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GRADUATE TRAINING IN EASTERN
AND CENTRAL AFRICA

A CONSULTANCY REPORT SUBMITTED TO
THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
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GRADUATE TRAINING IN EASTERN AND CENTRAL AFRICA

TABLE OF CONTENTS

	<u>Page</u>
I. <u>INTRODUCTION</u>	1
1.1 BACKGROUND INFORMATION ABOUT IDRC	1
1.2 OBJECTIVES AND TERMS OF REFERENCE	2
1.3 METHODS	4
II. <u>FINDINGS OF THE STUDY</u>	5
2.1 <u>DJIBOUTI</u>	5
2.1.1. INTRODUCTION	5
2.1.2. UNIVERSITIES IN THE COUNTRY	6
2.1.3. INSTITUTIONS VISITED	7
2.1.4. GRADUATE TRAINING IN DJIBOUTI	10
2.1.5. RESEARCH METHODOLOGY COURSES	10
2.1.6. GRADUATE TRAINING STATISTICS	10
2.1.7. GRADUATE TRAINING INFRASTRUCTURES	10
2.1.8. PROBLEMS PERTAINING TO GRADUATE TRAINING.	11
2.1.9. STAFF DEVELOPMENT POLICIES AND OTHER RELEVANT INFORMATION	11
2.2 <u>ETHIOPIA</u>	14
2.2.1. INTRODUCTION	14
2.2.2. UNIVERSITIES IN THE COUNTRY.....	15
2.2.3. CAMPUSES/COLLEGES/FACULTIES VISITED.....	17
2.2.4. GRADUATE TRAINING AND PROGRAMMES OFFERED.	19
2.2.5. RESEARCH METHODS COURSES	23
2.2.6. GRADUATE TRAINING STATISTICS	24
. STUDENTS	24
. STAFF	24
. FEES AND OTHER COSTS	28
. OTHER RELEVANT STATISTICS	28
2.2.7. GRADUATE TRAINING INFRASTRUCTURES	29
2.2.8. PROBLEMS PERTAINING TO GRADUATE TRAINING.	30
2.2.9. STAFF DEVELOPMENT POLICIES	31
2.3 <u>KENYA</u>	33
2.3.1 BACKGROUND INFORMATION	33
2.3.2 UNIVERSITIES IN THE COUNTRY	33

	<u>Page</u>
2.3.3 UNIVERSITIES/CAMPUSES/COLLEGES/FACULTIES VISITED	34
2.3.4 GRADUATE TRAINING PROGRAMMES	35
2.3.5 RESEARCH METHODS COURSES	43
2.3.6 GRADUATE TRAINING STATISTICS	44
. STUDENTS	44
. STAFF	44
. FEES AND OTHER COSTS	57
. OTHER RELEVANT STATISTICS/INFORMATION....	58
2.3.7 GRADUATE TRAINING INFRASTRUCTURES.....	58
2.3.8 PROBLEMS PERTAINING TO GRADUATE TRAINING....	59
2.3.9 STAFF DEVELOPMENT POLICIES.....	60
2.4 <u>MAURITIUS</u>	61
2.4.1 INTRODUCTION	61
2.4.2 UNIVERSITIES IN THE COUNTRY	61
2.4.3 COMPUSES/COLLEGES/FACULTIES VISITED	63
2.4.4 GRADUATE TRAINING PROGRAMMES	64
2.4.5 RESEARCH METHODS COURSES	66
2.4.6 GRADUATE TRAINING STATISTICS	66
. STUDENTS	66
. STAFF	67
. FEES AND OTHER COSTS	67
. OTHER RELEVANT STATISTICS	68
2.4.7 GRADUATE TRAINING INFRASTRUCTURES	68
2.4.8 PROBLEMS PERTAINING TO GRADUATE TRAINING....	68
2.4.9 STAFF DEVELOPMENT POLICIES	69
2.5 <u>SEYCHELLES</u>	71
2.5.1 INTRODUCTION	71
2.5.2 UNIVERSITIES IN THE COUNTRY	74
2.5.3 OFFICES/COLLEGES/SCHOOLS VISITED	74
2.5.4 TRAINING PROGRAMMES OFFERED	74
2.5.5 RESEARCH METHODS COURSES	77
2.5.6 GRADUATE TRAINING STATISTICS	77
2.5.7 GRADUATE TRAINING INFRASTRUCTURES	77
2.5.8 PROBLEMS PERTAINING TO GRADUATE TRAINING....	78
2.5.9 STAFF DEVELOPMENT POLICIES	79

	<u>Page</u>
2.6	<u>SOMALIA</u> 80
2.6.1	INTRODUCTION 80
2.6.2	UNIVERSITIES IN THE COUNTRY 81
2.6.3	UNIVERSITY CAMPUSES VISITED 82
2.6.4	GRADUATE TRAINING PROGRAMMES OFFERED 83
2.6.5	RESEARCH METHODS COURSES 86
2.6.6	GRADUATE TRAINING STATISTICS 86
2.6.7	GRADUATE TRAINING INFRASTRUCTURES 87
2.6.8	PROBLEMS PERTAINING TO GRADUATE TRAINING..... 88
2.6.9	STAFF DEVELOPMENT POLICIES AND OTHER RELEVANT INFORMATION 88
2.7	<u>TANZANIA</u> 92
2.7.1	INTRODUCTION 92
2.7.2	UNIVERSITIES IN THE COUNTRY 93
2.7.3	CAMPUSES/FACULTIES VISITED 94
2.7.4	GRADUATE TRAINING PROGRAMMES OFFERED 94
2.7.5	RESEARCH METHODS COURSES 99
2.7.6	GRADUATE TRAINING STATISTICS 101
	. STUDENTS 101
	. STAFF 103
	. FEES AND OTHER COSTS 112
2.7.7	GRADUATE TRAINING INFRASTRUCTURES 113
2.7.8	PROBLEMS PERTAINING TO GRADUATE TRAINING..... 113
2.7.9	STAFF DEVELOPMENT POLICIES 114
2.8	<u>ZAMBIA</u> 117
2.8.1	INTRODUCTION 117
2.8.2	UNIVERSITIES IN THE COUNTRY 118
2.8.3	CAMPUSES AND FACULTIES VISITED 119
2.8.4	GRADUATE TRAINING PROGRAMMES OFFERED 119
2.8.5	RESEARCH METHODS COURSES 122
2.8.6	GRADUATE TRAINING STATISTICS 123
	. STUDENTS 123
	. STAFF 125
	. FEES AND OTHER COSTS 126
2.8.7	GRADUATE TRAINING INFRASTRUCTURES 128
2.8.8	PROBLEMS PERTAINING TO POSTGRADUATE TRAINING 128
2.8.9	STAFF DEVELOPMENT POLICIES 130

	<u>Page</u>
2.9	<u>ZIMBABWE</u> 132
2.9.1	INTRODUCTION 132
2.9.2	UNIVERSITIES IN THE COUNTRY 134
2.9.3	UNIVERSITY CAMPUSES VISITED 134
2.9.4	GRADUATE TRAINING PROGRAMMES OFFERED 135
2.9.5	RESEARCH METHODS COURSES 137
2.9.6	GRADUATE TRAINING STATISTICS 138
	. STUDENTS 138
	. STAFF 139
	. FEES AND OTHER COSTS 147
2.9.7	GRADUATE TRAINING INFRASTRUCTURES 148
2.9.8	PROBLEMS PERTAINING TO GRADUATE TRAINING .. 149
2.9.9	STAFF DEVELOPMENT POLICIES 150
III	<u>GENERAL OBSERVATIONS</u> 151
3.1	DJIBOUTI 151
3.2	ETHIOPIA 151
3.3	KENYA 152
3.4	MAURITIUS 153
3.5	SEYCHELLES 153
3.6	SOMALIA 154
3.7	TANZANIA 154
3.8	ZAMBIA 155
3.9	ZIMBABWE 156
IV	<u>SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS</u> 157
4.1	POSTGRADUATE CURRICULA 157
4.2	REGULATIONS PERTAINING TO GRADUATE STUDIES..... 157
4.3	PROBLEMS OF POSTGRADUATE RESEARCH STUDENTS 158
4.4	PROBLEMS OF STAFFING 159
4.5	STAFF DEVELOPMENT POLICIES 159
4.6	RELEVANCE OF POSTGRADUATE COURSES 160
4.7	OTHER CONSIDERATIONS 160
V	<u>ACKNOWLEDGEMENTS</u> 162
VI	APPENDIX I: LIST OF PEOPLE MET 163

I. INTRODUCTION

1.1. BACKGROUND INFORMATION ABOUT IDRC

- (1) The International Development Research Centre, IDRC, is a corporation established by the Parliament of Canada in 1970 to promote and support scientific and technical research undertaken by scholars from developing countries for the benefit of their nations.
- (2) The fields of investigation to which IDRC gives its financial and professional support are primarily those which directly or indirectly affect the day to day lives of the people in the developing world: agriculture; food storage, food processing and distribution, forestry; fisheries; animal sciences; energy; tropical diseases; water supplies; health services; education; population studies; economics, communications; urban policies; science and technology policy; and information systems.
- (3) The operations of IDRC are guided by an international 21-member Board of Governors of whom 6 are, in practice, from developing countries. The headquarters of the institution are in Ottawa, Canada, with regional offices in Africa (Dakar and Nairobi), Asia (Singapore), Latin America (Bogota), and the Middle East (Cairo).

- (4) The programmes that IDRC supports help the developing countries to build the scientific competence of their institutions and of their researchers. The support thus enables the developing countries to solve their own problems.
- (5) The various programmes supported by IDRC fall under four divisions: Agriculture Food and Nutritional Sciences; Health Sciences; Information Sciences, and Social Sciences.

1.2. OBJECTIVES AND TERMS OF REFERENCE

- (1) As pointed out under 1.1.(2) above, one of the fields to which IDRC gives financial and professional support is Education. Indeed, IDRC's support towards helping developing countries to build the scientific competence of their institutions and researchers, as mentioned under 1.1.(4), also falls within the framework of Education.
- (2) It should be noted that University education in Eastern and Central Africa is, in most cases, as young as the political independence of the African countries in question. Most of the Universities were established in the early or mid-1960's, and were primarily aimed at producing the much needed trained manpower to serve in the various government ministries and parastatal organisations: secondary school teachers, agricultural officers, economists, foresters, medical doctors, veterinarians, etc.

- (3) The training offered in these Universities was primarily focussed on producing bachelor's degree graduates. Postgraduate training (taken in this report as being synonymous with Graduate training) was, in most cases, done in overseas Universities through competitive scholarships. Such scholarships were, however, (and still are) grossly inadequate. It was, therefore, soon realised that there was a need for establishing post-graduate training programmes in the African Universities as well, to cope with the ever increasing demand for highly trained manpower in the region.
- (4) The extent to which the various Universities in the Eastern and Central Africa have responded to the challenge of establishing postgraduate training programmes to cater for the national manpower needs, is not well documented in the literature.
- (5) The objective of author's consultancy mission was thus to travel to selected countries in the region, viz, Djibouti, Ethiopia, Mauritius, Kenya, Seychelles, Somalia, Tanzania, Zambia, and Zimbabwe with a view to:
- (a) assessing information on existing postgraduate programmes in the various disciplines and institutions in terms of staffing, infrastructure, content delivery modalities and unit costs;
 - (b) exploring needs for short-term research training courses of young staff in areas not normally covered in conventional postgraduate programs;

- (c) probing new and neglected areas where regional postgraduate programmes might be the most feasible approach;
- (d) exploring how to establish linkages between Deans and Directors of Postgraduate Studies, and between Manpower Development Officers in the universities;
- (e) exploring staff development policies in the visited institutions; and
- (f) recommending future trends in postgraduate programmes in the region and the place of research training in them.

1.3. METHODS

- (1) The information contained in this report was compiled through personal visits by the author to the institutions mentioned under each country visited, and through discussions with the officers listed under each country.
- (2) Additional information was obtained from published or mimeographed documents (including University Calendars/ Catalogues, etc.) presented to the author during his visit.
- (3) The author's job was facilitated by the fact that responsible officers at the IDRC, Nairobi, had already written letters of introduction to the various universities visited, outlining his arrival dates, and the objectives of the mission.

II. FINDINGS OF THE STUDY

2.1. DJIBOUTI

2.1.1. INTRODUCTION

- (1) The Republic of Djibouti is a small country (23,000 sq.km) situated on the Strait of Bab el Mandib, where the Red Sea and the Gulf of Aden meet. It is bordered to the north and west by Ethiopia, to the south by the Republic of Somalia, and to the east by the Red Sea.
- (2) Historically, Djibouti is a young country, having attained its political independence from France only in 1977. The administrative capital of Djibouti (formerly French Somaliland) is also called Djibouti, a city which grew as a port, which serves the hinterland of the country and also of Ethiopia.
- (3) Climatically, Djibouti has a hot (May to September temperatures 30 - 35^oC), semi-arid to almost desert climate, with sparse vegetation which consists mainly of thorn-bushes and xerophytic shrubs.
- (4) With such a hostile climate, Djibouti cannot grow enough food for its 350,000 human population. Almost all the food consumed in the country must be imported. The people, mostly the Somalis and the Afars, are thus largely nomadic pastoralists, grazing herds of camels, goats, sheep and cattle.

- (5) About 60% of the inhabitants of the Republic of Djibouti live around the capital, Djibouti, and most of them are Moslems. Friday is thus a non-working day. French culture is also quite conspicuous, especially with respect to the language used on official business, the system of education, and even the system of parking cars on the streets. Indeed cultural and economic ties with France are very strong, and many teachers in the schools, many senior officers in the Army and the Police Force, are expatriate^es from France.
- (6) Although Djibouti is a small country, she is fortunate enough to have 370 km of coastline, and the sea in the region is rich in a wide variety of flora and fauna, including fish. Most of the marine resources in the country, and in fact the terrestrial resources as well, are yet to be developed. Apparently, the development of the port and its strategic control, was more important to the colonial government than the development of Djibouti's other natural and manpower resources.

2.1.2. UNIVERSITIES IN THE COUNTRY

- (1) Elsewhere in Eastern and Central Africa, the tradition has been to establish a national University soon after political independence. Djibouti is one of the few exceptions to the rule. The country became politically independent in June 1977, and still does not have a national University.

- (2) Several factors seem to explain this discrepancy. In the first place, education was, apparently, not given one of the highest priorities by the colonial government. Secondly, the inhabitants of the country were, and still are, largely pastoralists with nomadic habit, moving from locality to locality in search for water and better pasture. Under such circumstance parents found it inconvenient to send their children to school. The number of Djibouti nationals who qualify for University education would thus be expected to be too small to justify the great expenses involved in building a national university. This, indeed, seems to be the case, even at the present time. It should be recalled also (see 2.1.1.(4) above) that the human population of the country is very small, being only 350,000.
- (3) The institutions of higher learning in Djibouti are thus at the level of secondary schools and non-degree granting colleges. University education for Djibouti nationals must, therefore, be undertaken in overseas institutions, as will be detailed under 2.1.3.(2) below.

2.1.3. INSTITUTIONS VISITED

- (1) The author was fortunate enough to hold discussions with relevant officials at the Ministry of Education; at the Centre of Adult Education; at the United Nations Development Programme; and at the Institute of Research (ISERST). The names and addresses of the officers interviewed are listed under Appendix I (attached).

(2) During the discussions the following facts were gathered about manpower training in Djibouti:

- (a) Even at secondary school level Djibouti largely relies on expatriate teachers. During 1983/84, for example, there were 224 such teachers out of a total of 281 qualified teachers. This means 79.7% expatriates, which is very high at that level of education. Djibouti thus has a long way yet to go to attain self-reliance with respect to her secondary school teaching.
- (b) The School System in Djibouti follows the French pattern of Education: some of school leavers follow an academic line and attain the Baccalaureat qualification, which can grant them admission towards a degree course in French Universities; others follow a Trade School or a technical line, which enables them to acquire specific skills (e.g., in electricity, in wood-work, in masonry, in plumbing, in mechanics) or knowledge in commercial, business subjects.
- (c) There is an agreement between the Djibouti and the French Governments, which guarantees scholarships to qualified Djibouti nationals who secure admission in French Universities, or in other French-speaking countries. The number of Djibouti students involved each year is in the order of 25 to 30.

