman Scattering: Suppression of  
The Non-Resonant Background Contribution and Observation of Beats  
Between Adiabatic and Non-Adiabatic Contributions"
- EMMANUEL KAMGNIA  
University of Illinois 1984  
Computer Science  
"A Numerical Conformation Mapping Method and the Poisson Equation on  
Irregular Domains"
- GABRIEL LANDO  
SUNY Buffalo 1981  
Biochemistry  
"Demonstration and Characterization of Antibodies Preferentially  
Reactive with Peptides in Antisera Produced Against a Globular  
Protein"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- DANIEL LANTUM Tulane University 1970  
Public Health  
"Planning a Family Health Program for Cameroon in 1970"
- CREPIN MAHOP University of New Mexico 1980  
Mathematics  
"High-Accuracy Stable Difference Schemes for Time Dependent  
Coefficient Evolution Equations"
- CHRISTOPHE MBA MEZOUI University of Maine 1978  
Animal Sciences  
"A Study of the Growth Responses in Tissue Culture of Liver  
Cells, Harvested from Chicks Fed Normal and L-Lysine Deficient  
Rations"
- AKURO DAVID MBAH Pennsylvania State Univ. 1980  
Animal Genetics  
"Genetic, Environmental, and Pricing Influences on Milk  
and Milk Component Production"
- JOHN MFOULOU Boston University 1974  
Philosophy  
"Ideology and Nation Building: The Tanzanian Case"
- MBIDA MPOAME Arizona State University 1981  
Zoology  
"Parasites of Some Fishes Native to Arizona and New Mexico  
with Ecological Notes"
- VICTOR NDAKBO University of Washington 1981  
Mathematics  
"Singular Convolution Operators of Hilbert Type on a Class of Totally  
Disconnected Abelian Groups"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

MBIAKOP PIERRE NGABA

Oregon State University 1981  
Nutrition

"Investigation of Methods for Determination and Prevention  
of Protein Instability in Wines"

JOE ERIC NGAM

Oregon State University 1980  
Animal Breeding

"The Generic Parameters Associated with Egg Production and Related  
Traits in a Sex-Linked Dwarf Strain of Single Combe White Leghorns"

JEAN DANIEL NGOU NGOUPAYOU

University of Arizona 1982  
Animal Science

"Nutritional Evaluation of Jojoba Meal"

GABRIEL OBENSON

Ohio State University 1970  
Geodetic Science

"Direct Evaluation of the Earth's Gravity Anomaly Field From  
Orbital Analysis of Artificial Earth Satellites"

HELENE MBANG SOPPE

Oregon State University 1981  
Chemistry

"Molecular Orbital Correlation of the Relative Rates of Chlorine  
Atom Abstraction from Homo- and Heteroarylmethyl Chlorides by  
Triphenyltin Radical"

LEKE IVO TAMBO

SUNY Buffalo 1980  
Education

"Planning Community Service Programs in Cameroon Secondary  
Schools: An Exploratory Study"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

DEFFO ESAIE TAMBOUE

Oregon State University 1983  
Chemistry

"Site-Specific Labeling of the Cardiac Glycoside Receptor Na<sup>+</sup>,  
K<sup>+</sup> -ATPase: Synthesis of a C-17 Side Group Photoaffinity Label:  
Relationship of Cardioactive Steroid Structure and Conformation  
to Biological Activity"

JUSTINE TANTCHOU

SUNY Buffalo 1979  
Biochemistry

"Use of Iodine-125 in Radioimmunoassay of Small Molecules  
(Application to Testosterone)"

EMMANUEL DOH TEBONG

University of Tennessee 1974  
Animal Science

"Lipogenic and Lipotropic Factors in the Physiopathology of Fatty  
Liver Syndrome in Gallus Domesticus"

CHAD

DANIEL GUELKODJINGAR

Univ. of Southern California 1982  
Curriculum Develop.

"Animation Rurale in Chad: Its Contribution to Living  
Standards and Literacy of the Villagers"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

COTE D'IVOIRE

AYEMOU ASSA

Cornell University 1973  
Agronomy

"Evaluation of Procedures for Predicting Nitrogen Available to Maize Under Field Conditions"

ACHI ATSAIN

SUNY/Albany 1979  
Economics

"Contribution of Foreign Trade to Economic Growth and Economic Instability in the Ivory Coast"

MAMADOU BAMBA

University of Illinois 1985  
Agricultural Economics

"Stabilizing the Cocoa Market: A Quarterly Econometric Application Using Optimal Control Theory"

JEAN CLAUDE BROU

University of Cincinnati 1982  
Monetary Economics

"Money Supply, Capital Flows and Monetary Policy in an Open Developing Economy: The Case of the West African Monetary Union 1963-1980"

THOMAS EPONOU

Michigan State University 1983  
Agricultural Economics

"Farm Level Analysis of Rice Production Systems in North-western Ivory Coast"

MATHURIN GBETIBOUO

University of Illinois 1983  
Agricultural Economics

"Export Strategies for Ivory Coast Cocoa"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- VINCENT LOKROU  
Colorado State University 1979  
Civil Engineering  
"Characteristics of Flow in Channel Abrupt Expansions"
- KODJO NIAMKEY  
Lehigh University 1981  
Engineering  
"Design and Implementation of a Statistical Alerter in a  
Codasyl Database"
- JOHN-PROSPER SEKA  
Columbia University 1978  
Education  
"The Fiction Reading Abilities of First Year English Majors at the  
University of Ivory Coast"
- DENIS ZUNON  
SUNY/Albany 1978  
Public Administration  
"The Analysis of French Technical Assistance Personnel in the Ivory  
Coast (1960-1976)"

ETHIOPIA

- ZEWDIE ABATE  
Colorado State University 1975  
Agricultural Engineering  
"Optimal Allocation and Management of Agricultural Water"
- BERHANU ABEGAZ  
University of Vermont  
Organic Chemistry  
"Photochemistry of Polymethyleneketene Dimers and Polyspiro-  
Cyclobutanones"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

GAFER ABUBAKER-SULIMAN

SUNY Albany 1979  
Public Administration

"Rural Participation in Program Phases: A Case Study of Resettlement and Rural Development of Khashm El Girba (New Halfa) Project (1959-1976), Democratic Republic of the Sudan"

DESTA ASAYEHEGN

Stanford University 1977  
International Education

"Student Alienation: A Study of High School Students in Ethiopia"

ERMIAS BEKELE

University of Michigan 1980  
Ecology

"Island Biogeography and Guidelines for the Selection of Conservation Units for Large Mammals"

ATLAW BELILGNE

Saint Louis University 1972  
Mathematics

"Spread of Lines"

MAMMO BESHAN

University of Missouri 1980  
Medical Sociology

"Health Care Delivery Systems in Underdeveloped Countries: Ethiopia, a Case Study"

DESTA BEYENE

University of New Hampshire 1972  
Plant Nutrition

"Physiology and Persistence of Alfalfa with Changes in Soil Chemistry"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ASMELASH BEYENE

Syracuse University 1972  
Public Administration

"Patterns of Authority in the Ethiopian Bureaucracy: A Study of Ethiopian Civil Servants with Respect to their Orientation toward Authority"

TADESSE BEYENE

Georgetown University 1973  
Linguistics

"Aspects of the Verb in Amharic"

HABTE-GIORGIS CHURNET

University of Tennessee 1979  
Geology

"The Relationships Between Dolomitization and Sphalerite Mineralization in the Lower Ordovician Upper Knox Carbonate Rocks of the Copper Ridge District, East Tennessee"

KESETE DANIEL

University of West Virginia 1972  
Animal Science

"Zinc Metabolism and Nutrition of Grazing Sheep"

ARRAYA DEBESSAY

Syracuse University 1979  
Accounting

"An Empirical Investigation of the Impact of Replacement Cost Disclosures on Capital Market Equilibrium, a Step Towards the Resolution of the Inflation Accounting Controversy"

AZEB DESTA

Ohio University 1975  
Curriculum Development

"An Investigation of the Utilization of Community Resources in Elementary Schools of Ethiopia to Provide Relevant Basic Education"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- SEYOUM GELAYE  
University of Tennessee 1981  
Animal Nutrition  
"Influence of Inherent Differences and Production Status on  
Intake and Digestibility of Nutrients in Beef Cattle"
- DEMISSU GEMEDA  
Brandeis University 1976  
Mathematics  
"Multiplicative Structure of Finite Free Resolutions of  
Ideals Generated by Monomials in An R-Sequence"
- AREFAINE GHEBRE-YOHANNES  
Northwestern University 1976  
Economics  
"Choice of Techniques in Ethiopian Manufacturing Industry"
- TAREKEGN GEBRE-YESUS  
Stanford University 1972  
Chemistry  
"Studies in the Indole Alkaloid Field"
- ASTATKE HAILE  
University of Arizona 1981  
Soil Management  
"Dynamics of Aboveground Net Primary Production in a Desert Grassland  
of Arizona"
- DESTA HAMITO  
Kansas State University 1978  
Agronomy  
"Linkage Disequilibrium - Distributions and Hypotheses Testing"
- TAMIRIE HAWANDO  
Kansas State University 1978  
Agronomy  
"Characterization of Crete, Smolan and Beanz Soils in Central  
Kansas"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

BELAYNEH HIRUY Washington State University 1981  
Agronomy

"Environmental Influence on Sunflower (Helianthus Annuus L.)  
Yield Components and Growth"

WOLDEAB ISAAC University of Michigan 1982  
Chemistry

"Approaches to the Synthesis of Captothecin"

JAMI ISSA University of Arizona 1978  
Horticulture

"Influence of Interstocks on Fruit Growth, Fruit Quality, Tree  
Size and Yield of Redblush Grapefruit (Citrus Paradisi MACF)  
on Cleopatra Mandarin (Citrus Reshni Hort.) Rootstock"

MOHAMMED JEMAL Purdue University 1976  
Pharmaceutical Chemistry

"Polarographic and Ultraviolet Spectroscopic Investigation  
of Benzylpenicillenic Acid and Other Degradation Products of  
Benzylpenicillin"

HAILE-MARIAM KAHSSAY Johns Hopkins University 1976  
Public Health Administration

"Traditional Health Beliefs in Ethiopia"

BAHIRU KASSAHUN Arizona State University 1979  
Mechanical Engineering

"Large Deformation in Viscoelastic Mixtures with Application  
to the Human Knee"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

TADESSE KIBREAB

Colorado State University 1975  
Agronomy

"Radish Root Growth Under Mechanical Stress"

ASMEROM KIDANE

Pennsylvania State Univ. 1973  
Economics

"The Demand and Price Structure for Selected Food Products in  
Ethiopia, An Econometric and Spectral Analysis"

SEMIE LECHEBO

SUNY Albany 1975  
Education

"Improvement of Teacher Education in Ethiopia with Guidelines for  
Curriculum Planning Exemplar: Specialization in Secondary School  
Social Studies"

KAHSAY LEGESSE

Indiana University 1978  
Curriculum Development

"A Study of Objectives and the Curriculum of Teacher Education  
in the Faculty of Education, Addis Ababa University, Ethiopia"

TADESSE MENGESHA

University of Wisconsin 1974  
Educational Administration

"Primary School Dropouts in Rural Ethiopia: Planning and  
Policy Implications"

BEKELE MOLLA

University of Maryland 1978  
Education

"The Relationship of the Components of the SDS and Theoretically  
Related Stereotypes to Holland's Types"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

GIRMA MULLJSA

Carnegie-Mellon University 1972  
Electrical Engineering

"Optimal Control of Synchronous Machine Systems via Linear Programming"

HABTE-MARIAM NEGHASI

Colorado State University 1974  
Agricultural Engineering

"Crop Water Use and Yield Models with Limited Soil Water"

KIFLE NEGASH

Michigan State University 1983  
Agricultural Economics

"An Assessment of the Integrated Rural Development Program in Eastern Upper Volta: 1974-1981"

AGEDEW REDIE

Columbia University 1977  
Education

"An Interactive Approach to a Design of a Model for Human Development Services with Evidence for Developmental Needs of 230 Adolescents in Addis Ababa, Ethiopia"

LEGESSE SENBETU

Univ. of California/San Diego 1976  
Physics

"Topics in Astrophysics and Many Body Theory"

NEGUSSIE TEBEDJE

Lehigh University 1972  
Civil Engineering

"Application of the Finite Element Method to Beam-Column Problems"

ABEBE TEFERA

Univ. of New Mexico 1982  
Civil Engineering

Title Unknown

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

SEYOUM TEFERRA

SUNY Buffalo 1978  
Educational Administration

"African Students in the U.S. and Nation-Building: The Attitudes of African Students Toward Major African Social and Educational Issues"

ASEFA TEFERRI

Michigan State University 1973  
Economics

"Incomes Policy for East Africa with Special Reference to Uganda"

TESFA-MICHAEL TESFA-YOHANNES

Johns Hopkins University 1972  
Medical Entomology

"Genetic Relationships of Aedes malayensis and A. Polynesiensis"

BRHANE TEFAY

Univ. of Calif./Los Angeles 1977  
Business Administration

"Labor and Management Negotiators in Kenya"

MAKONNEN WOLDE-AMLAK

SUNY Buffalo 1968  
Civil Engineering

"Energy Approach in the Dynamics of Generally Orthotropic Cylindrical Shells"

BEKELE WOLDE-MEDHIN

Univ. of California/Berkeley 1982  
Civil Engineering

"Swell Characteristics of Expansive Soils"

AKALOU WOLDE-MICHAEL

Univ. of Calif./Los Angeles 1967  
Geography

"Urban Development in Ethiopia in Time and Space Perspective"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

YEMANE ZECHARIAS

Cornell University 1984  
Civil Engineering

"Geomorphic Analysis of Groundwater Outflow from  
Mountainous Watersheds"

ASFAW ZELLEKE

Univ. of California/Davis 1984  
Plant Science

"The Effect and Interactions of Root Temperature with  
Rootstock Fertilization and Air Temperature on Budbreak,  
Growth and Composition of Grapevines (Vitis Vinifera L.)"

THE GAMBIA

BURENG GOREE-N'DIAYE  
(Arthur Bruce-Oliver)

Kent State University 1977  
Education

"A Proposal for the Modification of the Present High School  
Educational Programme in the Republic of The Gambia"

SASI SAMBA NDURE

Univ. of Northern Colorado 1978  
Educational Psychology

"Humanistic Psychology and Education: Implications for  
Teaching in The Gambia"

SUKAI ELLIE PROM

Howard University 1982  
Education

"Salient Content and Cognitive Performance of Person- and Thing-  
Oriented Low Income Afro-American Children in Kindergarten and  
Second Grade"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

GHANA

EMMANUEL ABLG

Claremont Graduate School 1971  
Economics

"Economic Development Project Evaluation in the Public Sector: The Case of Ghana"

JACOB ABOAGYE

University of Kansas 1972  
Physics

"Anomalous High-Temperature Ionic Conductivity in the Silver-Halides"

ISAAC ABRAHAM

Univ. of Nebraska Med. Center 1980  
Pharmacology

"Stereochemistry and Substituent Effects on the Lipid Solubility, Erythrocytic Uptake and Plasma Protein Binding of Some Cinchona Alkaloids and their Relationships to the Pharmacokinetics in the Dog"

MARIAN NEWLAND COLE(ADDY)

Pennsylvania State University 1971  
Chemistry

"Condensation of Free Alpha Amino Acids as a Probiological Polymerization System"

JOSEPH ADOMAKO-SARFOH

University of Cincinnati 1976  
Social Geography

"Interregional Migration and Economic Development in Ghana, 1960-1970"

BENJAMIN ADU-AMANKWA

Rutgers University 1980  
Chemical Engineering

"Mathematical Modeling of Enzymatic Hydrolysis of Vegetable Protein in Multipore Immobilized Enzyme Recycle Reactor"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

PETER AFRIYIE

University of Cincinnati 1979  
Educational Administration

"Administrative Process and Decision-Making for Development Through Organizations in a Developing Country"

LAWRENCE AGBEZUGE

Columbia University 1972  
Mechanical Engineering

"On the Indentation of a Consolidation Half-Space"

ALFRED AGYEI

New York University 1976  
Physics

"A Theory of Phase Transitions in Structurally Complex Crystals"

SETH AIDOO

Kansas State University 1972  
Grain Science

"High Protein Bread: Interactions of Wheat Proteins and Soy Proteins with Surfactants in Doughs and in Model Systems"

CHARITY DADZIE AKOWUAH

University of Rochester 1978  
Chemistry

"The Role of the Plasma Membrane in Determining Responsiveness to Methotrexate Therapy in L1210 Mouse Leukemia"

YAW AKYEAMPONG

University of Iowa 1971  
Civil Engineering

"The Local Sediment Transport Rate in Periodically Non-Uniform Flows"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ISAAC ALLOTEY

University of Kansas 1979  
Civil Engineering

"A Study of the Parametric Stability of Skew Stiffened Plates Using Finite Elements"

RICHARD AMABLE

Cornell University 1984  
Agronomy

"Preharvest Water Content Fluctuation and Soybean Seed Deterioration"

JULIUS AMATEKPOR

Cornell University 1976  
Agronomy

"Soils in Ghana Volta Drawdown Area and Effect of Seasonal Flooding After Five years"

CHRISTOPHER AMEYAW-AKUMFI

University of Michigan 1976  
Zoology

"Some Aspects of Breeding Biology of Crayfish"

FRANK AMOAH

Univ. of Calif./Los Angeles 1969  
Geography

"The Growth and Decline of Seaports in Ghana 1800-1962"

MAXWELL ANING

Columbia University 1977  
Metallurgy

"Creep and Stress Rupture Behavior of Polycrystalline Nickel-Base Super Alloys"

EMMANUEL ANNAN

University of Oklahoma 1978  
Electrical Engineering

"A Temperature-Dependent Stochastic Model for Power Systems Demand Forecasting"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

JOSEPH ANSAH

Purdue University 1974  
Civil Engineering

"Destination Choice Modelling and the Disaggregate Analysis of Urban Travel Behavior"

REGINALD ANTESON

University of Connecticut 1968  
Parasitology

"Biological Studies of Monanema Marmotae (Webster, 1967). A Filariod Parasite of the Woodchuck, Marmota Monax Canadensis"

MOSES ANTWI

Columbia University 1977  
Education

"Education and Economic Integration in West Africa"

DAVID ARDAYFIO

University of Minnesota 1972  
Mechanical Engineering

"A Study of the Dynamics of Rotors with Three-Dimensional Rotatory Inertia When Mounted on Flexible Shafts with Elastic Supports"

PAUL ASABERE

University of Illinois 1980  
Urban Planning

"The Determinants of Land Values in Accra, Ghana"