- (d) During the discussions the following statistics (referred to as Table I) on the number of Djibouti students who were undertaking post-secondary studies in various countries during 1983/84 were obtained:

Table 1 : Distribution of Djibouti students in various countries

Country	Number of Students
France	171
Ivory Coast	23
Morocco	2
Senegal	2
Tunisia	1
Canada	1
TOTAL	200

- (e) It was further noted that for historical reasons, 85.5% of the students who go for advanced studies overseas undertake their training in France. It was encouraging to note also that an increasing number of Djibouti nationals were undertaking their studies in other African countries. This is, however, limited to French-speaking African countries, largely because of the language factor.

2.1.4. GRADUATE TRAINING IN DJIBOUTI

- (1) As pointed out under 2.1.2.(1) above, there is no university in Djibouti. There are, therefore, no post-graduate training programmes offered in the country. All advanced studies undertaken by Djibouti nationals must thus be done overseas, largely in France (see Table 1 under 2.1.3.(2) (d) above).
- (2) It is unfortunate that during the author's visit to Djibouti it was not possible for him to secure relevant statistics on the number of Djibouti nationals who are enrolled for postgraduate degree programmes overseas. It was, however, stated that the majority of Djibouti nationals who go for higher studies overseas, enrol in programmes leading to only the Bachelor's degree or its equivalent.

2.1.5. RESEARCH METHODOLOGY COURSES

This section is not relevant to Djibouti. See comments under 2.1.4.

2.1.6. Graduate Training Statistics: See comments under 2.1.4

2.1.7. GRADUATE TRAINING INFRASTRUCTURES

There are no facilities for postgraduate training in Djibouti. See comments under 2.1.4.

2.1.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) Lack of undergraduate and postgraduate programme training facilities in any given country necessitates complete dependence on overseas institutions for the country's manpower development needs. The training given abroad does not often ensure that students from developing countries are exposed to situations which will equip them with the tools that are needed to solve the problems prevailing in their home countries. On the contrary, training in the more highly developed countries of the world often promotes brain-drain from the developing world.
- (2) Since the number of postgraduate scholarships available to students from developing countries is also progressively diminishing year after year, an over-dependence on overseas training also means a reduced pace in the developing countries' staff development programmes.
- (3) During the author's discussions with various officials in Djibouti, it was pointed out that the problems outlined above are, in fact, beginning to worry some of the senior government officials in the country.

2.1.9. STAFF DEVELOPMENT POLICIES AND OTHER RELEVANT INFORMATION

- (1) The hub of the economy in Djibouti centres around seaport business, international trade, and commercial business around the capital, where about 60% of the total human

population of the country live. Indeed, Djibouti is very nicely located for international trade, and there are many commercial banking facilities which help to promote business undertakings.

- (2) It was pointed out during the discussions that the policy of the Djibouti Government is to train a large proportion of Djibouti nationals towards acquiring practical professional skills which are relevant to the economic situation prevailing in Djibouti. The idea is to produce people who can be self-employed on completion of their training in the schools and colleges: people who are capable of repairing electrical faults in houses; repairing mechanical faults in the various pieces of machinery and equipment which are purchased with the hard-earned foreign exchange; and running the various types of commercial business activities prevailing in the city of Djibouti. The policy is thus to expand Trade and Technical Schools in the country, an aspect which does not seem to have been given adequate emphasis by a number of other independent countries in Eastern and Central Africa.
- (3) It has already been pointed out that 79.7% of the qualified teachers in the various secondary schools in Djibouti are non-nationals. In fact, most jobs in Djibouti which require university graduates are currently performed by expatriate staff, mostly from France. The Djibouti Government is thus also making serious efforts to accelerate the pace of training its nationals in

overseas institutions, who would then be expected to return (if they do), and take up the jobs currently done by expatriates.

- (4) Generally, however, Djibouti seems to be one of the least developed countries in Eastern and Central Africa with respect to local staff development. The country thus deserves special attention in terms of scholarship support, even at first degree level.
- (5) In terms of natural resources, Djibouti is rather unfortunate in that most of her countryside is a semi-desert. The meagre natural vegetation can hardly sustain the grazing pressure caused by the nomadic pastoralists, especially during the dry season. Some research is being undertaken by the national institute of scientific research, ISERST, in Djibouti on the possible exploitation of the country's groundwater resources for forage crops, but the results are yet to be seen. The groundwater resources of Djibouti also include hot springs, which have potential for producing geothermal energy, including electricity. Solar energy development, wind energy development, fishery resource development, geological resource development, are also being researched upon. Unfortunately, however, the research undertakings are primarily done by expatriate scientists, whose stay in the country is short-term in nature. This again reinforces the point on the need for training Djibouti nationals to acquire postgraduate research skills.

2.2. ETHIOPIA

2.2.1. INTRODUCTION

- (1) Ethiopia is unique amongst the Eastern and Central African countries visited in that except during the brief period of its invasion and occupation by Italian forces (1935 to 1941), it was never colonised by any super-power. The country also has a long tradition of recorded history. Furthermore, it developed its own script over 2,000 years ago, quite unlike any other country in the region. Despite this, however, university education in Ethiopia began only three ~~decades~~ ago. Indeed, the first university degrees in the country were conferred as recently as 1954.

- (2) For quite some time during the early days, University education in Ethiopia was in a somewhat confused state: the various colleges and schools which granted degrees in the country were administered by separate Government Agencies or Ministries. The Bachelor's degree in Engineering was, for example, granted by the Ministry of Education; the Bachelor's degree in Agriculture was granted by the Ministry of Agriculture; the Public Health College was controlled by the Ministry of Health, etc.

- (3) Things were further complicated by the fact that each ministry had its own policies of student admission, staff promotion, etc., and there was stiff competition among them with respect to acquiring the best students and the budget. In 1961, however, a centralised university system was established in Ethiopia. Under this new system, Addis Ababa University was inaugurated with a charter of its own, bringing together five degree-granting colleges under a single Board of Governors, one Council, one President, one Registrar and one Dean of Students. The Genete - Leul Palace, which the former Emperor vacated after the 1960 attempted coup d'etat, was donated to become the Main Campus of Addis Ababa University. The impressive and magnificent palace still houses the Central University Administration and the Senate Chamber. Subsequently, an additional University, Asmara University, was also established.

2.2.2. UNIVERSITIES IN THE COUNTRY

- (1) There are still only two universities in Ethiopia, Addis Ababa University and Asmara University, the former being larger than the latter in terms of student and staff population. It is unfortunate that because of time constraints the author was able to visit only Addis Ababa University.

- (2) During the discussions it was pointed out, however, that the general organisation of the two Universities is similar. Each has a President as its top executive officer, assisted by two Vice-Presidents, one for Academic Affairs, and the other for Administration and Development. There are also Deans of Schools (Faculties), Directors of Institutes, and Heads of Departments who form part of the administration. The highest Governing Body within each University is the Senate.
- (3) The teaching programmes offered at Addis Ababa University fall under two broad categories: Day Programmes and Continuing Education (Evening and Summer) Programmes.

The former category includes the following:

- (a) Agricultural Programmes;
- (b) Natural Science Programmes;
- (c) Professional Programmes;
- (d) Social Science and Language Programmes;
- (e) Pedagogical Science Programmes; and
- (f) Graduate Programmes.

The Continuing Education Programmes are offered during the evenings, on Saturday afternoons, and during summer months, under the Continuing Education Division. They are unique in Eastern and Central Africa in that they allow working people to complete undergraduate degree courses on a part-time basis, while still actively engaged in their jobs.

- (4) Agricultural Programmes are offered at the Alemaya Agricultural College, the Awasa Junior College, the Debre Zeit Junior Agricultural College, and the Faculty of Veterinary Medicine.

Natural Science Programmes are offered at the Faculty of Science, the Alemaya Science Teacher Training College, and the Bahir Dar Sciences Teacher Training College.

Professional Programmes are offered at the Faculty of Technology (Northern and Southern Campuses), the Addis Ababa Medical Faculty, the Gondar Medical College, the School of Pharmacy, and the Faculty of Law.

Social Science and Language Programmes are offered at the College of Pedagogical Sciences and the Bahir Dar Academy of Pedagogy.

- (5) Addis Ababa University is also unique amongst the various universities visited in that it is the only one which has a definite School of Graduate Studies, headed by a Graduate Studies Dean.

2.2.3. CAMPUSES/COLLEGES/FACULTIES VISITED

- (1) During his visit, the author was fortunate enough to meet and to hold discussions with a number of senior officers at the Main Campus of Addis Ababa University.

These included the President of the University, his Academic Vice-President, the University's Research and Publications Officer, the Associate Registrar in the School of Graduate Studies, the Dean of the School of Technology, the Chairman of the Department of Biology, and the Assistant University Librarian. Details on the names and addresses of the officers are given in Appendix I.

- (2) From the discussions that were held, and from the published and mimeographed documents that were presented to the author during the visit, it was learnt that:
 - (a) the total student population of Addis Ababa University during 1982/83 was 18,741, a figure which included regular and continuing undergraduate and postgraduate students.
 - (b) the total teaching staff during the same period comprised 609 Ethiopian and 213 expatriates, giving a total of 822 staff members. Of these, 260 were holders of terminal degrees, 224 were holders of Master's degrees, and 280 possessed the Bachelor's degree only.
- (3) The statistics presented under (2) above give the student/staff ratio in Addis Ababa University as 22.8: 1, which is a rather unhealthy ratio for a University institution.

2.2.4. GRADUATE TRAINING AND PROGRAMMES OFFERED

- (1) The establishment of postgraduate training programmes in Addis Ababa University began in 1978/79, and this development was necessitated by the factors which included the following:
 - (a) raising costs involved in training Ethiopian students overseas, which proved to be too expensive;
 - (b) increasing demand for university teachers with higher degrees, especially after the Revolution when many lecturers left the country;
 - (c) increasing demand for manpower with postgraduate qualifications in the various fields of science and technology; and
 - (d) decline in the number of scholarships available to Ethiopian students for overseas training.

- (2) When the School of Graduate Studies in Addis Ababa University was established in 1978/79, there were only 40 postgraduate students. Since then, the postgraduate student enrollment has increased to about 200 (in 1983/84). The distribution pattern of these students is summarised in Table 2 below:

Table 2 : Postgraduate Statistics at Addis Ababa
University during the academic year 1983/84.

College/Institute/Faculty	Department	Number of Students
Alemaya College of Agriculture	Animal Science	9
	Plant Science	20
	Agricultural Economics	6
Institute of Language Studies	Linguistics	8
	Literature	16
	Teaching of English as a Foreign Language	14
Faculty of Medicine	Anatomy	1
	Internal Medicine	18
	Obstetrics and Gynaecology	6
	Ophthalmology	6
	Paediatrics & Child Health	7
	Pathology	2
	Surgery	12
College of Social Sciences	Economics	13
	Geography	17
	History	5
Faculty of Science	Biology	15
	Chemistry	7
	Geology	5
	Mathematics	15
	Physics	13
	Statistics	8
Faculty of Technology	Civil Engineering	3
	TOTAL	196

- (3) During the discussions it was learnt that the following additional postgraduate training programmes have already been approved by the relevant University committees, and are scheduled to take off the ground in 1985:
- (a) An M.Sc. programme in Mechanical Engineering
(to be offered by the Faculty of Technology);
 - (b) An M.Sc. programme in Electrical Engineering
(to be offered by the Faculty of Technology);
 - (c) An M.Sc. programme in Remote Sensing (to be offered by the Faculty of Science); and
 - (d) A Master's programme in Community Health
(Faculty of Medicine).
- (4) It was also learnt that currently there are discussions on the establishment of postgraduate training programmes in Information Science, and in Tropical Medicine.
- (5) Since the establishment of the School of Graduate Studies in Addis Ababa University in 1978, a total of 237 candidates have successfully completed their higher degree programmes in the various fields shown in Table 2 (under (2) above). The largest number of candidates graduated from the Departments of Biology (32), Chemistry (24), Agricultural Economics (22) and Mathematics (21).

- (6) So far postgraduate training in Addis Ababa University is limited to the Master's degree only. Details on the admission procedures and regulations pertaining to the various Master's degree programmes are described in the Prospectus of Addis Ababa University. For admission, the applicant must have completed the Bachelor's degree with a cumulative grade point average (GPA) of 2.5 or higher on a 4 - point scale (where A = 4; B = 3, C = 2, D = 1, and F = 0 points), or a GPA of 2.75 or higher in the main field of study.
- (7) Details on the subject content of the various postgraduate courses offered by Addis Ababa University are described in the University's General Catalogue. The catalogue scrutinised by the author is a 557 page mimeographed document, which is currently being revised. More up-to-date information can be obtained from the office of the Dean of the School of Graduate Studies, Addis Ababa University.
- (8) The duration of the Master's degree programmes in Addis Ababa University is normally two years. The first year is devoted to advanced course-work study (24 credit hours), followed by an examination. All candidates must complete the course-work part with a cumulative average of B grade. Courses with grades below a C must be repeated. Candidates who successfully complete the course-work part embark on thesis research (which carries a minimum of 6 credit hours) for an additional year. On completion of the research each candidate writes up a thesis, which must be prepared in accordance with the rules and regulations set by the Graduate School.

- (9) The maximum registration period for the Master's degree programme is five years, but most students complete their studies within two years. The theses submitted by the postgraduate students are assessed on a Pass/Fail basis, and are scrutinized by both an internal and external examiner. The examiners' reports are considered by the Council of Graduate Studies, whose executive officer is the Dean of Graduate Studies, and whose Chairman is the Academic Vice-President of the University.

2.2.5. RESEARCH METHODS COURSES

- (1) Most Departments which offer postgraduate training in Addis Ababa University expose their candidates to research methods relevant to their study disciplines before the students undertake their research. This is mostly done on an individual basis through the guidance of the thesis supervisor.
- (2) Some Departments, however, offer specific Research Methodology courses, which are taken by all the students registered in that Department. The Department of Linguistics, for example, offers a postgraduate course, LING 508, which exposes the students to the research methods in Linguistics. The Department of History also offers a course entitled, "Advanced Methodology of Historical Research and Analysis", to mention but a few. Such courses/proving to be very useful to the students. /are

2.2.6. GRADUATE TRAINING STATISTICS

(1) STUDENTS:

- (i) Reference has already been made on the number and distribution of postgraduate students in the various Departments of Addis Ababa University (see 2.2.4.(2), Table 2). It was noted that largest numbers of students are found in the Faculties of Science (63 students), Medicine (52 candidates), and the Institute of Language Studies (38 candidates).
- (ii) It was noted also that on a Department basis, largest postgraduate student enrolments are in Plant Science (20 students), Internal Medicine (18 students), Geography (17 students), Literature (16 students), Biology (15 students) and Mathematics (15 students).
- (iii) It was noted also that on the basis of postgraduate student enrolment, weak or somewhat neglected postgraduate programmes are those in the Departments of Anatomy (one candidate), Pathology (two students), and Engineering fields. In the case of Engineering, reference has already been made (see 2.2.4.(3)) about the efforts being made to expand the Faculty's postgraduate training programmes.

- (iv) Currently the majority of the students undertaking postgraduate training in Addis Ababa University are Graduate Assistants in the University's Staff Development Programme. There is, however, a growing proportion of postgraduate candidates from the various Government and Parastatal Organisations, which suggests a better realisation on the need for increasing the number of manpower with postgraduate training experience and qualifications.
- (v) Judging from the total number of postgraduate students (about 200) as compared to that of undergraduate students (over 10,000), one notes, however, that postgraduate training in Addis Ababa University is still in its embryonic stages.

(2) STAFF:

- (i) From the list of academic members of staff which the author scrutinised during his visit to Ethiopia, a breakdown was made to show the number of members in the various Colleges and Faculties who possess the Ph.D. degree qualification, those whose highest academic qualification is the Master's degree, and those with the Bachelor's degree only. The data obtained for 1983/84, are as summarised in Table 3.

Table 3: Academic qualifications of teaching members of staff of Addis Ababa University.

College/ Faculty	PhD	Master's degree	Bachelor's degree only
College of Agriculture, Alemaya	19	34	49
Awassa Junior College of Agriculture	1	18	28
Bahir Dar Teachers' College	5	6	53
Debre Zeit Junior Agricultural College	3	21	28
Faculty of Education	10	15	12
Faculty of Law	3	5	8
Faculty of Medicine	8	3	51
College of Social Sciences	39	36	54
Faculty of Science	50	69	48
Faculty of Technology	22	25	29
Faculty of Veterinary Medicine	7	5	10
TOTAL	198	305	495

- (ii) It should be cautioned, however, that the information presented in Table 3 above should be taken only as a close approximation because the numbers could have changed since the data were first compiled. From the statistics, however, one can safely make some broad generalisations about the staffing situation of Addis Ababa University.
- (iii) It was noted that in terms of Faculties/Colleges with the highest number of Ph.D. and Master's degrees holders, the healthiest situation is in the Faculty of Science (50 Ph.D.'s and 69 Master's) and the College of Social Sciences (39 Ph.D.'s and 36 Master's). At Departmental level, the strongest Departments in terms of Ph.D. degree holders are Chemistry (14 Ph.D.'s), Mathematics (10 Ph.D.'s), Geology (10 Ph.D.'s) and Economics (10 Ph.D. holders).
- (iv) Considering, however, that the total number of Ph.D. degree plus Master's degree holders amounts to only 500 staff members, and that the remaining 500 who possess only the Bachelor's degree include Graduate Assistants who do not yet have much teaching experience at University level, one can quite safely remark that the staffing situation in Addis Ababa University could be healthier. This is especially true when also considering that undergraduate student population exceeds 10,000.

(3) FEEES AND OTHER COSTS:

- (i) Ethiopian nationals who are admitted for studies at Addis Ababa University are exempted from all types of fees. Foreign students must, however, pay tuition and other fees before they can register. The fees are in the process of revision. At the time of the author's visit in September 1984, the tuition fees were 50 Birr (U.S. \$25.00) per semester credit. As mentioned earlier, postgraduate students must undertake thesis research on completion of the course-work part of the Master's degree programme. In the case of the Graduate Assistants who are in the University's Staff Development Programme the research costs are met by the University. For the rest, the research costs are met by the students' employers, e.g., Government Ministries, or by various international agencies.

(4) OTHER RELEVANT STATISTICS

- (i) Addis Ababa University has a fairly good Central Library with some 500,000 volumes. There is also a separate Graduate Student Library, and a number of Departmental and Faculty libraries.
- (ii) Apart from stocking books, the libraries also subscribe to a number of periodicals. Some of the periodicals were, however, no longer being received owing to budgetary and foreign exchange constraints.

2.2.7. GRADUATE TRAINING INFRASTRUCTURES

- (1) Except for the problem of staffing as outlined above, the various Departments and Faculties are quite well equipped for postgraduate teaching and research. Addis Ababa University, indeed has a special and separate building for the administration of the various postgraduate student activities. The manpower for the administration of the student activities involves 19 people. These include the Dean, the Associate Registrar, the Administrator, and supporting staff. The facilities in the School of Graduate Studies include several motor vehicles (three new Toyota Landcruisers, one Nissan Patrol, and one Renault-4), modern duplicating facilities, photocopy machines, IBM Data Recorders, calculating machines, an electrostencil scanning machine, etc. There is also a cafeteria for postgraduate students, which is subsidised by the University.
- (2) Efforts are also being made to improve the staffing situation by training more staff members to the Ph.D. level. Since, however, there are no Ph.D. training programmes offered in Addis Ababa University, this has to be done overseas.
- (3) Efforts are also being made to expand the facilities for additional postgraduate training programmes. The Faculty of Technology is, for example, making the necessary preparations for the approved new M.Sc. programmes in Electrical Engineering and Mechanical Engineering. Some

of the programmes (e.g., the Electrical Engineering Programme) are intended to cater for the entire region (e.g., under ANSTI) and will receive some inputs from international agencies such as UNDP and DAAD.

2.2.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) Bearing in mind the fact that postgraduate training in Addis Ababa University began only in 1978, the achievements attained to date are quite impressive. This is especially true when considering the difficulties involved in recruiting highly qualified expatriate staff into Ethiopia, particularly owing to the political factors in the country.
- (2) Some of the postgraduate programmes offered by Addis Ababa University experience problems of inadequate equipment. The University's Language Laboratories, for example, require improvement. This is important since Language studies occupy a special place in Ethiopia, bearing in mind the unique variety of languages in the country, enhanced by the variegated terrain of the state.
- (3) The current world-wide inflation did not spare Ethiopia. In fact the situation has been aggravated by the recent drought, which has rendered thousands of Ethiopians famine-stricken. Under those circumstances budgetary allocations for additional postgraduate training facilities are bound to be thin. More external inputs to support postgraduate training in Ethiopia are thus necessary.

2.2.9. STAFF DEVELOPMENT POLICIES

- (1) The major focus in Addis Ababa University's Staff Development programme is to have most of the teaching members of staff Ethiopian nationals. This requires that the level of training of the teachers be advanced to the Ph.D. status or its equivalent.
- (2) Currently about 50% of the Ph.D. holders in the University are still expatriates. These are mostly from Cuba, GDR, Italy, Yugoslavia and the U.S.S.R. The country thus still has a long way to go to attain its staff development goals.
- (3) During the discussions it was learnt that Addis Ababa University is making serious efforts towards attaining her staff development goals. Every year the University selects a number of suitable candidates for staff development from amongst the best bachelor's degree graduates. The University has a special committee which screens, short-lists and interviews the candidates. The Ethiopian Government usually readily releases the candidates that the University selects. Those recruited are called Graduate Assistants. Soon after their recruitment they are enrolled in postgraduate degree programmes offered by the University. After one year of satisfactory performance they are promoted to the status of Assistant Lecturer. The Graduate Assistants who perform well in their Master's degree programmes are then confirmed as academic members of staff in the University. Those who perform badly are requested to seek alternative employment.

- (4) The degree to which the University's staff development goals have been attained varies from Department to Department. On the basis of the number of Ethiopian Ph.D. holders out of the total it was learnt that the Departments which have performed well in this respect include the Department of Economics, which has 6 Ethiopian Ph.D. holders out of the 10 in the Department, and the Department of Civil Engineering with 5 Ethiopian Ph.D. holders out of the 10 in the Department.

2.3.1 BACKGROUND INFORMATION

- (1) The foundation stone for an institution of higher learning in Kenya was laid down in 1952, soon after the Royal Charter to establish the Royal College of East Africa. Student enrolment in the College first took place in 1956, and soon thereafter the College was renamed University College Nairobi. Initially the College was affiliated to the University of London, but in 1963 it became a constituent of the University of East Africa.
- (2) The first degree programmes offered at the University College, Nairobi were limited to the Faculties of Arts, Science and Engineering. When, on June 30, 1970, the University of East Africa was dissolved, the University College, Nairobi became the University of Nairobi.
- (3) Subsequent developments at the University of Nairobi led to the establishment of the following additional Faculties: Agriculture; Architecture, Design and Development; Commerce; Law; Medicine; and Veterinary Medicine. Several Institutes and Schools were also established. These include the Institute of Adult Studies; Institute of African Studies; the Institute of Computer Science; and the School of Journalism. In addition Kenyatta University College, which focuses attention on the field of Education, was established as a College of the University of Nairobi.

2.3.2. UNIVERSITIES IN THE COUNTRY

- (1) Until recently the University of Nairobi was the only University in Kenya. As from 1984, however, a new University, the Moi University was established by an Act of Parliament.

- (2) There have recently been some changes in the administrative set-up of the University of Nairobi. According to the charges, the top executive of the University, the Vice-Chancellor, is now assisted by two Deputy Vice-Chancellors: one for Academic Affairs, and one for Administrator and Finance. Posts of Principals for several colleges have also been established; There is now a Principal in each of the following Colleges: Continuing Education (Kikuyu Campus); Agriculture and Veterinary Sciences (Kabete Campus); Engineering and Architecture (Main Campus); Health Sciences (Kenyatta National Hospital); Humanities and Social Sciences (Main Campus), and Physical and Biological Sciences (Chiromo Campus). These are in addition to the Principal of the Kenyatta University College. Within the Colleges there are also Deans of Faculties and Chairmen of Departments. The University's administrative overheads thus seem to be quite substantial.

2.3.3. UNIVERSITIES/CAMPUSES/COLLEGES/FACULTIES VISITED

- (1) The author's visit was confined to the University of Nairobi. The campuses seen included the Main Campus, the Chiromo Campus, the Kabete Campus, and Kenyatta University College.
- (2) During the visits the author held discussions with several Deans of Faculties and other senior administrative officers of the University, as detailed in Appendix I. He also received useful brochures and a copy of the University of Nairobi Calendar (1982-1984) as well as that of the Kenyatta University College (1983/84), which contain useful information on postgraduate training in the University.

2.3.4. GRADUATE TRAINING PROGRAMMES

(1) All Faculties at the University of Nairobi offer postgraduate training opportunities. The following Tables give statistics on the number of postgraduate students in each Department of the University:

(i) Table 4. Postgraduate student enrolment in the Faculty of Agriculture, University of Nairobi, during the academic year 1983/84.

Department	Number of Students			Total
	PhD	Master's	Postgrad Diploma	
Agricultural Economics	2	25	0	27
Agric. Engineering	0	1	10	11
Animal Production	0	6	0	6
Crop Science	7	76	0	83
Food Science & Technology	1	5	0	6
Forestry	0	1	0	1
Soil Science	1	9	0	10
TOTAL	11	1123	10	144

(ii) Table 5. Postgraduate Student enrolment in the Faculty of Architecture, Design and Development, University of Nairobi, during the academic year 1983/84.

Department	Number of Students			Total
	Ph.D.	Master's	Postgrad Diploma	
Architecture	1	3	0	4
Design	0	6	0	6
Fine Art	0	5	0	5
Land Development	2	10	0	12
Urban & Regional Planning	1	22	0	23
TOTAL	4	46	0	50

(iii) Table 6. Postgraduate student enrolment in the Faculty of Arts, University of Nairobi, during the academic year 1983/84

Department	Number of Students			Total
	Ph.D.	Master's	Postgrad Diploma	
Economics	6	21	16	43
Diplomacy	0	0	28	28
Sub-Department of French	0	6	0	6
Geography	3	23	0	26
Government	1	21	0	22
Linguistics & African Lang.	6	13	0	19
Literature	5	29	0	34
Philosophy	3	6	0	9
Religious Studies	3	15	0	18
Sociology	6	22	0	28
History	1	30	0	31

(iv) Table 7. Postgraduate student enrolment in the Faculty of Commerce, University of Nairobi, 1983/84

Number of Ph.D students	4
Number of Master's students	60
Number of Postgrad. Diploma students	0
TOTAL	64

(v) Table 8. Postgraduate student enrolment in the Faculty of Education, University of Nairobi, 1983/84

Department	Number of Students			Total
	Ph.D.	Master's	Postgrad. Diploma	
Educational Planning & Curriculum Development	8	24	180	212
Educational Foundation	9	15	52	76
Educational Communication & Technology	7	80	0	87
Educational Psychology	4	14	0	18
TOTAL	28	133	232	393

(vi) Table 9. Postgraduate student enrolment in the Faculty of Engineering, University of Nairobi, during the academic year 1983/84

Department	Number of Students			Total
	Ph.D	Master's	Postgrad. Diploma	
Civil Engineering	3	8	0	11
Mechanical Engineering	3	10	0	13
Electrical Engineering	1	13	0	14
Surveying & Photogrammetry	0	2	0	2
TOTAL	7	33	0	40

(vii) Table 10. Postgraduate student enrolment in the Faculty of Law, University of Nairobi, during the academic year 1983/84

Number of Ph.D. students	0
Number of Master's students	15
Number of Postgraduate Diploma students	7
TOTAL	22

(viii) Table 11. Postgraduate student enrolment in the Faculty of Science, University of Nairobi, during the academic year 1983/84

Department	Number of Students			Total
	Ph.D	Master's	Postgrad. Diploma	
Botany	3	20	0	23
Chemistry	3	38	0	41
Geology	3	8	0	11
Geography	1	7	0	8
Mathematics	4	22	0	26
Microbiology	1	17	4	23
Physics	7	23	0	30
Zoology	19	78	0	97
TOTAL	41	213	4	259

(ix) Table 12. Postgraduate student enrolment in the Faculty of Medicine, University of Nairobi, during the academic year 1983/84

Department	Number of Students			Total
	Ph.D.	Master's	Postgrad. Diploma	
Biochemistry	1	10	0	11
Community Health	1	10	0	11
Dental Surgery	0	1	0	1
Human Anatomy	6	0	0	6
Human Pathology	0	1	0	1
Medicine	2	32	0	34
Ophthalmology	1	2	0	3
Obstetrics and Gynaecology	0	44	0	44
Paediatrics	0	46	0	46
Pharmacy	6	1	0	7
Psychiatry	2	13	0	15
Radiology	0	7	0	7
Surgery	2	55	0	57
TOTAL	21	222	0	243

(x) Table 13. Postgraduate student enrolment in the Faculty of Veterinary Medicine, University of Nairobi, during the academic year 1983/84

Department	Number of Students			Total
	Ph.D.	Master's	Postgrad. Diploma	
Animal Physiology	0	6	0	6
Animal Production	0	1	0	1
Clinical Studies	1	8	0	9
Public Health	7	11	0	18
Veterinary Pathology	9	18	0	27
TOTAL	17	44	0	61

(xi) Table 14. Postgraduate student enrolment at the Population Research Institute, Institute of Computer Centre and the School of Journalism, University of Nairobi, during the academic year 1983/84.

Name of Institute/School	Number of Students			Total
	Ph.D.	Master's	Postgrad. Diploma	
Population Studies Institute	3	26	0	29
Institute of Computer Science	0	0	15	15
School of Journalism	0	0	22	22
TOTAL	3	26	37	66

(xii). Table 15. Summary showing the total number of postgraduate students enrolled at the University of Nairobi during 1983/84.

Programmes	Number of Students
Ph.D	170
Master's	1101
Postgraduate Diploma	327
TOTAL	1598

- (2) Details on the regulations pertaining to the postgraduate programmes outlined under (1) above are described in the 1982 - 1984 Calendar of the University of Nairobi (e.g., see pp. 72-84), and the 1983/84 Calendar of the Kenyatta University College (e.g., see pp. 23, 41, 47, 48, 60, 295).
- (3) In most Departments, Master's degree programmes at the University of Nairobi are of two years' duration: the first year being devoted to course-work study followed by examinations, and the second year to research followed by writing a thesis/dissertation.
- (4) The higher degree regulations of the University of Nairobi also allow some candidates to undertake a Master's degree study by research alone, followed by writing a thesis. Postgraduate candidates of this category are however, progressively getting fewer and fewer every year.

- (5) In the case of the Postgraduate Diploma programmes, the training lasts only one year. Although the programmes are undertaken largely by course-work study followed by examinations, the candidates are also given an opportunity to embark on a short research project, and to submit a project report for assessment.
- (6) Where Ph.D degree programmes are offered, the training is by research under the guidance of a qualified supervisor, followed by the writing of a thesis.
- (7) According to the higher degree regulations of the University of Nairobi, the maximum registration period for Ph.D students is five years for full-time students, and six years for part-time students. For Master's candidates, the maxima are three and four years for full-time and part-time students, respectively.
- (8) The assessment of postgraduate student performance at the University of Nairobi is done by internal and external examiners. This is for both the course-work examinations and for the thesis/dissertations. Where course-work is involved, the minimum pass mark in all Faculties is 50%. For the Ph.D programme the candidates must also appear for an oral examination, which is conducted by a panel of examiners appointed by the Senate. In some Faculties the Master's candidates must also defend their theses dissertations orally.

- (9) The co-ordination of the postgraduate training programmes in the various Faculties at the University of Nairobi is done by a central Postgraduate Studies Committee, which has one representative from each Faculty, and whose Chairman is the Vice-Chancellor.

2.3.5. RESEARCH METHODS COURSES

- (1) In most Departments, the postgraduate candidates learn about the methods used when embarking on their thesis research projects through their supervisors/advisors. In some, however, specific courses on Research Methods pertaining to particular subjects of study are offered to the students. Such Departments include the Department of Urban and Regional Planning (Faculty of Arts), which offers a course entitled "Statistical Methods in Planning", and another one entitled "Research Methodology"; and the Department of History which offers a course entitled "Methods of Historical and Social Science Research". The Master's degree programme in Archeology likewise includes a course entitled "Archeological Methods and Research Design", which is taken by the students before embarking on field research.
- (2) The significance of exposing the postgraduate students to specific Research Methods courses before they undertake research is gradually being realised by more and more Departments. It would thus seem safe to predict that more Departments will introduce Research Methods courses in the process of reviewing their master's degree curricula.