OBED ASAMOAH

Columbia University 1967  
Law

"The Legal Significance of the Declarations of the General Assembly of the United Nations"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- DANIEL ASANTE  
Washington State University 1976  
Agricultural Economics  
"The Economics of Size of Food Crop Farms in the Mampong-Ejura  
Agricultural District of Ghana"
- SETH ASARE  
University of Rhode Island 1979  
Phycology  
"Nitrogen Relations in Selected Macroalgae From Camp Varnum and  
Ninigret Pond in Rhode Island"
- EMMANUEL ATTIOGBE  
University of Kansas 1986  
Civil Engineering  
"Submicroscopic Cracking of Cement Paste and Mortar in Compression  
(Concrete, Microstructure, Self-Consistant Model, Stereology,  
Stress-Strain Curve)"
- KODJOPA ATTOH  
Northwestern University 1973  
Geology  
"Metamorphic Reactions in the Michigamme Formation, Iron County,  
Michigan"
- KWABENA AWUKU  
SUNY Albany 1975  
Education  
"Directions in Science Teacher Education in Ghana: Retrospect and  
Prospect"
- DERRICK AYEBO  
University of Nebraska 1980  
Food & Dairy Science  
"Partial Purification of Anticarcinogenic Components of Yogurt"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- ERNEST BAAFI  
Pennsylvania State University 1983  
Geophysical Engineering  
"Applications of Mathematical Programming Models on Coal  
Quality Control"
- JOSEPH BAFFOUR-SENKYIRE  
Purdue University 1971  
Agricultural Education  
"The Magnitude of the Incidence of Kwashiorkor (Protein-Calorie  
Malnutrition) and the Development of Educational Programs to  
Decrease its Occurrence in Ashanti Region of Ghana"
- YANFO BASSA-QUANSAH  
University of Pittsburgh 1972  
Educational Administration  
Title Unknown
- PHANUEL BEDIAKO  
University of Delaware 1982  
Chemical Engineering  
"The Dynamics of Substitution of Fossil Sources for the  
Production of Basic Organic Chemicals in the U.S. Economy"
- EMMANUEL BIMPONG-BOTA  
Massachusetts Inst. of Tech. 1976  
Chemistry  
"Chemical Instability Effects Due to Localized Reactions"
- SAMUEL BOAKYE  
University of Illinois 1979  
Civil Engineering  
"Hydraulic Fracturing in Earth Dams"
- THOMAS BUAMAH  
University of Connecticut 1973  
Animal Science  
"Studies on Modifications of the Protein Efficiency Ratio Method for  
the Evaluation of Poultry Feed Supplements"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

KWABENA DUFFUOR

Syracuse University 1979  
Economics

"The Impact of Post-1971 Exchange Rate System on the Economies  
of the Developing Countries with Specific Reference to Ghana"

WINGROVE CHARLES DWAMINA

SUNY Buffalo 1972  
Education

"English Literature and Language Planning in West Africa:  
Educational Implications"

JACKSON DZAKUMA

Oklahoma State University 1980  
Animal Science

"Productivity of Crossbred Ewes Under Accelerated Lambing  
and Accuracy of Estimating Lifetime Productivity"

JAMES DZANDU

Wayne State University 1980  
Biochemistry

"Comparative Biochemical Studies on Membrane Autophosphorylation  
in Intact Normal Human and Sickle Erythrocytes"

VICTORIA DZOGBEFIA

Oregon State University 1979  
Biochemistry

"Polychlorinated Biphenyls and Related Metabolites: Mode  
of Action on Phospholipid and Glyceride Biosynthesis"

PETER ESHUM-DADZIE

Massachusetts Inst. of Tech. 1979  
Engineering

"Magnetic Neutron Scattering From Praseodymium (1) Cobalt (5) and  
Samarium (1) Cobalt (5)"





AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

AGOGO MAWULI

University of Illinois 1972  
Economics

"A Sensitivity Analysis of Balance of Payments and Economic Expansion  
in the Less Developed Economies"

KWEKU MENSAH

University of Michigan 1972  
Ecology

"Allelopathy as Expressed by Sugar Maple on Yellow Birch"

AUGUSTINE MOSI

Colorado State University 1974  
Animal Nutrition

"Nitrogen-15 as a Measure of Rumen Microbial Protein Synthesis"

GOBINDRAM NANKANI

Harvard University 1976  
Economics

"The Intercountry Distribution of Direct Foreign Investments  
in Manufacturing"

STEPHEN NKRUMAH

New York University 1979  
Public Administration

"Atrophization of Rural Ghana: A Study into the Effects of  
Centralization on Rural Development in Ghana and the Implication  
of Decentralization for Rural Administration"

EMMANUEL NYADROH

Northwestern University 1981  
Accounting

"Corporate Diversification, Information Disclosure, and the Risk-  
Return Characteristics of Firms"

EBENEZER NYAKOTEY

American University 1975  
Economics

"Government and Development: A Case Study of the Impact of  
Government Economic Policies in Post-Independence Ghana"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

KWABENA OBEN-NYARKO

University of Arizona 1979  
Civil Engineering

"A Strategy for Decision Making in Water Resources Planning  
for Developing Countries"

DENNIS OBENG

Univ. of Calif./Berkeley 1974  
Mechanical Engineering

"Comminution of a Heterogeneous Mixture of Brittle and Non-Brittle  
Materials"

KWADWO ODURO

Univ. of Calif./Riverside 1975  
Phytopathology

"Phytopathological Studies: I. Isolation and Identification of  
Antibiotics Produced in Culture by *Amillaria Mellea*; and II.  
Epidemiology of Bacterial Fasciation of *Chrysanthemum Maximum*"

EVANS OFFORI

North Dakota State University 1969  
Radiation Biology

"The Effect of Gamma Radiation on the Reproduction and Longevity  
of the Stable Fly *Stomoxys Calcitrans* (L.)

JOSEPH OKANG

Ohio State University 1972  
Geodetic Science

"Comparative Study of Point Marking Devices and their Suitability  
for Photogrammetric Problems"

ISAAC OKOH

SUNY/Syracuse 1976  
Forestry

"Moisture Sorption and Electrical Resistivity of some Woods and  
Barks"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ADU OPOKU

Univ. of Calif./Riverside 1970  
Agronomy

"Availability and Uptake of Iron: Effect of Ph Changes During Uptake of Macronutrient Ions"

GEORGE OPOKU

Purdue University 1983  
Electrical Engineering

"Reactive Power Control to Alleviate Bus Voltage Violations in an AC-DC Power System"

JOHNSON OPOKU

Columbia University 1975  
Educational Psychology

"A Program of Public School Guidance Services for the National School System of Ghana"

ANDREWS OPPONG

University of Iowa 1976  
Accounting

"Cross-Sectional Differences in the Information Content of Annual Earnings Announcements"

STEPHEN OSEI

University of Tennessee 1981  
Animal Science

"Photoperiod, Adrenal Corticosterone and the Development of Avian Glaucoma"

PETER OSEI-KWAME

University of Iowa 1979  
Political Geography

"Neighborhood Variations in Political Integration: The Case of Kumasi, Ghana"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

JOSEPH SAI

Texas A & M University 1983  
Agricultural Engineering

"Effect of Capillary Hysteresis and Spatial Variability of  
Hydraulic Conductivity on Two-Dimensional Hillslope Soil  
Moisture Flow"

GABRIEL SOGAH

Univ. of Calif./Los Angeles 1975  
Chemistry

"Macrolytic Polyethers: Synthesis, Optical Activity and Chromato-  
graphic Resolution of Amino Acids"

CLEMENT SOMUAH

Massachusetts Inst. of Tech. 1977  
Electrical Engineering

"Emergency State Control of Slow Speed Dynamics"

EMMANUEL TAMAKLOE

University of Pennsylvania 1979  
City & Regional Planning

"Social Welfare and Equity Considerations in Transportation  
Investment Policies Toward Less Developed Regions"

KWAKU TENAH

Texas A & M University 1979  
Construction Engineering

"Construction Management Information Control Systems"

PERCIVAL TETTEH

University of Pennsylvania 1971  
City & Regional Planning

"The Spatial Structure of the Labor Force of Ghana"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

SETH TETTEH-OCLOO

Southern Illinois University 1973  
Special Education

"A Program for the Education and Training of the Deaf in Developing Countries: Ghana"

JOHN WIAFE-AKENTEN

Boston University 1984  
Physics

"Raman Spectroscopy of Supercooled Water"

KENYA

RUBEN O. ABASA

Rutgers University 1967  
Biology

"An Apholate Resistant Strain of Housefly, *Musca Domestica* L., Its Ovarian Development, Oogenesis, and Resistance to Other Chemosterilants and to Insecticides"

HENRY CHERUIYOT

Oklahoma State University 1978  
Veterinary Parasitology

"The Distribution and Factors Influencing the Establishment of Fasciola Hepatica Linnaeus 1758, in Native Oklahoma Cattle"

VICTOR D'COSTA

West Virginia University 1978  
Agronomy

"Fate and Availability of Native and Applied Magnesium to Crops on West Virginia Soils"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

KARIM JANMOHAMED

Northwestern University 1971  
African Studies

"A History of Mombasa c. 1895-1939: Some Aspects of Economic  
and Social Life in an East African Port Town During Colonial Rule"

MIRJEAN JANMOHAMED

University of Texas/Austin 1970  
Chemistry

"A Spectrophotometric Study of the Reaction of Cobalt(II) With 2-4-6-  
TRI(2-Pyridyl)Symtriazine"

MAINA KAGOMBE

New York University 1972  
Political Science

"Bureaucracy and Social Change: A Study of Transforming the British  
Bureaucracy in Kenya into an Indigeneous National Service"

FLORIDA KARANI

University of Pittsburgh 1979  
Education

"A Study of the Application of Interaction Analysis to the Training  
of Preservice Teachers in Kenya"

SAMUEL KATIA

University of Connecticut 1984  
Mathematics

"The D.C. Conduction Mechanisms of Ethylene Propylene Rubber as a  
Function of Chemical Composition"