2.3.6. GRADUATE TRAINING STATISTICS

(1) STUDENTS

- (i) When the University of Nairobi was inaugurated in July 1970 (following the dissolution of the University of East Africa), there were 2,584 undergraduate - and 184 postgraduate students, respectively. By 1980, the undergraduate student population had reached 5,667, and that of postgraduate students had grown to 1,474. As shown in Table 15 (under 2.3.4.(1) (xii) above), postgraduate student enrolment in 1983/84 had reached a figure of 1,598.
- (ii) From these statistics it is evident that postgraduate student enrolment at the University of Nairobi has shown impressive growth. In point of fact the University of Nairobi is a long way ahead of the other Universities described in this report in that respect.
- (iii) Within the University of Nairobi the Faculties with the highest population of postgraduate students are those of Education, Science, Arts, Medicine, and Agriculture (see relevant Tables under 2.3.4.(1) above).

(2) STAFF

- (1) During his visit to the University of Nairobi, the author failed to secure an up-to-date document giving a list the professors, associate professors, senior lecturers, etc.; teaching at the University.

He therefore had to rely heavily on the staff list shown on pp. 282-448 of the 1982-84 University of Nairobi Calendar, and also on pp. 300-312 of the 1983/84 Calendar of Kenyatta University College. Additional data were, however, also obtained from the office of the Registrar, University of Nairobi Main Campus.

(ii) The University of Nairobi staff statistics, as presented by the Registrar's office, are summarised in Table 16 below:

Table 16. Summary of staff statistics at the University of Nairobi (1983/84).

Rank	Total established positions	Total filled positions	Total vacant positions
Full Professor	72	41	31
Associate Professor	69	42	27
Senior Lecturer	242	159	83
Lecturer	557	380	177
TOTAL	940	622	318

(iii) An analysis of the data on staff members who possess Master's and Ph.D. degrees at the University of Nairobi is presented in Tables 17-28 below:

Table 17. Number of academic members of staff in the Faculty of Agriculture, University of Nairobi possessing the Ph.D. and Master's degree qualification (source 1982-84 University Calendar).

Department	Ph.D holders	Master's degree holders	Total
Agricultural Economics	10	1	11
Agricultural Engineering	1	7	8
Crop Science	14	4	18
Food Science & Technology	6	4	10
Forestry	1	5	6
Soil Science	6	2	8
Range Management	2	2	4
TOTAL	40	25	65

Table 18. Number of academic members of staff in the Faculty of Architecture, Design and Development, University of Nairobi possessing the Ph.D. and master's degree qualification (source as for Table 17).

Department	Ph.D holders	Master's holders	Total
Architecture	1	6	7
Design	0	0	0
Land Development	2	4	6
Urban & Regional Planning	9	5	14
Housing Research & Develop.	1	5	6
TOTAL	4	20	24

Table 19. Number of academic members of staff in the Faculty of Arts, University of Nairobi, possessing the Ph.D. and Master's degree qualification (source as for Table 17).

Department	Ph.D. holders	Master's holders	Total
Economics	10	10	20
Geography	7	8	15
Government	14	1	15
Linguistics & African Languages	5	6	11
Language and Study Skills Unit	0	2	2
Literature	2	6	8
French Studies Sub-Department	4	7	11
Philosophy	6	1	7
Religious Studies	2	4	6
Sociology	14	8	22
Diplomacy Training Programme	4	1	5
History	11	1	12
TOTAL	79	55	134

Table 20. Number of academic members of staff in the Faculty of Commerce, University of Nairobi, possessing the Ph.D. and master's degree qualification (source as for Table 17).

Department	Ph.D. holders	Master's holders	Total
Accounting	1	9	10
Business Administration	1	7	8
Management Science	0	5	5
TOTAL	2	21	23

Table 21. Number of academic members of staff in the Faculty of Engineering, University of Nairobi, possessing the Ph.D. and master's degree qualification (source as for Table 17).

Department	Ph.D holders	Master's holders	Total
Civil Engineering	5	10	15
Electrical Engineering	2	7	9
Mechanical Engineering	8	5	13
Surveying & Photogrammetry	1	6	7
TOTAL	16	28	44

Table 22. Number of academic members of staff in the Faculty of Law, University of Nairobi, possessing the Ph.D. and master's degree qualification (source as for Table 17).

Department	Ph.D. holders	Master's holders	Total
Commercial Law	1	7	8
Private Law	0	5	5
Public Law	3	4	7
TOTAL	4	16	20

Table 23. Number of academic members of staff in the Faculty of Science, University of Nairobi, possessing the Ph.D and Master's degree qualification (source as for Table 17).

Department	Ph.D holders	Master's holders	Total
Botany	8	4	12
Chemistry	14	4	18
Geology	5	2	7
Meteorology	4	5	9
Mathematics	11	10	21
Physics	11	4	15
Zoology	13	4	17
TOTAL	66	33	99

Table 24. Number of academic members of staff in the Faculty of Medicine, University of Nairobi, possessing the Ph.D and Master's degree qualification (source as for Table 17).

Department	Ph.D holders	Master's holders	Total
Advanced Nursing	0	3	3
Biochemistry	11	4	15
Community Health	2	6	8
Dental Surgery	1	3	4
Diagnostic Radiology	0	3	3
Human Anatomy	2	0	2
Human Pathology	1	0	1
Medicine	2	4	6
Medical Microbiology	4	4	8
Medical Physiology	2	3	5
Obstetrics & Gynaecology	2	5	7
Orthopaedic Surgery	0	6	6
Paediatrics	0	12	12
Pharmacy	3	8	11
Psychiatry	0	1	1
Surgery	1	7	8
TOTAL	31	69	100

Table 25. Number of academic members of staff in the Faculty of Veterinary Medicine, University of Nairobi, possessing the Ph.D and Master's degree qualification (source as for Table 17).

Department	Ph.D. holders	Master's holders	Total
Animal Production	8	1	9
Clinical Studies	8	6	14
Public Health, Pharmacology and Toxicology	5	7	12
Veterinary Anatomy	3	0	3
Veterinary Physiology	5	0	5
Veterinary Pathology & Microbiology	5	8	13
TOTAL	34	22	56

Table 26. Number of academic members of staff at the Institute of Adult Studies, University of Nairobi, possessing the Ph.D and Master's degree qualification (source as for Table 17).

Department	Ph.D. holders	Master's holders	Total
Adult Studies Centre	1	5	6
Correspondence Course Unit	0	4	4
Extra-Mural Division	0	3	3
TOTAL	1	12	13

27

Table 27. Number of academic members of staff at the Institute of African Studies, Institute of Development Studies, Institute of Computer Science, Population Studies & Research Institute, and the School of Journalism, University of Nairobi, possessing the Ph.D. and Master's degree qualification (source as for Table 17).

Institute/School	Ph.D. holders	Master's holders	Total
Institute of African Studies	3	6	9
Institute of Development Studies	8	1	9
Institute of Computer Science	2	2	4
Population Studies & Research Institute	5	2	7
School of Journalism	1	3	4
TOTAL	19	14	33

Table 28. Number of academic members of staff at Kenyatta University College University of Nairobi, possessing the Ph.D. and Master's degree qualification (source: Kenyatta University College 1983/84 Calendar).

Faculty	Department	Ph.D holders	Master's holders	Total
Science	Botany	7	1	8
	Zoology	6	1	7
	Chemistry	9	3	12
	Mathematics	9	8	17
	Physics	4	7	11
	Appropriate Technology Centre	2	1	3
	TOTAL	37	21	58
Arts	History	8	1	9
	Literature	1	8	9
	Languages & Ling.	1	9	10
	Business Education	1	8	9
	Geography	6	6	12
	Philosophy & Religious Studies	6	5	11
	Music	2	1	3
	Performing & Creative Arts Centre	0	0	0
	Fine Art	0	3	3
	TOTAL	25	41	66

Table 28 Cont.

Faculty	Department	Ph.D. holders	Master's holders	Total
Education	Educational Psychology	8	9	17
	Educ. Admin., Planning & Curr. Dev.	10	5	15
	Home Economics	1	7	8
	Educational Foundations	9	5	14
	Educational Communi- cation & Technology	10	11	21
	Physical Education & Games	0	1	1
	Bureau of Educational Research	3	3	6
	Basic Education Resource Centre	3	0	3
	TOTAL	44	41	85

(iv) A summary of the data presented in Tables 17 - 28 above is tabulated below:

Table 29. Over-all summary Table showing the number of Ph.D. and Master's degree holders in the various Faculties and Institutes, University of Nairobi (including Kenyatta University College).

Faculty/Institute	Ph.D. holders	Master's holders	Total
Fac. of Agriculture	40	25	65
Fac. of Architecture, Design and Devel.	4	20	24
Fac. of Arts (excluding Kenyatta UC)	79	55	134
Fac. of Commerce	2	21	23
Fac. of Engineering	16	28	44
Fac. of Law	4	16	20
Fac. of Science (excluding Kenyatta UC)	66	33	99
Fac. of Medicine	31	69	100
Fac. of Vet. Medicine	34	22	56
Fac. of Science, Kenyatta University College	37	21	58
Fac. of Arts, Kenyatta University College	25	41	66
Fac. of Education, Kenyatta University College	44	41	85
Institute of Adult Studies	1	12	13
Institute of African Studies	3	6	9
Institute of Dev. Studies	8	1	9
Institute of Computer Science	2	2	4
Population Studies & Research Institute	5	2	7
School of Journalism	1	3	4
TOTAL	402	418	820

- (v) If the academic strength of the various Faculties is judged on the basis of the cumulative number of staff members with Ph.D and Master's degree qualifications, it will be seen that the strongest four Faculties at the University of Nairobi are the Faculties of Arts (with 79 Ph.D. holders, plus additional 25 from Kenyatta UC), Science (with 66 Ph.D. holders, plus additional 37 from Kenyatta UC), Education (with 44 Ph.D. holders), and Agriculture (with 40 Ph.D. holders).
- (vi) On the same criterion, the strongest four Departments in the Faculty of Agriculture are Crop Science (14 Ph.D.'s), Agricultural Economics (10 Ph.D's), Food Science and Technology (6 Ph.D's), and Soil Science (6 Ph.D's). In the Faculty of Arts, the leading Departments with respect to Ph.D. degree holders are Government (14 Ph.D's), Sociology (14 Ph.D's), History (11 Ph.D's), and Economics (10 Ph.D's). In the Faculty of Science, the leading Departments are Chemistry (14 Ph.D. holders), Zoology (13 holders), Mathematics (11) and Physics 11 Ph.D. holders). In the Faculty of Veterinary Medicine Departments with the leading number of Ph.D. holders are Animal Production (8 Ph.D's), Clinical Studies (8 Ph.D's), Veterinary Pathology & Microbiology (5), and Public Health, Pharmacology and Toxicology (5 Ph.D. holders). In the Faculty of Education, the leading Departments are Educational Communication and Technology (10 Ph.D. holders), Educational Administration, Planning and Curriculum Development (10 holders), Educational Foundations (9 Ph.D. holders), and Educational Psychology 8 Ph.D's).

(vii) From the data presented in the Tables referred to above one can also spot the relatively weak Departments (i.e., those with lowest numbers of both Master's and Ph.D. degree holders). Some of the Departments are weakened by the fact that it is difficult to fill up some of the vacant positions. As shown in Table 16, the vacant positions during 1983/84 were as many as 318. The distribution of vacancies in the various Colleges at the University of Nairobi during the year referred to above, are summarised in Table 30 below:

Table 30: Vacant positions in various Colleges, University of Nairobi during 1983/84.

College	Vacant Positions				Total
	Professor	Assoc. Prof.	Senior Lect.	Lecturer	
Agric. & Vet, Sci.	2	2	14	21	39
Eng. & Archit.	4	4	14	9	31
Physical & Biol. Sci.	3	5	10	52	70
Humanities & Soc.Sci.	12	11	23	57	103
Health Sci.	10	4	21	33	68
Continuing Educ.	0	1	1	5	7
TOTAL	42	27	83	177	318

(viii) Considering the relatively large number of vacant positions (Tables 16 and 30 above) one is tempted to conclude that the staffing situation at the University of Nairobi could be healthier, even though the total number of Ph.D. holders in the University exceeds 400.

(3) FEES AND OTHER COSTS

(1) Details on the fees payable at the University of Nairobi are given on pp. 13-15 of the pp. 5 - 6 of the 1983/84 Calendar of the Kenyatta University College.

These are summarised in Table 31 below:

Table 31. Postgraduate fees at the University of Nairobi (source: University of Nairobi Calendar 1982-1984, pp. 13-15; Kenyatta University College Calendar 1983/84, pp. 4 - 5).

Category of fees	amount K. Shs. *
Tuition fees for postgraduate students (3 terms)	6,000/= p.a.
Residential fees:(a) 3 terms	5,775/= p.a.
(b) 4 terms	7,700/= p.a.
Registration fees	500/=
Supervisory fees	500/= p.a.
Field or laboratory fees	3,000/= p.a.
Examination fees:(a) Master's	400/=
(b) Ph.D	800/=
Graduation fee	20/=
Convocation fees	20/=
Coution money	60/=
Books and equipment (varies according to course)	900/= to 9,900/=

* The fees quoted are under review; approximately K.Shs. 15/= =U.S.\$ 1.00.

- (ii) It was noted also that the tuition fees for undergraduate students (K.Shs. 29,000/= p.a.) are significantly higher than those for postgraduate students (K.Shs 5,775/= p.a. for three terms). The basis for the discrepancy was not explained to the author, but this could be a deliberate attempt to keep the fees low for postgraduate students in order to attract potential candidates to enrol.

(4) OTHER RELEVANT STATISTICS/INFORMATION

- (i) The University of Nairobi also has a fairly good library with 300,000 volumes and 3,500 periodical titles. In addition to the Central Library on the Main Campus, there are also library collections in the various campuses, Faculties and Institutes.
- (ii) There is also a University Bookshop on the Main Campus, whose function is to provide to the students text books and stationery required for their studies.
- (iii) The University also has a Health Centre, which provides medical services to the students and the staff.

2.3.7.

GRADUATE TRAINING INFRASTRUCTURES/FACILITIES

The general impression gathered during the author's visit to the University of Nairobi was that most Departments have quite good facilities for solid postgraduate student training. The facilities in the Faculty of Veterinary Medicine were particularly impressive.

2.3.8.

PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) One of the problems noted is the difficulty in recruiting an adequate number of postgraduate students in some of the programmes, e.g., Human Anatomy and Pathology; Dental Surgery, Forestry; Surveying and Photogrammetry, etc. The extent to which this is linked with academic strengths/weaknesses in the Departments, requires further study.
- (2) Another problem is the difficulty in recruiting sufficiently qualified lecturers and professors in some Departments and Institutes. Indeed, in some cases, the problem is that of exodus of the already recruited staff members, for other better-paying jobs within the country or overseas. The University of Nairobi is aware of this problem and is negotiating with the Government of Kenya for more attractive terms of service for the University's lecturers and Professors.
- (3) The world-wide inflation is also a problem in that with the rising costs of all types of commodities, the donor agencies are forced to sponsor progressively fewer postgraduate students every year.
- (4) Foreign exchange constraints also seem to be effecting the quality of postgraduate training offered at the University of Nairobi. The purchase of textbooks, library periodicals, laboratory chemicals and reagents, and some pieces of equipment, usually requires money in foreign currency, which is currently under very tight Government control.

2.3.9.

STAFF DEVELOPMENT POLICIES

- (1) The University's Policy with respect to Staff Development is to fill all the established positions in the various Departments with qualified Kenyan citizens. The method used to achieve this is to select and recruit the best Bachelor's degree graduates (initially as Tutorial Fellows) and then to train them to the Master's and Ph.D. degree levels.
- (2) Initially the Tutorial Fellows are employed on contract terms. Those who do well in the Master's degree programme are then given substantive appointments as Assistant Lecturers. Subsequently they become Lecturers upon successful completion of the Ph.D. degree.
- (3) As shown in Tables 16 and 30 above, there are many (over 300) vacant positions (for posts of Lecturer and above) at the University of Nairobi, suggesting that the University still has a long way to go before the accomplishment of its academic staff development plan.

2.4. MAURITIUS

2.4.1.

INTRODUCTION

- (1) Mauritius became politically independent in 1968, and is a member of the Commonwealth nations. Because of historical and colonial factors, Mauritius is a bilingual nation, French and English being the most widely spoken languages.
- (2) The Government in Mauritius is democratic, with more than one political party. Modelled along the British pattern, the Government has close ties with England and, indeed, the Queen of England is still the over-all Head, being represented in Mauritius by a Governor-General.
- (3) Located off the eastern coast of Africa beyond the island of Madagascar, Mauritius is a small island country, with only one million inhabitants. Over 50% of the population comprises people of Indian origin.
- (4) For a long time now Mauritius has been depending largely on sugar cane in its export earnings, and the crop still occupies the leading position in Mauritian agriculture. Other crops include tea, coconuts, pawpaws, pineapples, and various other types of fruit.
- (5) Tourism is also becoming increasingly important in Mauritius, and now comes only next to sugar as a foreign exchange earner in the country.

2.4.2.

UNIVERSITIES IN THE COUNTRY

- (1) Mauritius has only one University: the University of Mauritius. Established in July 1971, the University began with Her Royal Highness, Princess Alexandra of England,

as its first Chancellor, a position which she is still holding to-day.

(2) As a developmental University, charged with the responsibility of responding to the needs of the young nation of Mauritius, the University of Mauritius was, from its inception, concerned with meeting the challenge of producing the high-level manpower personnel so much needed in the country. The University, therefore, began with programmes leading to degrees in Agriculture, Industrial Technology, and Administration.

(3) Three principal types of training programmes are offered at the University of Mauritius:

- (1) programmes leading to University Certificates (e.g., in Library Studies; in Business Studies; in Animal Production; in Sugar Cane Production and Sugar Manufacture; in Seed Science and Technology; in Electronic Instrumentation; and in Sugar analysis);
- (ii) programmes leading to University Diplomas (e.g., Diploma in Public Administration and Management; in Management Studies; in Personnel Management; in Co-operative Studies; in Social Work; in Accountancy; in Occupational Health and Safety; in Agriculture and Sugar Technology; in Agriculture, Fisheries and National Resources; in Mechanical and Electrical Engineering; in Building and Civil Engineering; in Land Surveying; and a Post-Diploma Certificate in Digital Systems;

- (iii) programmes leading to degrees, viz., B.A., B.Sc., B.Tech. (Bachelory Technology), and Higher Degrees (i.e., Master's, etc.).
- (4) Certificate programmes normally enrol candidates with at least five School Certificate credits (i.e., good "O" level passes), and the training usually takes one to two years. Diploma courses normally enrol candidates with two A-level passes, and usually last two to three years. Bachelor's degree programmes, on the other hand, require three good A-level passes for admission. The Bachelor's programmes in the Schools of Agriculture and Administration normally take three years to complete. The programme in Industrial Technology, in contrast, takes four years, one year (currently the third year of study) being devoted to practical training in industry. Details on the Higher Degree programmes will be provided under section 2.4.4.

2.4.3. CAMPUSES/COLLEGES/FACULTIES VISITED

- (1) The author's visit, because of time constraints, was confined to the main Campus of the University in Reduit, Mauritius. The Campus is based on buildings which were the nucleus of a former College of Agriculture, which were donated by the Government of Mauritius when the University was inaugurated. Since then, many new buildings have been acquired, and the University is still expanding.

- (2) The University of Mauritius is an active member of the Association of Commonwealth Universities, the Association of African Universities, and also of the Association des Universite's Partiellement ou Entierement de Langue Francaise".
- (3) During the discussions it was learnt that administratively the University is headed by a Vice-Chancellor (currently Prof. J. Manrakhan), assisted by a Pro-Vice-Chancellor (currently Mr. F. G. Carver), and a Registrar (currently Mr. B.K. Seebaluck). There are also Heads of Schools (equivalent to Deans of Faculties in other systems), and Pro-Heads of Schools (equivalent to Associate Deans of Faculties), who constitute part of the University's administrative team.
- (4) One of the Schools visited by the author is the School of Industrial Technology, which has quite impressive research facilities, especially in energy-related studies.

2.4.4. GRADUATE TRAINING PROGRAMMES

- (1) The University of Mauritius has a provision for offering the following postgraduate degree programmes:
- (i) Course-work Degrees: leading to Master's degrees in Science, Technology and Administration and,
 - (ii) Research Degrees: leading to the degrees of Master of Philosophy (M.Phil.) and Doctor of Philosophy (Ph.D.).

- (2) The course-work Master's degree programmes usually last one year for full-time students and two years for part-time students.

The Master's programme by thesis research alone usually lasts two academic years for full-time students or three years for those working on a part-time basis. For Ph.D. candidates, the programme usually takes three years for full-time students or five years for part-time students.

- (3) The University of Mauritius Calendar (1983/84), gives a comprehensive summary of the admission, registration, supervision and examination regulations pertaining to the various postgraduate courses offered by the University (see pp. 38-51 of the Calendar referred to).

- (4) During the visit it was noted that M.Phil. and Ph.D. degrees in the School of Administration can be taken in any of the following fields: Politics and Public Administration; Social Policy and Administration; Business Management; and Economics. In the School of Agriculture, M.Phil. and Ph.D. degrees can be taken in Agricultural Botany; Agricultural Chemistry; Agricultural Management; Agricultural Zoology; Animal Production; and Crop Production. In the School of Industrial Technology, M.Phil. and Ph.D. degrees can be taken in Civil Engineering; in Electrical Engineering; in Physics and Electronic Engineering; and in Sugar Technology.

- (5) The assessment of the course-work papers and the theses written by the postgraduate students of the University of Mauritius is done through a system of internal and external examiners.

2.4.5.

RESEARCH METHODS COURSES

There are currently no specific Research Methods courses undertaken by candidates who enrol for the various postgraduate degree programmes at the University of Mauritius. The students are guided on what methods to use in their research on an individual basis by their academic supervisors.

2.4.6.

GRADUATE TRAINING STATISTICS

(1) STUDENTS

(i) During the discussions it was learnt that in 1976/77 the University of Mauritius had some 1500 students in its various Schools (postgraduate and undergraduate students combined). Currently the cumulative number of undergraduate plus postgraduate students is only about 700. In fact the postgraduate student population at the University has declined to a figure below 10, which is very low.

(ii) The causal factors for the significant decline in the student population at the University of Mauritius were not fully understood by the author. The introduction of University fees (to be paid by all students, (unlike the previous practice of free University education),

the lack of employment opportunities for those who graduate, and the world-wide inflation in general (which makes it difficult for individuals to raise enough money for the relatively high University fees), are amongst the factors which seem to explain the decline. /to

(2) STAFF

(i) The University of Mauritius Calendar (1983/84) gives (on pp. 266-273) a list of the academic members of staff in its various Schools. It was noted that the total number of the University's academic members of staff during 1983/84 was 66, distributed as follows: 23 in the School of Administration, 16 in the School of Agriculture, and 27 in the School of Industrial Technology.

(ii) A scrutiny on the academic qualifications of the 66 staff members revealed that only 20 - 25% of them are Ph.D. holders, which seems to be unusually low for a University institution which used to have 1500 students.

(3) FEEES AND OTHER COSTS

The postgraduate fees at the University of Mauritius are Rupees (Rs) 6,000 per annum, plus Rs 1,200 to cover the bench fee, computer time and similar charges. Fees of the latter category are however, currently under review. Foreign students, in contrast, pay Rs 7,200 per annum, plus Rs 1,200 bench fee. To this, one should add residential and local transport costs, since the University is largely non-residential and the students stay off-campus.

(4) OTHER RELEVANT STATISTICS

(i) The University of Mauritius gives one Postgraduate Scholarship award per annum (which amounts to Rs 24,000 p.a., for two years) to academically strong full-time students. This is, however, tenable at the University of Mauritius only.

(ii) The University also awards two Bursaries of Rs 7,000 each, to each School per year: one for degree students and one for diploma students. These are awarded on merit.

2.4.7. GRADUATE TRAINING INFRASTRUCTURES

(1) During his visit, the author only managed to see the laboratories of the School of Industrial Technology, which are quite well equipped. The research equipment pertaining to energy - related fields was particularly impressive.

(2) In recognition of the good facilities in the University, the commonwealth Science Council, London will sponsor an international conference on Renewable Energy Technologies, scheduled to be held at the University, from March 25 to April 1, 1985.

2.4.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

(1) The current economic recession seems to have affected the University of Mauritius more negatively than was observed in the other Universities visited.

The rapid decline in the undergraduate and postgraduate student population clearly points out that there is a problem.

- (2) Rising unemployment figures is another problem which seems to kill the motivation for postgraduate training in Mauritius. This could also have contributed to the decline in the University's student population.
- (3) The significant decline in the University's student population has caused some lecturers to go on leave. Accurate statistics on actual numbers involved could not, unfortunately, be obtained during the author's visit.

2.4.9. STAFF DEVELOPMENT POLICIES

- (1) The University of Mauritius does not seem to have an aggressive Staff Development Programme, apparently because in most of its Schools, almost 100% of the academic members of staff are already Mauritian nationals.
- (2) The University does not also have a system of recruiting promising young graduates as Tutorial Assistants/Graduate Assistants. The cadre for Tutorial Assistants/Tutorial Fellows/Graduate Assistants does not thus exist in the University.. If a vacancy arises in any given School, this is filled by advertising the post and inviting applications. In the event that the selected applicant does not possess a Master's degree, then the University makes efforts to have him trained to the Master's or Ph.D. level in Mauritius or overseas.

- (3) The University of Mauritius has some co-operation links with several Universities in the U.K. (e.g., Reading; Dundee; Lancaster etc.) and, through these, she secures a modest number of scholarships for staff training in the U.K. Through the links the University has also benefitted from visits by external examiners from the U.K., chiefly under the British Council's support.

2.5.1. INTRODUCTION

- (1) The Republic of Seychelles comprises 115 islands with a total land area of 450 sq. km spread over an Exclusive Economic Zone of 1,000,000 sq. km. The largest of the islands is Mahe Island, which accommodates 90% of the population, and where Victoria, the seat of government, is located.
- (2) Amongst the many islands in Seychelles, one of the best known is Aldabara, which is the world's most carefully preserved atoll. This is the home of the giant tortoise and a vast number of bird species.
- (3) Located within equatorial latitudes, and surrounded by the Indian Ocean, Seychelles receives a high rainfall (annual average of 2294 mm), intense insolation (mean minimum temperature 24.5° C, mean maximum temperature 29.8° C), and a relatively high humidity (mean relative humidity 80%). The islands also have an appreciable vegetation cover.
- (4) The islands are of two categories: granitic islands (e.g., Mahe Island), and coralline islands (e.g., Aldabara Island). The former are rugged, with a high central range of hills and a narrow coastal plain; and the latter are low islands, sprawling over a much wider area of ocean. Coconuts abound along the coastal plain, and forest trees are dominant on the mountain slopes.

- (5) The geographical location of the islands of Seychelles, far away from the African landmass and far away from the sub-continent of India, spared them of early European "discovery", and hence also from early colonisation by European super-powers. The first settlers on the islands were French, who came as land owners with African slaves in the 1770's. The settler-servant-slave population was substantially increased during the 19th century, when hundreds of ex-slaves, freed from Arabian slave-ships, were landed in Seychelles by the British navy. Additional settlers in subsequent years came from neighbouring Mauritius in the south, and also from India and China.
- (6) During the early part of the 19th Century, the U.K. and France were in military conflict, and Seychelles were, as from 1814, brought under the sphere of influence of the U.K., and were administered from Mauritius. This continued until 1903, when Seychelles became a separate British Crown colony.
- (7) When in June, 1976 Seychelles became politically independent (with Mr. James Macham as its first President), it became a democratic republic. The following year, however, there was a Revolution, and Mr. Albert Rene (formerly Prime Minister) became, and still is, President of the Republic of Seychelles.

- (8) Although French rule on the islands ended over 150 years ago, French is still widely spoken in Seychelles, the other two languages spoken being English and Creole. The last mentioned apparently developed as broken French, mixed with languages of African origin, etc., and is being developed by the Government of Seychelles to be the national language of the country.
- (9) The inhabitants of Seychelles to-day are a multi-racial mix in all colours: people of African origin, of European origin, and of Asian origin. Over the years, however, there have been inter-marriages resulting in a nice blending of the various racial groups, although almost pure stocks of each category can also be detected. The total population of Seychelles is, however only 65,000. This is a very small population, considering the total land area of 450 sq. km, spread over 1,000,000 sq. km of ocean.
- (10) Seychelles has tourism as its number one foreign exchange earner. In 1980, over 70,000 tourists visited the country, and there is a big scope for expanding the industry. Marine fisheries also have tremendous potential as foreign exchange earners in Seychelles, but the development of these resources requires careful planning and appreciable in-puts. Agriculture is another sector in Seychelles economy being developed. The country will, however, continue to import most of its food (rice, wheat, etc.), because of the difficult, mountain terrain on the islands, making the agricultural land marginal, or very difficult to manage.

2.5.2. UNIVERSITIES IN THE COUNTRY

- (1) Currently there is no University in Seychelles and, apparently, there are no Government plans to build one in the foreseeable future. With a total population of 65,000 and only 1300 pupils in the Seychelles polytechnic, there appears to be little justification for the country to undergo the huge expenses involved in building a national university.
- (2) Training in Seychelles stops at the polytechnic level, as will be detailed later.

2.5.3. OFFICES/COLLEGES/SCHOOLS VISITED

- (1) The offices/schools visited by the author included the office of the Assistant Secretary in the President's office; the Management Training Centre; the office of the Principal Assistant Secretary in the Ministry of Education and Information; and the Seychelles Polytechnic at Anse Royale, all on Mahe Island.
- (2) During the discussions a lot of information (and useful documents) were obtained on the education system and training programmes in Seychelles as will be summarised below.

2.5.4. TRAINING PROGRAMMES OFFERED

- (1) As pointed out above, there is no University in Seychelles. The training programmes offered in the country are as follows:
 - (i) Primary Education: compulsory education, lasting 9 years. In 1984 there were 14,000 pupils at Primary School level. This is about 20% of the entire population of the country.

(ii) National Youth Service: optional education, lasting two years. This involves bringing together about 90% of the primary school leavers in training villages, where they learn about community living, acquire practical skills in agriculture, fishery-related economic activities, construction technology, health-related skills, etc., and where they also learn academic subjects such as Mathematics, English, Geography, Physics, Biology, Chemistry, etc. The National Youth Service (NYS) programmes essentially aim at preparing the youth towards the solution of the socio-economic problems in Seychelles through work participation.

That the Government of Seychelles attaches great importance to the NYS programmes can be verified by the fact that the Chairman of the National Board for the NYS Programme is the President of the Republic of Seychelles himself. The teaching force in all the NYS villages now amounts to 500 teachers, one-third of whom are expatriates.

(iii) The Seychelles Polytechnic: optional education, pursued by candidates who have completed the NYS training, lasting one to three years. Three broad types of training programmes are offered in the polytechnic: those leading to professional qualifications only (e.g., one year course in hotel management; courses leading to secretarial qualifications; courses leading to teaching qualifications);

those leading to "O" - level and "A" - level qualifications (e.g., students in the Departments of Humanities and Science); and programmes which lead to professional qualifications (e.g., Accounting, Commerce) and at the same time preparing the students to enrol in certain "O" - level or "A" - level subjects.

As the word polytechnic implies, there are many types of skills learnt at the Seychelles Polytechnic: agriculture, art and design, business studies, construction, continuing education, health studies, hotel and tourism, maritime studies, mathematics and science, etc. Altogether some 1,300 students and 170 teachers are involved.

- (2) During the discussions it was learnt that some 250 students from the Seychelles Polytechnic will do their "O" - level examinations in 1984, and 200-220 will do "A" - level examinations in 1985.
- (3) During the author's visit to Seychelles, he also held discussions with relevant officials at the Management Training Centre. In the discussions he learnt that this is an in-service training institute which was established by the Seychelles Government to help upgrade the skills of, and improve the work performance of managers, supervisors and financial administrative personnel in the public and the private sector. There are two Departments in the Centre: the Department of Administration (for administrative, and executive and secretarial cadres), and the Department of Finance and Industry (for accounting cadres and parastatal companies and corporations).

The latter Department also runs courses for the well-established local Diploma in Accounting and Management, and also for the examinations of the Association of Accounting Technicians (AAT), London.

- (4) From the information summarised above, it is thus noted that the education system in Seychelles is quite unlike that of most other countries in Africa. There is no continuity from Primary School to "O" - level and "A" - level.

2.5.5. RESEARCH METHODS COURSES

Since, as pointed out above, there is no University in Seychelles, this heading is not relevant to the country.

2.5.6. GRADUATE TRAINING STATISTICS

There are no undergraduate or postgraduate degree courses offered in Seychelles. All the training beyond "O" and "A" - levels must be undertaken overseas. It was not, unfortunately, possible to secure any figures on the number of Seychellois students undertaking their postgraduate training abroad. From the discussions, however, it appeared that the numbers involved are very small.