PATRICK KENYA

University of Oklahoma 1976  
Epidemiology

"An Epidemiological Study of Esophageal Carcinoma in Oklahoma  
City Hospitals, 1970-1975"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- ELIUD MALUKI  
University of Denver 1966  
International Affairs (Non-AIL)  
"The Influence of Traditionalism Upon Nyerere's 'Ujamaa-ism'"
- RACHEL MASAKE  
Washington State University 1977  
Veterinary Medicine  
"Pathogenesis of Fasciola Hepatica Infection in Mice and Its Relationship to Host Immune Response"
- PETER MISIKO  
Cornell University 1976  
Agricultural Engineering  
"Incentives and Disincentives Influencing Farmers in the Adoption of Agricultural Innovations: The Case of Bungoma District - Kenya"
- THOMAS MULUSA  
Univ. of Massachusetts 1982  
Adult Nonformal Education  
"Structured Courses as a Strategy for Rural Development: A Case Study of the Kenya Farmer Training Centres"
- ALFRED MURATHE-MUTHEE  
Washington State University 1982  
Agricultural & Resource Economics  
"Optimal Investment and Operation Plans for Kenya's Electrical Industry"
- LEOPOLI MUREITHI  
Claremont Graduate School 1974  
Economics  
"Employment, Technology, and Industrialization in Kenya: A Study in Development Strategy"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- ELIJAH MUTHENGI  
SUNY/Albany 1980  
Education  
"Institutional Goals and National Development Plans in Five  
Teacher Education Institutions in Kenya"
- WILFRED MWANGI  
Michigan State University 1978  
Agricultural Economics  
"Farm Level Derived Demand Response for Fertilizer in Kenya"
- JOAB NDOMBI  
Stanford University 1978  
Applied Geophysics  
"Geology, Gravity and Resistivity Studies of Olkaria Geothermal  
Field, Kenya"
- GODFREY NGURU  
University of Tennessee 1975  
Educational Administration  
"A Study of Educational Expenditures in Kenya 1963-1975"
- ENOS NJERU  
Univ. of Calif./Santa Barbara 1984  
Sociology  
"The Farming Herders: Irrigation, Reciprocity and Marriage Among  
the Turkana Pastoralists of North-Western Kenya"
- RICHARD OCHILLO  
Vanderbilt University 1975  
Pharmacology  
"Pharmacodynamics of Furan Analogs of Muscarine"
- CHARLES ODIDI-OKIDI  
Fletcher School 1975  
Int'l. Development Studies  
"The Prospects for the Establishment of Regional Regulatory  
Arrangements for the Control of Pollution of the Seas"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

WELLINGTON OTIENO

Univ. of Calif./Berkeley 1977  
Entomology

"The Pathology and Host-Parasite Relationship of Entomogeneous Nematode, Romanomermis Culicivora Ross and Smith (Mermithidae) in Mosquito Host Culex Pipiens Say (Culicidae): Its Application in Integrated Control"

SAMUEL ROHIO

New School for Social Research 1970  
Political Science

"Theory of Political Unity in the Philosophy of F.S.C. Northrop"

SULEMAN VERJEE

University of Chicago 1975  
Statistics

"The Logistic Model for Quantal Response Data and a General Bias-Correcting Technique"

MAURI YAMBO

University of Illinois 1980  
Industrial Sociology

"A Profile of the Kenyan Labor Force: Race, Occupation and Industry; Ethnicity and Sex Differentials in the Postcolonial Period"

LESOTHO

ZACHARIA MANARE

University of Rochester 1972  
Mathematics

"On Some Aspects of Galois Cohomology in the Large"

267

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ANTHONY MARUPING

Catholic University 1977  
Economics

"An Examination of the International Demonstration Effect in Selected Economies of Southern Africa"

JANE MKHIZE

Rutgers University 1982  
Biology

"The Effects of Hydroprene and R-20458 with or without Surfactants or Their Blends on the Rice Weevil, Sitophilus Oryzae (L.)"

MOSHE MOLELEKOA

University of Washington 1982  
Mathematics

"Space-Time Symmetries of Yang-Mills Fields"

HENRY (PULE) PHOOFOLO

Northwestern University 1979  
African Studies

"The Basotho Social Formation and the Rinderpest Crisis of 1897"

JAMES TAOLE

Columbia University 1981  
Mathematics Education

"A Study of the Effect on Pupils' Achievement of Studying a Selected Secondary School Mathematics Topic in the Vernacular"

LIBERIA

AUSTIN AMEGASHIE

University of Florida 1978  
Geography

"Liberian Agricultural Programs: The Theory and Practice of Marketing and Food Distribution Systems"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- DANIEL BARCLAY  
Southern Illinois University 1982  
Education Administration  
"Foundations of Education in Higher Educational Institutions  
in Liberia"
- PATRICK BOGBA  
SUNY/Buffalo 1979  
Education Administration  
"Technical/Vocational Education and Manpower Development as  
Instruments in Liberia's National Development"
- EMMET DENNIS  
University of Connecticut 1967  
Biology  
"Biological Studies on the Life History of Mesostephanus Yedeeae  
Sp.N."
- SAMUEL GOODING  
Purdue University 1983  
Economics  
"The Effect of Taxes on Foreign Investments in Less Developed  
Countries"
- BILLY JOHNSON  
University of Florida 1978  
Biology  
"The Potential Role of Amanitins in the Regulation of DNA-Dependent  
RNA Polymerase II Activity in Amanita Species"
- JOSEPH JONES  
American University 1976  
Economics  
"A Macroeconomic Study of the Liberian Economy: A Short-Run  
Analysis"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

RANDOLPH MCCLAIN

University of Kansas 1977  
Chemical Engineering

"Isothermal P-X Data (Total Pressure-Liquid Composition) and Phase Equilibrium Behavior in the Isopentane- N-Pentane-Isoprene System (100oF-120oF)"

SIZI MORRIS

Kansas State University 1980  
Plant Breeding

"Composite Environment Interaction and Density-Depth Interrelationship Studies With Maize in Nigeria"

MOPOI NUWANYAKPA

Kansas State University 1982  
Animal Science

"I. Evaluation of Four Cultivated Tropical Pastures and Three Breeds of Cattle for Increased Beef Production - II. Digestibility of Alfalfa Haylage, Sodium Hydroxide-Treated and Untreated Wheat Silages by Lambs"

DICKSON REDD

West Virginia University 1975  
Molecular Biology

"A Study of Growth Substances and Other Chemicals During Dormancy and Sprouting of Potato Tubers (Solanum Tuberosum) L CV. Russet Rural"

RATSIMANDEFITRA ANDRIAMANALIMANANA

Lehigh University 1979  
Mathematics

"Ovals, Unitals and Codes"

270

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

RAJAONA ANDRIAMANANJARA

University of Michigan 1971  
Economics

"Labor Mobilization and Economic Development: The Moroccan Experience"

J. PIERRE LAW-KOUOK-KOUONG

University of Washington 1982  
Mathematics

"Compactifications of Complex Affine Surfaces"

AIMEE RABAKOARIHANTA

Oregon State University 1981  
Horticulture/Botany

"Embryo Development in Relation to Interspecific Hybridization of Phaseolus"

ELISABETH RABAKONANDRIANINA

University of Hawaii 1979  
Biology

"Experimental Hybridization in Lipochoeta(Compositae): Infragenetic Relationships and Possible Origin from Wedelia"

REMI RAKOTONDRADONA

Washington State University 1983  
Biology

"Use of Seed Treatments to Control Stripe Rust and Leaf Rust of Wheat in Washington"

BAKOLIMALALA RAMAMONJIARISOA

University of Massachusetts 1980  
Botany

"Comparative Anatomy and Systematics of African and Malagasy Woody Saxifragaceae Sensu Lato"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

OVERTOUN JENDA  
University of Kentucky 1981  
Mathematics  
"On Injective Resolvents"

BENSON KANDOOLE  
Univ. of Southern California 1979  
Economics  
"A Nonlinear Simulation Model of the American Economy"

PETER MAKHAMBERA  
University of Minnesota 1974  
Animal Science  
"Feed-Gain Ratios for Swine of Diverse Body Composition"

JUSTICE MLIA  
Rutgers University 1975  
City & Regional Planning  
"Public Decision-Making and the Spatial Organization of  
Development in Malawi"

ANDREW MPHONDE  
University of Connecticut  
Civil Engineering  
"Shear Strength of High Strength Concrete Beams"

MATTHEW MUMBWA  
Oklahoma State University 1981  
Education  
"Selection of Academic Department Heads in Doctorate Granting  
Universities"

HENRY MWANDEMERE  
University of Florida 1977  
Soil Chemistry  
"The Effect of Soil Physico-Chemical Properties, Gypsum, Lime  
(Arachis Hypogaea L.) and Fertilizer Materials on Yield and Quality  
of Peanuts"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- ANACKLET PHIRI  
University of Texas/Austin 1980  
Applied Linguistics  
"A Description of Derivational Forms in Tumbuka"
- HENRY ZINTAMBILA  
University of Hawaii 1982  
Geography  
"Climatic Water Balance and Crop Production in Malawi"
- MALI
- DIOLA BAGAYOKO  
Louisiana State University 1983  
Physics  
"Electronic Structure of Iron"
- MAMADOU GUEYE  
SUNY/Buffalo 1980  
English Education  
"A Study of Errors in the Written Production of Speakers of Bambara, Fulani, Songay at the First Year English at Ecole Normale Superieur of Bamako, Mali, West Africa"
- FATOUMATA KOUYATE  
University of Kansas 1984  
Civil Engineering  
"Sar Imagery Analysis: Scene Statistics and a Textural Approach to Classification (Land Use)"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ISSIAKA LY

Georgetown University 1980  
Linguistics

"Language Planning in Mali: A Preliminary Study"

ALMOUZAR MAIGA

Cornell University 1974  
Animal Science

"Physical and Chemical Composition of the Carcass of the Domestic Bovine as Influenced by Breed, Sex, Level of Feed Intake and Stage of Growth"

OUSMANE MINTA

Ohio University 1980  
Linguistics

"Language Policy and Literacy Development: A Study of the Two West African Countries of Ghana and Mali"

OUMAR N'DIAYE

University of Florida 1980  
Agronomy

"Physiological Aspects of Peanut (*Arachis Hypogaea* L.) Yield as Affected by Daminozide"

SOUMANA SAKO

University of Pittsburgh 1981  
Public Administration

"Determinants of Public Policy: A Comparative Analysis of Expenditure Patterns in the African States"

SIDI MOCTAR SANGARE

University of Illinois 1982  
Geography

Title Unknown

CHEICK OUMAR SIDIBE

SUNY/Buffalo 1982  
Education Administration

"Education and Society: The Malian School System in Transition"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

CHEICKNA SYLLA

SUNY/Buffalo 1982  
Engineering

"Computer Aided Layout of Job Performance and Procedure Training Aids"

MAURITIUS

JAWAHARLALL BAGUANT

University of Tennessee 1980  
Chemical Engineering

"Energy and Economic Development Strategies System Studies for Less Developed Countries"

PYNEEANDEE MARDAMOOTOO

University of Illinois 1980  
Animal Science

"Characterization of Staphylococcus Aureus of Bovine Origin"