2.5.7. GRADUATE TRAINING INFRASTRUCTURES

This heading is not relevant to Seychelles, since there is no University in the country. The training infrastructure at the Seychelles Polytechnic is, however, impressive for the kind of programmes the polytechnic offers.

- (1) The key problem is that since there is no University in Seychelles, relatively few Seychellois acquire University education. This is aggravated by the fact that scholarships for overseas study are also becoming more and more difficult to secure.
- (2) Even at Polytechnic Training level there are problems. Because of the paucity of Seychellois with University education, the teachers in the Seychelles Polytechnic are mostly expatriates: from the U.K., France, Mauritius, Algeria, the U.S.A., Canada, etc. These require to take their salary savings (upon completion of their contracts) in foreign currency, which Seychelles herself badly needs.
- (3) When there are financial constraints, it is often difficult to ensure both quantity and quality at the same time. Seychelles is trying to increase both the quality and quantity in her educational system, and seems to have done quite a commendable job on this, although there seems to be a need for evaluating the country's NIS training programmes. During the discussions it was learnt that there had been quite a lot of inputs into the Seychelles' educational sector from overseas governments, through bilateral arrangements with the Governments of the U.K., France, Cuba, the U.S.S.R., China, Australia, Czechoslovakia, Romania, Yugoslavia, Greece, etc. The impact these arrangements have made seemed to be very positive.

STAFF DEVELOPMENT POLICIES

- (1) The Government of Seychelles is aware of the need for her to train the Seychellois people to undergraduate and postgraduate degree levels, with a view to attaining self reliance in her high-level manpower demands. It is this realisation which led to the recent establishment of the Directorate of Manpower Planning in the country.

- (2) In order to attain self-sufficiency, and in view of the fact that there is no University in the country, Seychelles needs a lot of scholarship assistance, which would enable her to train her own nationals in the various fields which are relevant to the economic development of the country. Additional bilateral agreements would seem advantageous in this context.

: 80 :

2.6. SOMALIA

2.6.1. INTRODUCTION

- (1) The Somalia Democratic Republic, located on the Horn of Africa, attained its political independence in 1960. The total human population in the country is about eight million. Its two major cities, Mogadishu (with nearly 1.0 million people) and Hargeisa (with approximately 500,000 people) were previously the capitals of British Somaliland and Italian Somaliland, respectively. The former is the current capital.
- (2) The people of Somalia are well known for their pastoral and nomadic life, keeping large herds of camels, goats, cattle and sheep. In fact the Republic of Somalia gains its foreign exchange primarily from the export of live animals (largely to Saudi Arabia).
- (3) The country also puts a big emphasis towards the development of agriculture, and is well known for the export of bananas.
- (4) Efforts have also been made on industrial development, and the industries in question include cement factories (based on local limestone and gypsum deposits), asbestos roofing factories, and chemical factories. The country has received appreciable inputs in these developments from the World Bank, the Italian Government, and several other donor countries and agencies.

- (5) Being bounded by the Gulf of Aden at the mouth of the Red Sea and also by the Indian Ocean on the east, Somalia has quite a long coastline (2500 km). Indeed the country has promising, but underdeveloped, marine resources.

2.6.2 UNIVERSITIES IN THE COUNTRY

- (1) There is only one University in Somalia: the Somali National University, which was opened in 1970, one year after military take-over of the Government. The first three Faculties established at the University were the Faculties of Law, Economics and Education.
- (2) Since 1970 a number of other Faculties and Colleges have been added. Currently these number 14, viz., the Faculties of Medicine; Engineering; Veterinary Medicine; Industrial Chemistry; Geology; Education; Law; Economics; Agriculture; Journalism; Political Science; Islamic Studies; Languages; and the University Teacher Training College.
- (3) The chief executive in the Somali National University is given the title of Rector, and is assisted by two Vice-Rectors: one for Academic Affairs, and one for Administration.
- (4) The Somali National University admits qualified candidates who have satisfactorily completed Secondary Education ("O" - level), the teaching medium in the schools being the Somali language.

- (5) The medium of instruction at the Somali National University is not uniform: in some study disciplines (e.g., in the Faculty of Education) English is used as the teaching medium; in some (e.g., Political Science) Somali is the language of instruction; in some (e.g., Faculties of Science, Economics and Law) the language used is Italian, while in others (e.g., Faculty of Islamic Studies) the medium of instruction is Arabic. A mixture of two or more of the languages within one Faculty is also not uncommon. This is unique amongst the Universities visited.
- (6) Since the students' language ability is somewhat limited at the time of their University admission, prospective candidates must undergo an intensive language study course for six months prior to their joining the University. Each student undertakes studies in a language which is required in his degree study discipline, and the language courses are normally taken at the University.

2.6.3.

UNIVERSITY CAMPUSES VISITED

- (1) The author's visit was confined to the main Campus of the Somali National University. He also had an opportunity to hold discussions with the Director of Planning in the Ministry of Culture and Higher Education.
- (2) Other institutions visited included: the National Academy of Science and Arts, the Somali Institute of Administration and Management (SIDAM), and the Maritime and Fisheries Institute, all in Mogadishu.

(3) During the discussions it was learnt that the Somali National University will soon move from its current location to occupy new campus buildings, which are now almost complete.

2.6.4. GRADUATE TRAINING PROGRAMMES OFFERED

(1) During the visit it was learnt that student training at the Somali National University is largely confined to the undergraduate level. The distribution of the students in the various Faculties / Colleges is as summarised in Table 32 below:

Table 32. Undergraduate student population in the various Faculties at the Somali National University (1983/84)

Faculty/College	Number of Students
Medicine	209
Engineering	218
Veterinary Medicine	169
Industrial Chemistry	121
Geology	88
Education	857
Law	58
Economics	214
Agriculture	172
Journalism	96
Political Science	150
Islamic Studies	67
Languages	272
Teacher Training College	309
TOTAL	3,100

- (2) The Government Charter under which the Somali National University was established does not, unfortunately, give the University any mandate to offer postgraduate training. The University is, however, drafting amendments to the Charter which, when approved by the Government, will give provisions for offering postgraduate training. In the meantime the only programme at the Somali National University which can be termed "postgraduate training", is a sandwich programme which involves a co-operation link with the University of Saskatchewan in Canada, which is funded by the Canadian International Development Agency (CIDA), and which involves eight Somali students.
- (3) The co-operation link programme referred to under (2) involves the Faculties of Medicine, Education, Agriculture, and Veterinary Science, and there are two students from each Faculty. Under this programme, the students undertake course-work studies for 18 months in Canada, and then return to Somalia for thesis research under joint supervision by Faculty staff from Saskatchewan and Mogadishu. In the end the students will obtain Master's degrees of Saskatchewan University.
- (4) During his visit the author also learnt (through the June 1984 issue of the Industrial Management Review, published by the Ministry of Industry, Mogadishu) about the existence of the Somali Institute of Development Administration and Management, SIDAM, which offers a postgraduate course leading to a Master of Business Administration degree.

His visit to SIDAM revealed the following facts:

- (i) the MBA course is offered as a joint venture between SIDAM and the California State University, Fresno;
- (ii) the course is offered under a World Bank-financed project (1983-86);
- (iii) the admission standards are equivalent to those obtaining at the School of Business and Administrative Sciences, California State University, Fresno (e.g., good first degree: GPA of about 3.0; a TOEFL score of not less than 550);
- (iv) the selected students take an intensive (six months) English Language course prior to admission;
- (v) teaching is done entirely in Somalia, and the Faculty members are highly qualified: five Ph.D. degree holders, three MBA holders, two holders of M.A. degrees;
- (vi) the fields covered include Marketing, Finance and Economic Development and Administration;
- (vii) the duration of the course is two years;
- (viii) the standards of performance required for graduation (e.g., GPA of 3.0) are the same as those obtaining in California;
- (ix) the candidates who successfully complete their postgraduate training at the Somali Institute of Development Administration and Management are awarded MBA degrees of the California State University, Fresno.

2.6.5. RESEARCH METHODS COURSES

- (1) Amongst the courses offered at the SIDAM, there is one on Research Methodology and Design(ADM 611). This gives the postgraduate students the necessary academic tools before they go to the field to undertake research.
- (2) The students are subsequently given an opportunity to undertake research, and to write publishable papers from the research findings (ADM 642, ADM 643).

2.6.6. GRADUATE TRAINING STATISTICS

- (1) As pointed out under 2.6.4.(2), there are only eight postgraduate students at the Somali National University, who are all involved in a sandwich postgraduate degree training programme(with the University of Saskatchewan, Canada).
- (2) The statistics pertaining to the students involved in the sandwich programme between the Somali Institute of Development Administration and Management and the California State University, Fresno are as shown in Table 33 below:

Table 33. Postgraduate student population at the Somali Institute of Development Administration and Management (1983/84):

Academic Year	Number of Postgraduate Students
1983/84	70
1984/85	180
TOTAL	250

- (3) From Table 33 it will be noted that by the end of the current academic year, a total of 250 postgraduate students will have undertaken their MBA training at the SIDAM, which is very encouraging.

2.6.7.

GRADUATE TRAINING INFRASTRUCTURES

- (1) As mentioned under 2.6.4 above, there are no postgraduate training programmes offered by the Somali National University, except for the sandwich programme involving co-operation with the University of Saskatchewan, Canada. Even in this case, the bulk of the training is undertaken in Canada, and the eight Somali students involved will be awarded higher degrees of the University of Saskatchewan. Postgraduate training infrastructures are thus yet to be developed in the University.
- (2) The postgraduate training infrastructures for the World Bank- supported MBA project at the Somali Institute of Development Administration and Management are, on the other hand, quite adequate. There are impressive computer facilities for the course, and a good library is being developed at the institute.
- (3) It seemed, during the visit, that not many people are aware the MBA course at the SIDAM. This includes the Somali people themselves. This was a bit surprising, considering the ^{big} 1984/85 intake (of 180 students).

2.6.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) The problem here is that there are no postgraduate courses offered at the Somali National University. Consequently, postgraduate training must be done in overseas institutions. Since, however, scholarships for overseas study are becoming increasingly difficult to secure, relatively few Somali nationals get opportunities to acquire postgraduate training experience.
- (2) The establishment of more programmes like the one offered at the SIDAM would alleviate the problem outlined above. If such programmes are developed, however, they should, perhaps, be offered as a joint venture with the Somali National University, and the postgraduate degrees should be of the Somali National University. The current arrangement whereby the course, even though offered in Somalia, is taught almost completely by the Faculty staff of the California State University, Fresno, does seem to encourage self reliance. Indeed, continuity of the MBA programme at the SIDAM beyond 1986 seems dubious (unless an extension is granted), since there are currently few qualified Somali nationals at the institute, involved in teaching the MBA course.

2.6.9. STAFF DEVELOPMENT POLICIES AND OTHER RELEVANT INFORMATION

- (1) The Somali National University has an active Staff Development programme. The University attracts promising and academically strong candidates who complete their first degrees at the University by appointing them to the status of Assistant Lecturer.

- (2) Since there are no postgraduate training courses offered at the Somali National University, the newly recruited Assistant Lecturers spend their first year of appointment assisting the more senior staff members in teaching and research. In fact, they spend the first year as Assistant Lecturers on probation. Those who perform well during the probation period are confirmed to full University employment status the following year. Subsequently, after the probation period, the confirmed staff members are sent overseas for Master's and Ph.D. training programmes.
- (3) After serving satisfactorily for four years as Assistant Lecturer^s at the Somali National University, the staff members are usually promoted to the status of Lecturer, even before acquiring the Ph.D. degree qualification. After the level of Lecturer, the next status up the academic ladder is that Associate Professor and then full Professor.
- (4) On the average, 75% of the teaching staff (total 490) at the Somali National University are now nationals. Not many of these, however, have been trained to Ph.D. level. Many have the Bachelor's degree only; many others have the Master's degree as well, and very few (less than ten in all) have the Ph.D. degree qualification. With so few Ph.D. holders, it is evident that the Somali National University still has a long way to go towards building the needed manpower for solid postgraduate training programmes.

- (5) During the discussions it was learnt that the confirmed staff members who are sent overseas for postgraduate training largely go to Italy, the U.S.A., the U.K. and Canada. The costs for their training are usually covered through scholarship support from the governments of the countries mentioned. Additional Scholarships are provided by several other agencies, including the Arab League, including ALESCO, which is equivalent to UNESCO.
- (6) It was pointed out, during the discussions, that one of the problems in training Somali nationals overseas is that many of the candidates do not return to Somalia upon their graduation. This is partly because they get married while overseas, or get other attractions. This drawback would be eliminated if the infrastructures for local postgraduate training were established.
- (7) From the discussions held with several senior officers of the Somali National University, and also of the National Academy of Science and Arts (NASA), it was learnt that research is given a big emphasis in Somalia. Indeed, some of the researchers in the country are having their research projects sponsored by international agencies such as IDRC, SAREC, etc. It seemed, however, that Somalia has a problem of lack of a big team of qualified nationals who are capable of formulating and writing up comprehensive research projects, and also for effecting the formulated research programmes.

It has, for example, been pointed out that there are less than ten Ph.D. holders at the Somali National University. At the Somali National Academy of Science and Arts, similarly, there is only one Ph.D. holder and five holders of Master's degrees, out of a total team of twenty researchers. Somalia thus seems to need significant external inputs to assist her in the postgraduate training of her teaching and research staff.

2.7. TANZANIA

2.7.1 INTRODUCTION

- (1) The possibility of establishing a University in Tanzania was first mentioned in an official report of Higher Education in East Africa in 1955, but it was not until in 1961 that a University College was established in the country.
- (2) The University of Dar es Salaam initially started as a College which was affiliated to the University of London, and subsequently (in 1963) to the University of East Africa. When the University of East Africa was dissolved on June 30, 1970, the University College, Dar es Salaam became the University of Dar es Salaam.
- (3) When it started in October 1961, the University had only 14 students enrolled in its Faculty of Law. Subsequently, in 1964, 1965 and in 1968, the Faculties of Arts and Social Sciences, Science, and Medicine, respectively, were added. Other Faculties which were established later are the Faculties of Agriculture (1969, with the divisions of Forestry and Veterinary Science added in subsequent years), Engineering (1973), and Commerce and Management (1979). A number of institutes were also established, viz., the Institute of Kiswahili Research (1965), the Institute of Development Studies (1973), the Institute of Marine Sciences (1978), the Institute of Production Innovation (1981), and the Institute of Resource Assessment (1983).

- (4) Over the years, student population at the University of Dar es Salaam has grown from 14 in 1961/62, to 203 in 1964/65, to 778 in 1966/67, and to nearly 4000 students in 1983/84.
- (5) Until June 30, 1984 the University of Dar es Salaam, had three campuses: the Main Campus, which occupies a beautiful site on Observation Hill, about 13 km from the Dar es Salaam City centre; the Muhimbili Campus, which lies within the city centre, and the Morogoro Campus, two to three hours drive away from Dar es Salaam towards the interior.
- (6) Since July 1, 1984 the Morogoro Campus, which used to embrace the Faculties of Agriculture, Forestry and Veterinary Science, has been upgraded to an independent fully-fledged University: Sokoine University of Agriculture. In the present report, reference will be made to both Universities.

2.7.2

UNIVERSITIES IN THE COUNTRY

- (1) Following the up-grading of the Faculty of Agriculture, Forestry and Veterinary Science, University of Dar es Salaam, to a fully-fledged independent University, Tanzania has been in possession of two Universities, the University of Dar es Salaam, in Dar es Salaam, and the Sokoine University of Agriculture, in Morogoro.

- (2) Each of the two Universities has a Vice-Chancellor as its Chief executive officer. At the University of Dar es Salaam the Vice-Chancellor is assisted by the Chief Academic Officer (referred to elsewhere as the Deputy Vice-Chancellor, or as Pro-Vice-Chancellor, who handles academic affairs); and also by the Chief Administrative Officer (elsewhere referred to as Registrar), who assists in administrative matters. At the Sokoine University of Agriculture, the titles of Deputy-Vice-Chancellor and Registrar are used instead of those of Chief Academic Officer and Chief Administrative Officer, respectively.

2.7.3 CAMPUSES/FACULTIES VISITED

- (1) Since the author has had an opportunity to visit all the campuses, many times, it was not necessary for him to revisit them when ~~compiling~~ this document. He, however, had to secure relevant data from the University's administrative officers in the Staff Development-, Staff Recruitment- and Higher Degrees sections.
- (2) Additional data were extracted from the University Calendar (1982/83 - 1984/85) and Prospectus (1984/85).