JOSEPH VELLIN

Cornell University 1971  
Agricultural Economics

"A Full Employment Strategy for Agricultural Development in Mauritius"

MOROCCO

MOHAMED BIROUK

St. Louis University 1972  
Economics

"Estimating Foreign Resources Needs for Morocco's Economic Development"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ALAIN FYMAT

Univ. of Calif./Los Angeles 1967  
Geology

"Theory of Radiative Transfer in Atmospheres Exhibiting Polarized Resonance Fluorescence"

RAMDANE KHALID

University of Washington 1976  
Civil Engineering

"Dynamic Properties of Deep-Sea Sediments"

NIGER

OUMAROU WATTA

SUNY/Buffalo 1985  
English/TESL

"The Human Thesis: A Quest for Meaning in African Epic (Conversation, Levels, and Language, Griot, "Donda Garba Dikko")"

NIGERIA

CHRISTOPHER ABASHIYA

Ohio University 1971  
Guidance & Counselling

"A Proposed Student Personnel Programme for Ahmadu Bello University, Nigeria"

AYODELE ABATAN

Virginia Polytechnic Inst. 1976  
Civil Engineering

"Stability of Reticulated Domes Under Multiple Static and Dynamic Loads"

213

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ALIYU ABDULLAHİ

University of Wisconsin 1976  
Science Education

"A Determination of the Relative Importance of Selected Chemistry Laws and Theories for Possible Inclusion in Nigeria's Secondary School Curriculum"

FOLAGBADE ABOABA

University of Wisconsin 1971  
Agricultural Engineering

"Physical Processing Characteristics of Some Aquatic Macrophytes as Related to Mechanical Harvesting"

MOSES ADAH

University of Texas/Austin 1973  
Physics

"Fourier Analysis of Conduction Electron Velocities by Ultrasonic Waves in the Noble-Metals"

ISAAC ADALEMO

University of Michigan 1974  
Geography

"Spatial and Temporal Configurations of Rural Periodic Markets in Western Nigeria"

RAHEEM ADAMSON

Rutgers University 1975  
Nutritional Biochemistry

"The Requirement and Metabolism of Arginine in the Rabbit"

JOSEPH ADEGBOYE

University of No. Carolina 1975  
Animal Science

"Regulation of Haemolymph Calcium in the Crayfish *Procambarus Acutus Acutus* Girard (Crustacea Decapoda)"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

JOSEPH ADEGOKE

Florida State University 1974  
Molecular Genetics

"Programming of DNA Synthesis and Nature of DNA Synthesized at Different Times in the S Phase of the Cell Cycle of a Eucaryotic System"

SULAIMAN ADEKOLA

Ohio State University 1975  
Electrical Engineering

"A Study of the Radiation Patterns of a Shielded Quasi-Tapered Aperture Antenna for Acoustic Echo-Sounding"

SAMUEL ADENUBI

Stanford University 1972  
Mechanical Engineering

"Effects of Axial Turbomachine Type Discharge Conditions on Performance of Annular Diffusers - An Experimental Study"

ABIODUN ADETUGBO

Columbia University 1967  
Linguistics

"The Yoruba Language of Western Nigeria: Its Major Dialect Areas"

JOSEPH ADEWARA

University of Wisconsin 1975  
Metallurgy

"Crack Initiation and Propagation in Ductile Irons"

AKANBI ADEWOLE

University of No. Carolina 1978  
Social Psychology

"The Effect of Similarity on Agreement in the Jordan Paradigm"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

OMONIYI ADEWOYE

Columbia University 1968  
African History

"The Legal Profession in Southern Nigeria, 1854-1943"

EKUNDAYO ADEYEMI

New York University 1974  
Public Administration

"Kaduna Capital Territory and Metropolitan Lagos: Case Studies. An Analysis of the Institutional and Administrative Framework for Urban Land Planning and Development"

SOLOMON ADEYEMI

University of No. Carolina 1973  
Chemistry

"Reactions Between Azide Ion and Dipositive (X, Nitrosyl-Bis-Bipyridine) Ruthenium (III) (X=Chloride, Nitrate) Synthetic Versatility of the Solvent Intermediates"

SULEYMAN ADEYEMI

University of Wisconsin 1976  
Environmental Engineering

"Modeling, Identification and Control of a Dynamic and Stochastic Chemical Biological Process"

JACOB ADEYINKA

Ball State University 1973  
Science Education

"An Evaluation of Short Term Learning Associated with Specific Instructional Tasks in a Learning Center for Students Enrolled in a General Education Biology Course"

ISABELLA ADJAERO

University of Connecticut 1980  
Mathematics

"Uniqueness of the Coefficient Ring and Related Problems in Group Rings"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

DAVID ADU

SUNY/Buffalo 1976  
Mathematics

"CM-Homomorphisms of Semigroups of Closed Binary Relations"

RANDOLPH ADU

California Inst. of Tech. 1971  
Civil Engineering

"Response and Failure of Structures under Stationary Random Excitation"

MOSES AJAJA

University of Colorado 1977  
Applied Statistics

"Time-Series Methods for Enrollment Projection"

OWOLABI AJAYI

University of Arizona 1982  
Water Resources Administration

"Institutional Models for Water Resources Administration in Developing Countries: Case Example, Nigeria"

PETER AKINJIOLA

University of Rochester 1982  
Chemical Engineering

"Thermal Hydraulic Instabilities in Cryogenic Evaporators"

SHEKARAU AKU

University of Denver 1974  
Mechanical Engineering

"The Freeforming of Infinite Plates under Arbitrary Charge Distributions"

NURUDEEN ALAO

Northwestern University 1970  
Geography

"Some Problems in Axiomatic Theory of Location and Regional Economic Growth"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

USMAN ALIYU

Purdue University 1978  
Electrical Engineering

"Corrective Control for Transient Emergency State of Power Systems"

DORAYI AMINU

University of Oregon 1973  
Physical Chemistry

"Thermal Decomposition of Ethylcyclobutane: A Low Pressure Unimolecular Reaction Study"

FRIDAY ANUGWA

Cornell University 1980  
Animal Science

"Severe Energy and Protein Deprivation Throughout Gestation: Effects on Reproductive Performance of Gilts and Postweaning Growth and Body Composition of Their Offspring"

GABRIEL ARIJE

Colorado State University 1971  
Animal Science

"Beef Female Reproductive Prediction, Alteration and Blood Hormone Levels"

FRANCIS ASUBIOJO

Stanford university 1978  
Physical Chemistry

"Kinetics and Mechanisms of Gas Phase Ionic Nucleophilic Displacement Reactions at Carbonyl and Phosphonyl Centers"

EZEKIEL AWUWOLOYE

University of Illinois 1973  
Psychological Measurement

"A Screening Index for Selection"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

BUBA BAJOGA

SUNY/Buffalo 1972  
Electrical Engineering

"Recoder Complexity for BCH Codes"

ROBERT BARROW

Duke University 1973  
Microbial Biochemistry

"Studies on the Occurrence and Biosynthesis of the 2 Amino-2.6-Dideoxyhexoses, Quinovasamine and Fucosamine in Bacteria"

UMAR BENNA

University of No. Carolina 1975  
Urban & Regional Planning

"The Effectiveness of Planning Strategies in Northern Nigeria"

HENRY COKER

SUNY/Albany 1977  
Public Administration

"Merit in the Public Service: A Comparative Study of Ghana and Nigeria"

EMMANUEL DENENU

Massachusetts Inst. of Tech. 1979  
Food Science

"Genetic Deregulation of the Aromatic Amino Acid Pathway in a Methanol-Utilizing Yeast, Hansenula Polymorpha"

GABRIEL EJEBE

Drexel University 1976  
Electrical Engineering

"Assessment of Power System Security under Load Uncertainty"

ITA EKANEM

Brown University 1971  
Geography

"African Students and Their Attitudes Toward Pan-Africanism and Black Consciousness in the United States"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- UMA ELEAZU  
Univ. of Calif./Los Angeles 1969  
Political Science  
"Federalism and Nationbuilding in Nigeria 1946-1966: A Study  
of Political Integration in a Plural Society"
- ENEFIOK ETUK  
Michigan State University 1979  
Agricultural Economics  
"Micro-Economic Effects of Technological Change on Smallholder  
Agriculture in Northern Nigeria: A Linear Programming Analysis"
- ADEBISI FABAYO  
University of Connecticut 1980  
Education Administration  
"A Descriptive Cross-Cultural Study of Nursing Students Problems  
and Academic Achievements"
- ABIODUN FALUSI  
Cornell University 1973  
Agricultural Economics  
"The Economics of Fertilizer Distribution and Use in Nigeria"
- HENRY FAPOHUNDA  
Utah State university 1980  
Agricultural Engineering  
"River Basin Sequential Water Use and Salinity Effects n Crop  
Yield Economics"
- EBENEZER GEORGE  
University of Rochester 1976  
Statistics  
"Combining Independent One-Sided and Two-Sided Statistical Tests -  
Some Theory and Applications"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ORLANDO DABIBI-GEORGE

Harvard University 1970  
Applied Mathematics

"The Boundary Layer Dynamics under Swirling Flows in a Rotating System"

ENAMIDEM IBOK

West Virginia University 1979  
Electrical Engineering

"Reliability Analysis and Optimum Maintenance Scheduling of Molded Case Circuit Breakers"

NDU IFUDU

University of Connecticut 1979  
Pharmaceutical Science

"The Kinetics and Mechanisms of Micellar Inhibition of the Alkaline Hydrolysis of Sulfonyl Fluorides"

WILLIAM JIDE IGE

Brandeis University 1974  
Chemistry

"Excitation Functions of Ion Molecule Reactions at Low Energies"

OLUWAFEMI ILESANMI

University of Wisconsin 1969  
Geography/Climatology

"A Study of Nigerian Rainfall Patterns from the Viewpoint of Precipitation Dynamics"

CHRISTOPHER IMOISILI

Columbia University 1977  
Business Administration

"Management Practices and Organisational Effectiveness: A Guide to Conceptual Emphasis in Developing Nigerian Managers"