2.7.4 GRADUATE TRAINING PROGRAMMES OFFERED

- (1) Postgraduate training at the University of Dar es Salaam can lead to one of the following qualifications:

a postgraduate diploma in Education, in Law, or in Public Health; a Master's degree in the various Faculties; and a Ph.D. degree in most fields.

- (2) The postgraduate Diploma courses are usually one year programmes undertaken by course-work study, followed by written examinations. There is often some provision for the candidates to undertake a short independent research project also (e.g., course ED 513: Independent Study in the postgraduate diploma course, Education).
- (3) Master's degree courses by course-work and dissertation last one to three years, full-time, depending upon the programme. One-year Master's programmes are offered by the Institute of Development Studies, and by the Department of Education in the Faculty of Arts and Social Sciences. Two-year Master's programmes are the commonest. The first year is usually devoted to course-work study followed by written examinations, and the second year (for those who attain the stipulated standards in the course-work examinations) is devoted to research followed by writing a dissertation, under the guidance of a qualified supervisor appointed by the Senate. Three-year Master's degree programmes are offered in the Faculty of Medicine.

- (4) Master's degree programmes at the University of Dar es Salaam and the Sokoine University of Agriculture, Morogoro can also be undertaken by research only, without any prescribed course-work component. At the end of the research phase the candidates write and submit a thesis. Thesis Master's programmes can be offered in any Faculty provided that there are adequate facilities for the candidate's research, and also that there is a qualified staff member in the relevant Faculty and Department, who can competently supervise the proposed research. The duration of the registration period for thesis Master's courses is usually two years for full-time students or three years for those working on a part-time basis.
- (5) Ph.D. degree programmes at the University of Dar es Salaam and the Sokoine University of Agriculture, Morogoro, are undertaken by thesis research alone. Prospective candidates can, indeed, register for a Ph.D. study in any academic Department provided that they meet the stipulated admission criteria, there are adequate facilities in the relevant Department for the proposed research project, and there are competent supervisors to guide the research. The duration of the Ph.D. training course is usually four years for full-time students and six years for part-time students.

- (6) The various postgraduate programmes offered at the University of Dar es Salaam are described in detail in the University Calendar (1982/83 - 1984/85). The admission-, examination-, and thesis/dissertation regulations pertaining to each programme, are also described in the University Calendar. In all cases the applicants for the Master's degree courses must be in possession of a good Bachelor's degree (at least Lower Second or equivalent, or an overall grade of B in the subject of intended study). Candidates who are applying for admission to Ph.D. degree programmes must be in possession of a Master's degree from a recognised University, or a very good Bachelor's degree with relevant research experience.
- (7) The candidates who secure admission for programmes involving course-work followed by dissertation, must complete the various courses with a B grade average (3.0 grade-point-average) before they can embark on dissertation research. The academic progress of the candidates who are registered by thesis research alone is assessed through periodic reports submitted by the candidates' supervisors (once every six months) to the Senate's Higher Degree Committee, through the relevant Faculty or Institute Boards.

- (8) The assessment of the candidates' course-work performance, and also of the theses and dissertations, is done by internal as well as by external examiners. At least two examiners are appointed by the Senate for Master's degree candidates (one internal and the second external). For Ph.D. candidates, at least three solid examiners are appointed, one of whom must be external. In addition to the examination of the written thesis, an oral examination is also mandatory for Ph.D. candidates at the University of Dar es Salaam and the Sokoine University of Agriculture.
- (9) In order to effect a good co-ordination of the various postgraduate courses offered at the University of Dar es Salaam, and in an attempt to ensure that high standards of postgraduate performance are maintained in all the Faculties and relevant institutes, the University of Dar es Salaam established, in 1980, the post of Director of Postgraduate Studies, and the Director was charged with the responsibility of co-ordinating all the postgraduate training activities in the University. The Director of Postgraduate Studies thus became Chairman of the University Senate's Higher Degrees Committee, and also over-all co-ordinator of Staff Development activities of the University of Dar es Salaam (which have a strong postgraduate training element).

2.7.5

RESEARCH METHODS COURSES

(1) Most Faculties and relevant Institutes at the University of Dar es Salaam and the Sokoine University of Agriculture realise the usefulness of exposing the postgraduate students to research methodology courses before the students go to the field for dissertation research. Examples of Research Methods courses offered in the various Departments are given in Table 49 below:

Table 49. Examples of Research Methods Courses offered in various Departments at the University of Dar es Salaam and Sokoine University of Agriculture.

University	Faculty/ Institute	Department	Research Methods Courses
Sokoine University of Agricul- ture	Agriculture	Rural Economy	RE 403: Survey Methodology
		Agricultural Engineering	AE 403: Research Methodology
		Agricultural Education & Extension	AEE 403: Survey Methods
	Forestry	-	FO 416: Methods and Techniques in Experimental Biology
	Veterinary Science	-	MVM 601: Research Methodology

University	Faculty/ Institute	Department	Research Methods Courses
University of Dar es Salaam	Arts and Social Sciences	Education	ED 501: Research Methods
			ED 602: Research Methods
		Economics	3 months Research Methodology course (not given code numbers)
		History	HI 602: Research Methodology & Research Techniques
		Art, Music & Theatre	MS 606: Research Methodology; FA 600: Research Methodology
		Sociology	SO 403: Methods and Techniques in Social Research
		Political Science and Public Admi- nistration	PS 600: Social Science Research Methods
	Commerce and Management	-	CM 606: Research Methods Seminar
	Development Studies	-	DS 600: Research Methodology

(Source: University of Dar es Salaam Prospectus,
1984/85)

(2) In some Faculties (e.g., Science, Law, Engineering, Medicine), there are no formal Research Methods courses offered: the individual postgraduate students are advised on the research methods appropriate to their specific research projects by their academic supervisors.

2.7.6 GRADUATE TRAINING STATISTICS

(1) STUDENTS

(i) The statistics on postgraduate students at the University of Dar es Salaam are presented in Table 50 and 51 below

Table 50. Distribution of postgraduate students in various Faculties at the University of Dar es Salaam during 1983/84.

Faculty/Institute	Number of Students			Total
	Ph.D.'s	Master's	Postgraduate Diploma	
Arts and Social Sciences	21	88	0	109
Commerce and Management	3	36	0	39
Engineering	2	21	0	23
Law	6	26	8	40
Medicine	4	70	4	78
Science	15	66	0	81
Agriculture, Forestry and Veterinary Science*	24	65	0	89
Institute of Development Studies	2	12	0	14
T O T A L	77	384	12	473

*Now Sokoine University of Agriculture

Table 51. Statistics on postgraduate awards at the University of Dar es Salaam in various years.

Year	Number of graduates			Total
	Ph.D.	Master's.	Postgraduate Diploma	
1971	2	2	0	4
1972	2	18	1	21
1973	4	13	0	17
1974	3	43	1	47
1975	5	57	2	70
1976	2	83	0	85
1977	2	111	4	117
1978	6	153	7	166
1979	4	91	2	103
1980	3	132	9	144
1981	2	129	5	136
1982	7	113	8	128
1983	5	108	6	119
1984	6	132	9	147
TOTAL	53	1185	66	1304

(ii) It was noted (table 50) that in terms of postgraduate student population, the leading four Faculties are Arts and Social Sciences; Agriculture, Forestry and Veterinary Sciences (now in Sokoine University of Agriculture); Science; and Medicine, in that order.

(2) STAFF

(i) The statistics showing the distribution of academic members at the University of Dar es Salaam and the Sokoine University of Agriculture in the various Faculties (as published in the 1984/85 University of Dar es Salaam Prospectus) are shown in Table 52-56 below.

Table 52. Distribution of academic members of staff at the Sokoine University of Agriculture in various Faculties (Source: 1984/85 University of Dar es Salaam Calendar).

Faculty	Department	Ph.D. holders	Master's holders	Bachelor's only	Total
Agriculture	Animal Science and Production	5	5	8	18
	Agricultural Education & Extension, and Centre for Continuing Education	3	7	4	14
	Agricultural Engineering & Land Planning	2	7	9	18
	Crop Science & Production	13	5	7	25
	Food Science & Technology	5	3	6	14
	Rural Economy	3	5	4	12
	Soil Science	5	7	4	16
	TOTAL	36	39	42	117

Faculty	Department	Ph.D. holders	Master's holders	Bachelor's only	Total
Forestry	Forest Biology	3	2	1	6
	Forest Engineering	0	5	0	5
	Forest Mensuration & Management Planning	2	2	1	5
	Forest Economics	1	2	0	3
	Wood Utilisation	2	2	1	5
	University Training Forest	0	1	2	3
	TOTAL	8	14	5	27
Veterinary Science	Veterinary Anatomy	0	0	4	4
	Vet. Physiol., Biochemistry, Pharmacology, Toxicology	0	0	6	6
	Veterinary Microbiology & Parasitology	4	4	1	9
	Vet. Pathology	0	1	3	4
	Vet. Medicine & Public Health	1	1	2	4
	Vet. Surgery, Obstetrics and Production	2	1	2	5
	TOTAL	7	7	18	32
GRAND TOTAL for Sokoine University of Agriculture		51	60	65	176

Table 53. Distribution of academic members of staff in the Faculty of Arts and Social Sciences, University of Dar es Salaam (1984/85)

Department	Ph.D. holders	Master's holders	Bachelor's only	Total
Statistics	6	5	1	12
Geography	7	4	2	13
Literature	3	4	2	9
Foreign Languages and Linguistics	5	6	1	12
Communication Skills Unit (Part of Depart. of Foreign Lang. and Linguistics)	0	12	2	14
Economics	14	15	1	30
History	7	7	0	14
Political Science and Public Administration	14	12	0	26
Art, Music and Theatre	2	6	3	11
Sociology	6	11	1	18
Kiswahili	1	9	2	12
Education	12	14	0	26
Economic Research Bureau	5	12	4	21
=====				
T O T A L	82	117	19	218

(Source: 1984/85 University of Dar es Salaam Prospectus).

Table 54. Distribution of academic members of staff in various Departments in the Faculties of Commerce and Management, Law, Science, and the Computer Centre, University of Dar es Salaam (1984/85).

Faculty	Department	Ph.D. holders	Masters holders	Bachelor's degree only	Total
Commerce and Management	Accounting	1	6	5	12
	Finance	0	5	4	9
	Marketing	2	7	5	14
	General Manag..	1	6	1	8
	TOTAL	4	24	15	43
Engineering	Civil Engin.	13	13	18	44
	Electrical Eng.	5	14	5	24
	Mechanical Eng.	9	16	16	41
	Chemical & Process Eng.	5	2	8	15
	TOTAL	32	45	47	124
Law	(No Departments)	7	13	11	31
Science	Botany	10	2	1	13
	Chemistry	11	6	3	20
	Mathematics	7	7	1	15
	Zoology & Marine Biology	14	7	5	26
	Physics	10	7	4	21
	Geology	4	8	5	17
	TOTAL	56	37	19	112
Computer Centre	(No Departments)	0	3	0	3

(Source: 1984/85 University Prospectus)

Table 55. Distribution of academic members of staff in the various Departments, Faculty of Medicine, University of Dar es Salaam (1984/85)

Department	Ph.D. holders	Master's degree holders	First degree only	Total
Anatomy/Histology	3	1	3	7
Biochemistry	1	2	1	4
Physiology	3	0	0	3
Medicinal Chemistry	3	4	1	8
Pharmaceutics	2	1	3	6
Pharmacognosy	1	1	2	4
Community Health	0	4	2	6
Paediatrics & Child Health	0	5	2	7
Traditional Medicine Research Unit	1	3	5	9
Clinical Pharmacology	2	2	1	5
Surgery	0	7	4	11
Orthopaedics & Trauma	0	3	2	5
Ophthalmology	0	2	2	4
Obstetrics & Gynaecology	0	3	1	4
Anaesthesiology	0	1	4	5
Morbid Anatomy and Histopathology	1	0	3	4

Medicine contd.....

Department	Ph.D. holders	Master's degree holders	First degree only	Total
Haematology and Blood Transfusion	0	2	1	3
Microbiology	0	2	2	4
Parasitology/ Entomology	2	3	1	6
Radiology & Radiotherapy	0	0	2	2
Medicine	0	4	4	8
Behavioural Sciences	1	4	0	5
Epidemiology and Biostatistics	0	2	3	5
Psychiatry	0	2	3	5
Oral Surgery and Oral Pathology	0	0	1	1
Restorative Dentistry	0	2	2	4
Community and Preventive Dentistry	1	1	1	3
T O T A L	21	61	56	138

(Source: 1984/85 University Prospectus)

Table 56. Summary showing the total number of academic members of staff in various Faculties and Institutes (1984/85).

Faculty/Institute	Number of Staff Members			Total
	Ph.D. holders	Masters holders	First degree only	
Agriculture, Forestry and Veterinary Science*	51	60	65	176
Arts and Social Sciences	82	117	19	218
Commerce and Management	4	24	15	43
Engineering	32	45	47	124
Law	7	13	11	31
Medicine	21	61	56	138
Science	55	37	19	112
Computer Centre	0	3	0	3
Institute of Development Studies	5	26	5	36
Institute of Marine Sciences	1	2	3	6
Institute of Kiswahili Research	1	16	5	22
Institute of Production Innovation	0	1	7	8
Institute of Resource Assessment	5	8	8	21
T O T A L	265	413	260	938

(Source: 1984/85 University Prospectus)

* Now in Sokoine University of Agriculture, Morogoro.

- (ii) It was noted (Table 56) that the University of Dar es Salaam and the Sokoine University of Agriculture combined had 265 Ph.D. degree holders during 1984/85. This figure, however, includes staff members who are on secondment to other institutions. In addition, there were 413 Master's degree holders. This, however, includes some staff members who are on Ph.D. training, and who are not physically present at the University. Those who are holders of the first degree only, are largely candidates who are on staff Development, and who are thus usually enrolled for Master's degree programmes, locally or overseas.
- (iii) Tables 52 - 55 reveal that there is a wide variation from Department to Department on the number of staff members with Ph.D. and Master's degree qualifications. Within the Faculty of Agriculture, Sokoine University of Agriculture, the strongest Departments include the Departments of Crop Science and Production, and Soil Science. Within the Faculty of Veterinary Science, Sokoine University of Agriculture, the strongest Department in this respect is Microbiology and Parasitology. In the Faculty of Arts and Social Sciences, the highest numbers of Ph.D. and Master's degree holders are in the Departments of Economics, Political Science and Public Administration, and Education. In Engineering the strongest Departments are Civil- and Mechanical Engineering, while in the Faculty of Science the strongest Departments in this respect are those of Zoology and Marine Biology, Chemistry, and Botany.
- (iv) The statistics which are presented in Tables 52 - 55 above are not free of error. The University of Dar es Salaam and Sokoine University of Agriculture are, like other Universities in the region, also experiencing the problem of teaching staff exodus. A growing proportion of qualified members of staff get attractions to move to better-paying jobs, or to other Universities, leaving behind them vacancies which are difficult to fill. Table 56 shows the number of vacant posts (caused either by staff resignations, or by difficulties in staff recruitment).

Table 56. Vacant posts (numbers outside brackets) in the various Faculties at the University of Dar es Salaam* during 1984/85 (numbers in brackets show size of establishment).

Faculty	Professor	Assoc. Prof.	Senior Lect.	Lecturer	Ass. Lect.	Total Vacant posts
Arts and Social Sciences	12(23)	15(35)	16(55)	10(56)	0(38)	53(207)
Science	11(17)	9(18)	11(36)	15(40)	8(27)	54(138)
Engineering	8(12)	11(15)	6(35)	14(41)	4(29)	43(132)
Commerce and Management	4(4)	4(5)	4(10)	5(14)	2(14)	19(47)
Law	4(5)	5(8)	6(8)	5(8)	6(9)	26(38)
Medicine	6(21)	15(24)	20(56)	27(77)	0(26)	68(204)
Institute of Devel. Studies	2(3)	3(6)	6(9)	7(18)	0(1)	18(37)
Institute of Resource Assess.	1(2)	0(3)	3(6)	1(7)	1(3)	6(21)
Institute of Kiswahili Research	2(2)	2(4)	3(9)	3(10)	1(7)	11(32)
Computer Centre	1(1)	0(1)	3(3)	1(3)	0(0)	5(8)
Institute of Production Innovation	0(1)	0(1)		2(9)		2(11)
TOTAL	51(91)	64(120)	78(227)	79(283)	22(154)	305(875)

* Sokoine University of Agriculture not included).

(v) It was noted that vacant posts occur in largest numbers in the Faculties of Medicine, Science, Arts and Social Sciences, and Engineering, in that order.