CHRISTOPHER IMORU

Northwestern University 1972  
Mathematics

"The Jensen-Steffensen Inequality"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

OLUKUNLE IYANDA

New York University 1975  
Business Administration

"Impact of Foreign Direct Investment in Manufacturing on the Nigerian Economy"

YUSUFU JINKIRI

University of Connecticut 1983  
Economics

"The Growth of Government Expenditure in Nigeria: A Test of Alternative Hypotheses"

ABAYOMI LAWANSON

University of Massachusetts 1970  
Botany

"Characterization of the ATPases Associated with Mature and Developing Chloroplasts of Phaseolus Vulgaris Variety Red Kidney"

ADEWALE MABAWONKU

Michigan State University 1977  
Agricultural Economics

"The Role of Apprenticeship Training in the Small-Scale Industrial Sub-Sector of Western Nigeria"

SEBASTIAN MEZU

Johns Hopkins University 1971  
Linguistics

"Leopold Sedar Senghor et la Defense et Illustration de la Civilisation Noir"

ISA MOHAMMED

University of Oregon 1974  
Mathematics

"Isomorphism Conditions for the Simple Modular Lie Algebras of Block Type"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

MAURICE NDUANYA

University of Pittsburgh 1974  
Curriculum Development

"Developing a Model for the Process and Management of Curricular Innovation in Developing Countries of Africa with Special Reference to Nigeria and Botswana"

AUGUSTINE NWABUZOR

Harvard University 1971  
Business Administration

"Local Foodstuff Distribution in Developing Nations: A Study in Performance and Opportunities in Nigerian Wholesale Trade"

ERNEST OBE

University of Pittsburgh 1971  
Education

"Probabilistic, Elimination Weighted-Choice and Conventional Techniques of Multiple-Choice Testing"

EMMANUEL ODIGBOH

Pennsylvania State Univ. 1974  
Agricultural Engineering

"Viscometric Characterization of Cassava Starch Pastes"

WALTER OFONOGORO

Columbia University 1972  
Economic History

"The Opening Up of Southern Nigeria to British Trade and its Consequences: Economic and Social History, 1881-1916"

BABATUNDE OGUNDELE

University of Illinois 1970  
Accounting

"Accounting and Economic Development: The Case of Nigeria"

EBENEZER OGUNLANA

Purdue University 1970  
Pharmaceutical Microbiology

"Biosynthesis of Ergot Alkaloids-in vitro Studies on Ring D"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

OLAOGUN OGUNSOLA

Duke University 1976  
Economics

"An Integrated Theory of Corporate Simulation Models: A Case Study of a Hypothetical Oil Company"

EMMANUEL OJEBBA

Ohio State University 1974  
Electrical Engineering

"Optimum Sampling of the Near Field for the Prediction of Antenna Patterns"

JEREMIAH OJOWU

University of Connecticut 1980  
Economics

"Technological Transformation in Nigerian Agriculture: An Analysis of the Nigerian Agricultural Development Policies, Including the Role of the Marketing Boards"

GODWIN OKURUME

Yale University 1970  
Economics

"Foreign Trade and the Subsistence Sector in a Peasant Export Economy: A Case Study of the Impact of Agricultural Export Expansion on Domestic Food Supplies in Western Nigeria"

DAVID OLAGUNJU

Northwestern University 1981  
Mathematics

"Bifurcation and Stability of Propagating Oscillatory Flames"

MICHAEL OLASEHINDE

Columbia University 1973  
Psychology

"The Changing Perceptions of Family Power Structure and Manipulative Behavior Among Yoruba Children"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

GABRIEL OLAYI

Adelphi University 1977  
Mathematics

"Finite Elements in Finite-Element Method"

OMOTOYE OLORODE

University of Kansas 1970  
Botany

"Hybridization Studies in Zinnia Section Mendezia and Tragoceras  
(Compositae)"

JOHNSON OLOWOLAFE

California Inst. of Tech. 1977  
Physics

"Silicide Formation and the Interaction of Metals with  
Polycrystalline Silicon"

JOSEPH OLUBADEWO

Vanderbilt University 1975  
Pharmacology

"Human Placental Cholinergic System: Occurrence, Distribution,  
Variation with Gestational Age, and Release of Acetylcholine"

BENJAMIN OLUFEAGBA

University of Texas/Austin 1975  
Electrical Engineering

"Distributed Parameter Systems Approximation for Estuarine  
Water Quality Modelling and Control"

STEPHEN OLUGBEMI

SUNY/Albany 1978  
Public Administration

"Military Leadership and Political Integration in Nigeria,  
1966-76: A Policy Approach to the Study of the Developmental  
Performance of the Military in a New and Plural Society"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ABIODUN OLUWOLE

Univ. of Calif./Berkeley 1969  
Nuclear Physics

"Nuclear Spins, Triplet-P(1) and Triplet P(2) Hyperfine Structures and Nuclear Moments of Germanium-69 and Germanium-75 and Triplet P(2) Hyperfine Structure of Germanium-69"

OGBEMI OMATETE

Univ. of Calif./Berkeley 1971  
Chemical Engineering

"Column Dynamics of Ternary Ion Exchange"

AKINTOLA OMIGBODUN

Massachusetts Inst. of Tech. 1971  
Civil Engineering

"On Transverse Shear Deformation in Circular Cylindrical Shells"

SAMUEL OMOBOMI

New York University 1971  
Economics

"Evaluation of Regression Analysis When the Errors are Heteroscedastic and Autocorrelated"

OLADIPO ONAYEMI

Cornell University 1975  
Food Technology

"Dehydration, Storage and Nutritional Properties of Methionine Supplemented Cowpea Powders"

INNOCENT ONWUEME

Univ. of California/Davis 1969  
Agronomy

"Effect of Heat Stress on Nitrate Reductase Activity and Growth in Barley & Wheat Seedlings"

ISAIAH ONYEMELUKWE

University of Michigan 1977  
Economics

"Econometric Analysis of Structural Patterns of Economic Development"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- JACOB OWOYALE  
University of Florida 1975  
Pharmacy  
"Synthesis and Biological Testing of Adrenal Scanning Agents"
- GABRIEL OYANNA  
University of Rochester 1972  
Physics  
"Theory for the Anomalous Thermal Properties of Uranium-Dioxide"
- OYELEYE OYEDIRAN  
University of Pittsburgh 1971  
Public Administration  
"Political Change in a Nigerian Urban Community"
- OLASOPE OYELARAN  
Stanford University 1971  
Linguistics  
"Yoruba Phonology"
- AKINOLA SALAU  
Stanford University 1976  
Physics  
"Investigation of Luminescence from Trapped Excitons in Cesium-Iodide"
- DAUDA SALIMONU  
Northwestern University 1975  
Mechanical Engineering  
"Viscous and Turbulent Flows Across Steps"
- ISIAQ OLUSOLA SOILE  
Duke University 1973  
English  
"The Myth of the Archetypal Hero in Two African Novelists - Chinua Achebe and James Ngugi"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- OYINDAMOLA SOMORIN  
Johns Hopkins University 1970  
Chemistry  
"Studies on Ricin"
- BABATUNDE SOWEMIMO  
University of Illinois/Chicago 1973  
Pharmacognosy  
"A Phytochemical Investigation of Gnidia Species"
- ALFRED SUSU  
Stanford University 1971  
Chemical Engineering  
"Reactive Scattering of Atomic and Molecular Gases from Clean Semiconductor Surfaces"
- ADEDIRAN TAIWO  
New York University 1975  
Science Education  
"A Study of the Nature of Incidental Physical Science Knowledge Possessed by Elementary School Children in Western State of Nigeria"
- ROLAND UBOGU  
SUNY/Albany 1978  
Economics  
"Highway Congestion, Work-staggering, Optimal Tolls, and Residential Location: Three Essays in Transportation and Urban Economics"
- IGNATIUS UKPONG  
Boston University 1976  
Economics  
"Infrastructure and Economic Development: A Study of The Electricity Industry in Nigeria"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

SOLOMON WANGBOJE

New York University 1968  
Art Education

"A Program of Art Education for Prospective Teachers of Art in the  
Secondary Schools of Nigeria"

RWANDA

CASIMIR BIZIMUNGU

University of Illinois/Chicago 1983  
Public Health

"Factors Associated with Attrition in Family Planning  
Programs: A Study of the Situation at the University of  
Illinois Family Planning Clinic (With an Essay on Implications  
of the Study for the Rwanda Family Planning Program)"

JAMES GASANA

University of Idaho 1982  
Forestry

"Site Factors Affecting Growth of Maiden's Gum, Eucalyptus  
globulus Labill. subsp. maidenii (F. Muell.) Kirkpatrick  
in Rwanda"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

SIERRA LEONE

AMADU BANGURA

Iowa State University 1983  
Rural Sociology

"Farmer Motivation Patterns in Participating in Adaptive Crop  
Research Trials/Demonstrations in Sierra Leone"

ROGERS BARLATT

University of Connecticut 1977  
Chemistry

"Hydride Formation in Strontium-Silver-Hydrogen, Calcium-Zinc-  
Hydrogen and Strontium-Zinc-Hydrogen Systems"

ALEX BOCKARIE

Michigan State University 1980  
Mathematics Education

"The Effectiveness of a Unit in Teaching and Learning of Growth  
Relations in the Sixth and Seventh Grades"

ANDREW BOMAH

Clark University 1982  
Geography

"An Analysis of the Physical and Landuse Variables Affecting  
Soil Erosion in the Njala Area of Sierra Leone, Southern  
Province"

JOHN ELLIOTT

Massachusetts Inst. of Tech. 1969  
Civil Engineering

"The Distress and Failure of Pavement Structures"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- CHRISTIAN HORTON Univ. of Calif./Los Angeles 1979  
Music Education  
"Indigenous Music of Sierra Leone: An Analysis of Resources  
and Educational Implications"
- ABDUL JALLOH University of Arizona 1980  
Mechanical Engineering  
"Dynamic Analysis of Structures by the Force Method"
- JOSCELYN JARRETT University of Iowa 1980  
Mathematics  
"Study of the Differential Effects of Three Levels of  
Instruction in Estimation on Fifth and Sixth Grade Pupils"
- WILTSHIRE JOHNSON University of Vermont 1976  
Chemistry  
"The Thermochemistry of "Embecic" Crystals, Solid Solutions,  
Mixed Valence and Sulphur Organic Compounds"
- ALIMANI KARGBO Michigan State University 1983  
Agricultural Economics  
"An Economic Analysis of Rice Production Systems and Production  
Organization of Rice Farmers in The Gambia"
- JOSEPH LAPPPIA University of Wisconsin 1979  
Agricultural Economics  
"Agricultural Development Projects and Small Farmer Behavior:  
The Economics of Small Farmer Rice Production and the  
Distribution of Benefits in the Integrated Agricultural  
Development Project in Sierra Leone"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

JONATHAN LENGAR

Ball State University 1978  
Educational Psychology

"An Analysis of the Perceptions of Teacher Trainees, Practicing Teachers, College Educators, and Public School Administrators Regarding the Effectiveness of Undergraduate Teacher Preparation Programs at Ball State University and Western Michigan University"

BERNARD LOGAN

Univ. of Calif./Los Angeles 1983  
Geography

"The Optimal Location of Rural Water Supply Facilities in Sierra Leone

MICHAEL LUMEH

Northwestern University 1983  
Engineering

Title Unknown

JOSEPH MASSAQUOI

West Virginia University 1981  
Chemical Engineering

"Combustion in Underground Coal Conversion"

SAHR MONDE

University of Arizona 1981  
Agronomy/Plant Genetics

"Nearest-Neighbor Procedure and Density-Dependent Yield Prediction in Barley"

MATTHEW SENGOVA

University of Wisconsin 1981  
Linguistics

"A Classification of Tense, Aspect, and Time Specification in the Verb System of Mende"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

PATRICK SUTTON

Michigan State University 1978  
Agronomy

"Evaluation of Some Oxisols, Ultisols, and Inceptisols with  
Their Practical Significance in Sierra Leone"

SIGISMUND THOMAS

Western Michigan University 1983  
Educational Leadership

"The Cipp Evaluation Model: A Functional Structure for the  
Inspector of Schools"

SONNY TUCKER

University of Illinois 1981  
Agricultural Education

"A Study of School Farm Laboratory Instructional Resources as  
Data Base for Improving Agricultural Science Programs in  
Secondary Schools of Sierra Leone"

JONATHAN WILSON

Duke University 1985  
Biology

"Sub-Lethal Effects of Diflubenzuron (Dimlin) on the Reproduction and  
Photobehavior of the Grass Shrimp Palaemonetes Pugio Holthuis"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

AHMED ABDULLA AHMED Univ. of Calif./Los Angeles 1979  
Geography

"The Dynamics of Land Use and Woody Vegetation Changes  
in Jebel Marra, Darfur, Sudan"

AHMED HUMEIDA AHMED Ohio State University 1980  
Agricultural Education

"Lender Behavior and the Recent Performance of Rural Financial  
Markets in the Sudan"

MAHMOUD AHMED University of Florida 1983  
Agronomy

"Water Stress Effects on Physiological Processes and Yield of  
Soybeans"

ABDALLA MOHAMED ALI Cornell University 1982  
Horticulture

"Effect of the Pre-Anthesis Temperature, Growth Regulators and  
Interfruit Competition on the Shape and Size of Sweet Pepper  
Fruit (Capsicum Annuum L.)"

ALI BANNAGA University of Wisconsin 1968  
Agricultural Economics

"Study of Characteristics, Attitudes and Opinions of the Students  
in the College of Agriculture in Sudan"

HASSAN DAMOUS Washington State University  
Agricultural Economics

"The Policy Impact on Sudanese Wheat Sector and Pattern of Wheat  
Consumption"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

MAHGOUB EL HAG

Iowa State University 1978  
Animal Science

"Evaluation of Silage Additives and Fermentation Characteristics  
of Forages Using Model Laboratory Silos"

SALMAN EL AWAD

University of Florida 1981  
Agronomy

"Soluble Silicates and UV-B Radiation Effects on the Growth,  
Nutrient Concentration, and Yield of Sugarcane"

HASSABEL ELBASHIR

Indiana University 1984  
Business Administration

"Monetary Approach to the Balance of Payments uUnder Fixed Exchange  
Rates: The Case of Sudan"

IDRIS EL HASSAN

University of Connecticut 1980  
Rural Sociology

"On Ideology: The Case of Religion in Northern Sudan"

SIDDIG EL HASSAN

University of Missouri 1981  
Plant Pathology

"Temperature-Induced Complexing of the Genomic Components in Situ of  
Southern Bean Mosaic Virus and Its Biologic Significance"

YOUSIF SEIF EL NASR

Kansas State University 1984  
Biology

"Laboratory Studies of Factors Related to Resistance of Pearl Millet  
(*Pennisetum Americanum* (L.) Leeke) Entries to Three Stored-Product  
Insect Species"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- FAROUK EL TAHER  
Cornell University 1982  
Horticulture  
"Molybdenum Studies on Absorption, Translocation, Distribution and Response in Apple Seedlings and Mature Trees"
- KAMAL FATTAH  
University of Arizona 1979  
Horticulture  
"The Effect of Toxaphene on Plasma Membrane ATPases of Different Tissues from the Cockroach (*Periplaneta Americana* (L.)) and the Mouse"
- MOHAMED GAILANI  
Kansas State University 1985  
Nutrition  
"Water Activity in Relation to Microbiology During Processing and Storage of Sudanese Dried Beef"
- MUSTAFA HUMMEIDA  
University of Nebraska 1981  
Agricultural Engineering  
"Airflow Distribution Along Perforated Duct During Grain Aeration"
- ABDELAZIZ IBRAHIM  
University of Minnesota 1967  
Veterinary Medicine  
"Isolation and Uses of Phages for Typing Salmonella"
- MOHAMMED KAMBAL  
University of Texas 1980  
Linguistics  
"An Analysis of Khartoum University Students Composition Errors with Implications for Remedial English in the Context of Arabicization"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

EISA ABDEL LATIF

University of Kansas 1985  
Biology

"The Effect of Aggression on Dispersal and Related Parameters in  
Microtene Populations"

MOHAMED MALIK

Univ. of So. California 1980  
Public Administration

"Development Reconsidered: Toward a Concatenated Theory of  
Human Well-Being"

ABDEL RAZIG MOHAMMED

Michigan State University 1979  
Agricultural Economics

"Factors Affecting the Supply and Demand for Seasonal  
Agricultural Labor: A Case Study of the Economics of Cotton  
Harvesting in Khasm El Girba Scheme, Sudan"

GAAFAR MOHAMMED

Michigan State University 1982  
Agricultural Economics

"An Analysis of Smallholder Rainfall Crop Production Systems:  
A Case Study of the Nuba Mountains Area, Western Sudan"

NURELDIN MUSHARAF

Ohio State University 1983  
Animal Science

"Broiler Chicken Performance and Energy Utilization as Affected  
by Protein Levels and Amino Acid Levels"

ASHA OMER

Kansas State University 1981  
Home Economics

"Perceived Inservice Needs of Home Economics Teachers in Sudan"

IBRAHIM WASFI

University of Missouri 1980  
Pharmacology

"The Effects of Pregnancy and Diabetes on Hepatic Lipid Metabolism  
by the Isolated Perfused Liver in vitro"

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AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

EL SAYED ZAKI

Michigan State University 1980  
Agricultural Economics

"An On-Going Evaluation of the Planning, Implementation and Tenancy  
(Farm) size of the Rahad Irrigation Project of the Sudan"

SWAZILAND

EUPHRASIA KUNENE

Univ. of Calif./Los Angeles 1979  
Linguistics

"The Acquisition of Siswati as a First Language: A Morphological  
Study with Special Reference to Noun Prefixes, Noun Classes and Some  
Agreement Markers"

OWEN MORDAUNT

Indiana University 1981  
English/TESL

"Attitudes Toward the Utility and Sociocultural Influences of the  
English Language: A Study of Prospective Teachers in Swaziland"

ANNIE MYENI

University of Massachusetts 1983  
Education

"Intercultural Sensitivity: Theory Development, Instrument  
Construction and Preliminary Validation"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- NAMEUS MNZAVA Univ. of California/Davis 1971  
Plant Pathology  
"Regulation of Gynophore Elongation and Fructification in the  
Peanut (Arachis Hypogaea L)"
- PIUS NG'WANDU Stanford University 1971  
Education  
"Factors Affecting the Participation of Primary School Teachers' in  
Village Community Leadership in Tanzania"
- JUSTINIAN RWEYEMAMU Harvard University 1971  
Economics  
"An Industrial Strategy for Tanzania"
- CLEMENS TIBAZARWA Claremont Graduate School 1975  
Economics  
"Economic Impact on Tanzania of the East African Common Market"
- TOGO
- PIERRE ABASSA University of Alabama 1984  
Animal Science  
"Systems Approach to Gobra Zebu Production in Dahra, Senegal"
- DOVI-AKUE ALIPOE Texas Tech. University 1984  
Agricultural Economics  
"Econometric Analysis of the Structural Relationships of the U.S.  
Cotton Economy"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- KODJO AMEGEE  
Oregon State University 1985  
Agricultural Engineering  
"Application of Geostatistics to Regional Evatranspiration"
- EDINA BEDOU-JONDOH  
Indiana University 1972  
Linguistics  
"Some Aspects of the Predicate Phase in Gegbe"
- LUBIN DOE  
University of Arizona 1979  
Economics  
"A Simple Macroeconomic Model of Togo"
- OTTO EDOH  
University of Arizona 1983  
Physics  
"Optical Properties of Carbon from the Far Infrared to the Far Ultraviolet"
- EGNONTA KOFFI-TESSIO  
University of Hawaii  
Agricultural Economics  
"Patterns of Energy Use, Energy Cost Increases and Their Impacts on Crop Production on the Big Island of Hawaii: A Linear Programming Approach"



AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- SALAH KHAMMOUMA  
Stanford University 1972  
Chemical Engineering  
"Ammonia Synthesis on Supported Iron Catalysts"
- AHMED MAHJOUB  
SUNY/Stonybrook 1979  
Computer Science  
"Analysis of Response Time in Real Time Systems"
- NAJIB SAID  
Tufts University 1970  
International Affairs  
"The Philosophy of the Parti Unique in Tunisia: A Theoretical Framework"
- ALI BEN SALEM  
Cornell University 1973  
Agricultural Economics  
"Firm Size and Changes in Industrial Structure: An Econometric Analysis of the Dairy Industry in New York State"
- AMOR TAHARI  
University of Pittsburgh 1978  
Economics  
"Money, Government, Budget Constraint and Balance of Payments in a Growing Economy"
- ALI ZOUBA  
University of Arizona 1979  
Phytopathology  
"Stabilization and Chemical Properties of Two Related Isometric Cactus Viruses"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

UGANDA

JOMABUTI AJEANI

Oklahoma State University 1979  
Animal Science

"Whey-Grown Yeast as a Protein Source for Early-Weaned Pigs and Sheep"

CHRISTOPHER BAKWESEGHA

Rutgers University 1973  
Town Planning

"Modernization and National Integration in Uganda"

SAMM BBUYEMUSOKE

Washington State University 1981  
Agricultural Economics

"The Supply of and Demand for Asparagus in the United States"

ABBAS HIRYA

Rutgers University 1981  
Planning

"Transportation, Economic Development and Spatial Transformation in Uganda"

JOHN ILUKOR

University of Rochester 1967  
Physics

"Study of Excitation & Propagation of Ultrasonic Waves in Quartz at 114 GHZ"

JOHN KAHIMBAARA

University of Michigan 1975  
Geography

"Squatter Settlements and the City in Developing Countries, A Spatial Simulation"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

ANDREW KAYIIRA

SUNY/Albany 1978  
Criminology

"Violence in Koudoism: The Rise and Nature of Violent Crime  
In Uganda"

BEN LATIGO

Univ. of So. California 1979  
Mechanical Engineering

"Large Scale Structure Interactions in a Two-Dimensional Turbulent  
Mixing-Layer"

ERIABU LUGUJJO

California Inst. of Tech. 1974  
Electrical Engineering

"I. Backscattering and Channeling Effect Studies on Semiconductor  
Metal Systems. II. Low-Temperature Migration of Silicon Through  
Metal Films"

PEREGRINE NTUNGWA MAASHA

Columbia University 1975  
Geophysics

"Studies of the Tectonics, Seismicity and Geothermics of the Rift  
System of East Africa"

EDDIE MUKASA-MUGERWA

Colorado State University 1974  
Animal Science

"Genetics of Bovine Spermatozoan Morphology"

SAMUEL MUSISI-NKAMBWE

University of Kansas 1975  
Geography

"Transportation Networks as Agents and Index of Modernisation in  
Costa Rica"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- PETER MIYANDA-MUTEBI  
Univ. of Calif./Los Angeles 1973  
Education  
"The History Curricula for Uganda Secondary Schools, 1940-1970: A General Evaluative Study, Focusing on Attempts to Use History as a Factor in Developing National Consciousness and a Sense of African Dignity"
- JESUDAS MWANJE  
Kansas State University 1970  
Physics  
"X-Ray Diffraction by a Thermally Excited Quartz Crystal"
- SAM NAHAMYA  
Colorado State University 1980  
Agricultural Economics  
"Regional Economic Disintegration - Tensions, Conflicts and Causes: The Case for the EAC"
- PETER NKEDI-KIZZA  
Univ. of California/Davis 1979  
Agronomy  
"Ion Exchange in Aggregated Porous Media During Miscible Displacement"
- NATHAN OKIA  
Indiana University 1968  
Biology  
"The Effect of Ovariectomy and Replacement Therapy on Rat Anterior Pituitary FSH and Nucleic Acids"
- FAUSTINO ORACH-MEZA  
University of Rhode Island 1978  
Oceanography  
"Polynomial Distributed Lag Formulation of the Functional Dependence of Maine Lobster Yield on Several Components of Bio-Economic Variables"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

CHANDRA PATEL

New York University 1973  
Economics

"An Econometric Study of the Ugandan Economy: 1954-1967"

ZAIRE

BIN-WARUZI BIANGA

University of Wisconsin 1982  
Rural Administration

"Peasant, State and Rural Development in Postindependent Zaire"

MENDO CHIRUME

Florida State University 1979  
Education

"Improving Agricultural Education in Zaire: A Strategy for  
Educational Planning"

MABIALA-SEDA DIANGUALA

Florida State University 1980  
Adult Education

"Development of Midrange Educational Technology in a  
Developing Country: The Case of Zaire"

DIANZUNGU BINIAKUNU

SUNY/Buffalo 1980  
Education

"Design and Evaluation of a Beginning French Reading Program:  
The Case of Third Grade Program in Zaire"

LUMEMBELE KABUYA

SUNY/Buffalo 1980  
Education

"Assessment of Reading Abilities of Zairian Students at  
Ages 12 and 18 Years"

AFCRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

- THEOPHILE (DIA BONDO) LUKUSA                      University of Michigan    1973  
Development Economics
- (Title Unknown)
- LWA-MIGONGO LWAMBA                              Adelphi University    1981  
Mathematics
- (Title Unknown)
- PAUL MALIMBA                                      Univ. of Calif./Los Angeles    1971  
Economics
- "An Economic Evaluation of the International Coffee Agreements of  
1962 and 1968"
- MARC-ANTOINE MBAYA                              Ohio State University    1974  
Mechanical Engineering
- "Dynamic Stability of a Cylindrical Shell in an Acoustic Medium"
- MAJAMBU MBIKAY                                  SUNY/Buffalo    1979  
Biochemistry
- "Rate of Initiation of Protein Synthesis in Intact Cells and Cell-  
Free System: Probing with Inhibitors for Differences Among Messenger  
Ribonucleic Acids"
- DENIS MBUYI                                      SUNY/Buffalo    1982  
Comparative Education
- "Educational Messages in Kenya and Tanzania: A Comparative Analysis  
of Contemporary Elementary School Textbooks"
- BENJAMIN MPIANGU                                  SUNY/Buffalo    1973  
Educational Psychology
- "The Relationship Between Conservation of Number and Arithmetic"

AFGRAD ALUMNI IN DOCTORAL PROGRAMS  
WITH DISSERTATION TITLES

KALAMBAYI MUAMBA-NTOMBOLO                      SUNY/Albany    1980  
Public Administration  
"Authoritarian Rule and National Development: A Case Study of the  
Dilemma of Development in Zaire"

PASCAL MUBENGA                                      Western Michigan University    1972  
Mathematics  
"Convergence of Bounds in Optimization"

BIPI MULUMBA                                        SUNY/Buffalo    1981  
Medicinal Chemistry  
"Allylic Esters as Potential Antitumor Agents"

ALONE NGWASHI                                      University of Massachusetts    1976  
Agricultural Economics  
"Optimum Sources of Feedgrains for the Massachusetts Dairy  
Industry"

WA GAMOKA PAMBU                                   Florida State University    1978  
Educational Psychology  
"A Structure-of-Intellect Analysis of some Piagetian Formal  
Operation Tasks: A Developmental View"

PASCAL PAYANZO                                      Northwestern University    1974  
Sociology  
"Education and University Students in a New Nation: The Case of the  
Republic of Zaire"

NTAWUKIRIWABO SEKIMONYO                        Florida State University    1978  
Education  
"A Demographic-Educational and Resources Requirements Simulation  
Model with Application to Zaire"

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Northwestern University 1979  
Chemistry

"Steric Properties of Pi-Electrons"

ALEXIS TAKIZALA  
Univ. of Calif./La Jolla 1974  
Linguistics

"Studies in the Grammar of Kihungan"

NZAJI TSHIMANGA  
University of Vermont 1981  
Pharmacology

"10-Formyltetrahydrofolate Synthetase and Formate Metabolism  
in Adult Filariae"

MUKOHYA VWAKYANAKAZI  
University of Wisconsin 1982  
Rural Sociology

"African Traders in Butembo, Eastern Zaire (1960-1980): A  
Case Study of Informal Entrepreneurship in a Cultural Context  
of Central Africa"

ZAMBIA

VERNON CHINENE  
University of Hawaii 1984  
Agronomy

Title Unknown

JOSEPH CHIPEPA  
University of Arizona 1981  
Animal Physiology

"Effect of Reduced Energy Intake on Pituitary Response to  
Gonadotropin Releasing Hormone"

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Lehigh University 1973  
Chemical Engineering

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Active Carbon from Dilute Aqueous Solution"

CHISEPO MPAISHA

University of Pittsburgh 1979  
Public Administration

"A Study of Zambia's Copper Policy: Partial Nationalisation,  
Market Intervention, Deep Sea-Bed Mineral Exploitation"

SIBESO MUKOBOTO

University of Massachusetts 1982  
Curriculum Development

"Development of a Curriculum Planning Model for Zambian Secondary  
Schools"

GODFREY MUYOBA

University of Washington 1983  
Geography

"Labor Recruitment and Urban Migration: The Zambian Experience"

CHISELEBWE NG'ANDWE

University of Connecticut 1980  
Economics

"Inflation in Zambia: 1964-1976"

YOBERT SHAMAPANDE

Columbia University 1979  
Urban & Regional Development

"Rural Development Planning and Resource Allocation Policy in Zambia"

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University of Pittsburgh 1977  
Public Administration

"Corporate Autonomy and Government Control: A Study of 3 State Enterprises Under a National Planned Developing Economy, Indeco, RDC, and NCCM of Zambia"

DENNIS WANCHINGA

Oklahoma State University 1983  
Biology

"The External Ultrastructure and Biology of the Spinose Ear Tick, Otobius Megnini Duges, 1884 (Acarina: Argasidae)"

ZIMBABWE

TEDDY ZENGENI

Stanford University 1970  
Geophysics

"PKKP and the Fine Structure of the Earth's Core"