(3) FEEES AND OTHER COSTS

(i) The postgraduate fees at the University of Dar es Salaam and the Sokoine University of Agriculture, which were applicable during 1984/85, are as shown in Table 57 below.

Table 57. Summary of fees of various categories at University of Dar es Salaam during 1984/85.

Category of fees	Amount in T.Shs.
<u>Registration fees:</u>	
(a) Master's and Ph.D.	1,200/=
(b) Postgraduate Diploma	90/=
<u>Tuition fees:</u>	
For course-work students	12,000/= p.a.
<u>Supervision fees:</u>	
For thesis research students	2,000/= p.a.
<u>Research fees:</u>	
(a) For course-work Master's & Postgrad. Diploma.....	15,000/= per programme
(b) For thesis Master's and Ph.D. students	15,000/= p.a.
<u>Residential fees:</u>	
For all postgraduate students	24,000/= p.a.
<u>Caution money:</u>	1,000/= p.a.
<u>Examination fees:</u>	
(a) Master's and Postgraduate Diploma	2,000/=
(b) Ph.D.	3,000/=
<u>Student Union fees:</u>	300/= p.a.
<u>Book allowance:</u>	5,000/= p.a.
<u>Thesis/dissertation production</u>	5,000/=

(Source: University of Dar es Salaam Prospectus, 1984/85).

(ii) The fees shown in Table 57 are, however, currently under review.

2.7.7. GRADUATE TRAINING INFRASTRUCTURES

- (1) The various Faculties at the University of Dar es Salaam, have quite adequate facilities for postgraduate training. In fact, some of the programmes cater not only for Tanzania, but also for other countries in the region. The ANSTI postgraduate programme in Water Resources Engineering, offered in the Faculty of Engineering, is an example of such a course of regional interest.

- (2) Where the local facilities are inadequate, the University makes efforts to establish co-operation links with selected other Universities overseas. Such links include the co-operation with Carleton University in Canada (under CIDA's financial support), the co-operation with the Universities of Nijmegen and Eindhoven in The Netherlands (supported by the NUFFIC), the co-operation with the Royal Veterinary and Agricultural University, Copenhagen, Denmark (under DANIDA's support), and with the University of Lund, Sweden (under SIDA's support), to mention but a few. Through the links the University has been receiving support in the form of equipment, library books and periodicals, laboratory chemicals, scholarships for overseas study, and qualified lecturers and visiting professors.

2.7.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) The problems summarised below are not unique to the University of Dar es Salaam and the Sokoine University of Agriculture, Morogoro: they were also cited in the other Universities visited. One of the big problems is the lack of adequate scholarship support (e.g. from the Tanzanian Government) for postgraduate training at the two national Universities. Many strong candidates who

secure admission for postgraduate training in the various Faculties therefore fail to pursue the courses.

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- (2) Another problem noted is the lack of an adequate foreign exchange allocation to the University, which would enable the University to purchase books and journals, which are necessary for effecting solid postgraduate training; or to purchase laboratory chemicals and reagents, which are indispensable in University teaching.
 - (3) The third problem is the lack of adequate facilities for postgraduate student accommodation. The current postgraduate residential block, which was built during the days of the University of East Africa, is grossly inadequate for the current demand.
 - (4) The problem of staff exodus has already been mentioned. The salaries paid to the academic members of staff at the University of Dar es Salaam are amongst the highest in the country. However, they are amongst the lowest in the region. There is thus a growing tendency for staff mobility: movements to where the salaries are higher, or where the fringe benefits are more attractive. These movements are robbing the Departments of origin of some of the best lecturers and professors.

2.7.9. STAFF DEVELOPMENT POLICIES

- (1) From its inception, the University of Dar es Salaam has had an aggressive Staff Development Programme. This involves recruiting the best students (those attaining a good Upper Second pass) amongst the Bachelor's degree graduates as Tutorial Assistants, and training them to Master's and Ph.D. degree level.

- (2) Where Master's degree programmes are offered at the University of Dar es Salaam (i.e., in the Tutorial Assistant's field of intended specialisation), the newly recruited staff members are trained locally. Where programmes are not available locally, efforts are made to train them in suitable Universities overseas. The University indeed budgets for her Staff Development Programme every year.
- (3) Tutorial Assistants who do well in their Master's degree programmes (B+ grade average) are confirmed as academic members of staff, and promoted to the status of Assistant Lecturer (usually after two years). Subsequently they are given opportunities to enrol for the Ph.D. degree, either locally or overseas. The University's Staff Development Committee usually gives the locally-registered Ph.D. candidates opportunities for short-term exposure in suitable Universities overseas, to undertake library research, to do chemical analyses of their research materials, etc.
- (4) Assistant Lecturers who successfully complete their Ph.D. degrees are automatically promoted to the status of Lecturer. Those who fail in their Master's or Ph.D. degree programmes are discontinued from University services.
- (5) Since the establishment of the University of Dar es Salaam, many Tutorial Assistants have been trained to the Ph.D. level. Indeed, the performance of the University of Dar es Salaam is one of the best in the region in this respect. Some Departments have 10 or more Tanzanian Ph.D. holders in an establishment of 13. This was made possible through generous

scholarship support from various overseas Governments (e.g., Canada, the U.K., the U.S.A., the Netherlands, Denmark, Switzerland, the Federal Republic of Germany, Norway, Sweden, etc.), and from non-Governmental funding agencies such as the Rockefeller Foundation, the Ford Foundation, etc.

2.8

Z A M B I A

2.8.1

INTRODUCTION

- (1) The establishment of a University in Zambia was first recommended in the early 1950's, but it was not until after the country attained its political independence from the U.K. in 1964 that serious thought and action was taken on the matter. The Act of Parliament for the establishment of the University of Zambia thus came into operation in November, 1965, and the Chancellor of the new University, Dr. K.D. Kaunda, was installed in July 1966.
- (2) The University of Zambia began with three Schools (equivalent to Faculties, or Colleges in other Universities): Education, Humanities, and Natural Sciences. Subsequently the Facilities were expanded, and additional schools were established. These were the schools of Law (1967), Engineering (1969), Medicine (1970), Agricultural Sciences (1971), Mines (1973), Business and Industrial Studies (1978), Environmental Studies (1981), and Veterinary Medicine (1983).
- (3) Whereas most other Universities in the newly independent African countries which had been under British colonial rule initially started off as colleges of the University of London (and hence had umbilical connections with the University of London in terms of student admission regulations, duration of the bachelor's degree training period, etc.), the University of Zambia was independent from the very beginning. The University, for example, decided to include successful School Certificate ("O" - level) leavers (instead of Form VI leavers only) for

first degree enrolments. This was unlike the situation in the Universities in Kenya, Uganda, Tanzania, Zimbabwe, etc., where the admission to bachelor's degree programmes was restricted to Form VI leavers. This was partly necessitated by the lack of adequate numbers of Form VI Leavers available to the University at its inception.

- (4) The objective of the University of Zambia is to serve as an instrument of national development:

"It must combine practical service to the nation at a critical time in its life with fulfilment of the historic purposes of a University as a seat of learning, a treasure house of knowledge, and a creative centre of research."

These objectives are enshrined in the motto of the University: service and excellence.

2.8.2 UNIVERSITIES IN THE COUNTRY

- (1) Currently there is only one University in Zambia: the University of Zambia: This has two campuses: the Main Campus in Ndola. and the Lusaka Campus.
- (2) The Chief Executive of the University is the Vice-Chancellor (currently Dr. J.M. Mwanza), who is assisted by a Pro-Vice-Chancellor (currently Prof. B.F. Mweene) and two Principals: one for the Lusaka Campus (currently Prof. K. Mwafuluka) and the other for the Ndola Campus (currently Prof. M.E. Kashoki). The two campuses have 3000 and 1000 students, respectively.

2.8.3

CAMPUSES AND FACULTIES VISITED

- (1) Because of time constraints the author's visit was confined to the Main Campus in Lusaka. During the visit he was most impressed with the excellently maintained campus grounds: lawns nicely controlled and beautifully green, flowers in attractive blooms, and the general cleanliness of the environment of high standard.
- (2) During the visit the author held discussions with staff members or administrative officers (in some cases Deans) of the Schools of Law, Education, Medicine, Engineering, and Science), and also with the Acting Director of the Education Research Bureau. He also held discussions with the University Acting Research and Postgraduate Secretary, with the Deputy Vice-Chancellor, with the then Acting Principal for the Lusaka Campus, and also with the Permanent Secretary in the Ministry of Higher Education.

2.8.4

GRADUATE TRAINING PROGRAMMES OFFERED

- (1) The University of Zambia offers two broad types of postgraduate programmes: higher degree programmes by thesis research alone; and higher degree programmes involving coursework and examination, followed by research and writing a dissertation. Under the first category, the candidates may register for a Master's, or for a Ph.D. degree programme (if already in possession of a good Master's degree, and if qualified supervisors are available). The second category is mainly for the Master's degrees.

- (2) Regulations pertaining to postgraduate training programmes of the University of Zambia are clearly documented in the University's 1983/84 Calendar (pp. 79-86) and also in the individual school handbooks. Prospective applicants for Master's degree programmes are expected to be in possession of an Upper Second first degree, or a Lower Second with experience.
- (3) The duration of the various Master's degree programmes at the University of Zambia varies from School to School. Most programmes by course-work and dissertation take two academic years (about 15 months), the first year being devoted to course-work and ^{research and thesis writing where} the second year to the candidates are enrolled in programmes involving course-work and ~~research~~ research, they must pass the course-work part with a B-grade average before they can be allowed to embark on dissertation research. In the School of Law, candidates whose grade average is below the required B, but above the grade of C, may be allowed to repeat the failed courses, or may be awarded a postgraduate diploma.
- (4) The Master's programme in Medicine takes a significantly longer time to complete because it is regarded as ^a part-time programme. The course-work part takes at least two years, and the entire programme takes four to seven years to complete, which is rather long.
- (5) The Master's degree programmes by research only on a full-time basis are usually of two years duration. For Ph.D.'s the normal minimum length is two academic years full-time, and the normal maximum time allowed is four academic years full-time. For part-time students, the normal minima and maxima for Ph.D. students is three and six years, respectively.

- (6) The Schools which offer postgraduate training programmes by course-works and dissertation at the University of Zambia are as shown in Table 34 below:

Table 34. Course-work Master's degree programmes at the University of Zambia

School	Programmes offered
Education	M.A. in African Literature; History; and M.Ed.
Humanities & Social Studies	M.A. in Economics; Educational Psychology; Industrial/Organisational Psychology; Political Science; Sociology; and MPA (Master of Public Administration)
Law	LL.M., and Postgraduate Diploma in International Law
Medicine	M.Med. in Internal Med.; Obstetrics and Gynaecology; Paediatrics and Child Health; General Surgery
Mines	Master of Mineral Science in Geology; Metallurgy and Mineral Processing; Mining Engineering
Natural Sciences	M.Sc. in Biology; Chemistry; Land Resource Survey; Mathematics; Geography; Physics
Engineering	M.Sc. in Environmental Engineering; Structural Engineering; Production Engineering and Management; Thermofluids Engineering

- (7) Postgraduate training programmes at the University of Zambia are administered through a Central Graduate Studies Committee of Senate, whose Chairman is the Pro-Vice-Chancellor, and whose terms of reference are clearly stipulated in the University Calendar (e.g., p. 46, 1983/84 Calendar).

Each School also has a Graduate Studies Committee chaired by the School Dean, and which sends its deliberations to the Central Graduate Studies Committee of Senate. Each School Dean is assisted by two Assistant Deans: one for undergraduate studies, and the other for postgraduate studies.

- (8) Applications for postgraduate admissions at the University of Zambia are processed by, and the candidates are initially selected by, the various schools in consultation with the relevant Departments. In case a particular School rejects the application of a given candidate, it must submit all the application particulars of the candidate (transcript, letters of references) and the reasons for the rejection to the Senate's Graduate Studies Committee, whose Secretary will then inform the candidate accordingly.

2.8.5

RESEARCH METHODS COURSES

- (1) Most Schools which offer postgraduate training by course-work and dissertation at the University of Zambia teach at least one course on Research Methods.

Examples of such courses are shown in Table 35 below:

Table 35. Examples of Research Methods courses in various Schools at the University of Zambia.

Schools:	Research Methods Courses
Education	ED 510: Research Methods
	E 570: Resources, Research Methods & Thesis Planning
	H 540: Historical Methodology
Engineering	IE 600: Statistics and Experimental Design
	CE 623: Numerical Methods in Structural Engineering
Humanities	EC 510: Quantitative Methods
	PS 540: Advanced Methods
	PA 500: Research Methods & Techniques
	PL 500: Research Methods & Techniques
	S 520: Advanced Methods in Social Research

- (2) Where formal Research Methods courses are not offered, the individual postgraduate students are guided on the appropriate methods to use in their research projects by their thesis/dissertation supervisors.

2.8.6

GRADUATE TRAINING STATISTICS

(1) STUDENTS

- (i) The distribution of the postgraduate students admitted in the various postgraduate programmes at the University of Zambia during 1983/84 was

as shown in Table 36 below:

Table 36. Admitted postgraduate students according to School and Study Programme, as on March 13, 1984.

School	Programme	Number of Students
Education	M.A.: Master of Arts	11
	M.E.: Master of Education	9
Humanities & Social Science	M.A.: Master of Arts	22
	M.P.A. Master of Public Administration	6
L a w	LL.M.: Master of Laws	17
	Postgrad. Diploma in Law	2
Medicine	M.Med.: Master of Medicine	16
Mines	M.Min.Sc.: Master of Mineral Sciences	11
Natural Sciences	M.Sc.: Master of Science	14
	Ph.D.: Doctor of Philosophy	1
T O T A L		109

(ii) When the data in Table 36 were being compiled, there were additional 27 postgraduate students who had completed the course-work part, and whose theses/dissertations were under examination. There were four additional students whose thesis examinations had been assessed, but who had not yet graduated. This brings the total postgraduate student population at the University of Zambia to 140, which is a very small number compared with the total student population of 4,300.

(2) STAFF

(i) An analysis of the academic members of staff at the University of Zambia, listed in the 1983/84 University Calendar, showing the proportion possessing post-graduate degree qualifications, is shown in Table 37.

Table 37. Distribution of academic members of staff with Master's and Ph.D. degrees in various Schools and Institutes at the University of Zambia:

School/Institute	Numbers with			Total
	Ph.D.	Master's	Bachelor's degree only	
Agricultural Sciences	12	27	10	49
Business & Industr. Studies	5	17	9	31
Education	33	44	12	89
Environmental Studies	1	4	1	6
Engineering	16	17	9	42
Humanities & Social Studies	42	43	11	96
Law	8	18	2	28
Medicine	8	17	40	65
Mines	21	10	9	40
Natural Sciences	52	23	14	89
Veterinary Medicine	3	1	0	4
Centre for Continuing Education	4	11	9	24
Centre for Arts	1	1	0	2
Educational Research Bureau	4	3	0	7
Institute of African Studies	6	6	6	18
Institute of Human Relations	1	2	2	5
Kafue Basin Devel. Project	1	0	0	1
Rural Devel. Studies Bureau	3	6	1	10
Technology Development Advisory Unit	1	1	2	4
TOTAL	222	251	137	610

(ii) Of the 610 academic members of staff at the University of Zambia, 222 thus possess Ph.D. degree qualifications, and 251 possess Master's degrees. Staff members who possess the Bachelor's degree only (137) are mostly Staff Development Fellows who are already enrolled for higher degree programme, locally or overseas.

(3) FEEs AND OTHER COSTS

(i) The fees which are payable by postgraduate students at the University of Zambia are summarised in the University's Handbook on Postgraduate Studies (pp. 2, 11 of Vol. I, and p. 120 of Vol. II), and also in the 1983/84 University Calendar (pp. 85-86). A summary of the fees is shown in Table 38 below:

Table 38. Postgraduate fees at the University of Zambia (1983/84)

Category of fee	Amount in Zambian Kwacha
Application fee	K 10
Registration fee	K 40
<u>Tuition fee:</u>	
(a) Master's by course-work and research:	
Full-time	K 600 p.a.
Part-time	K 300 p.a.
(b) Master's and Ph.D. by research	
Full-time: Basic fee	K 300 p.a.
Field or Laboratory fee (where applicable)	K 150 p.a.
Part-time: Basic fee	K 150 p.a.
Field or Lab. fee (where applicable)	K 150 p.a.
<u>Examination fee:</u>	
Master's degree	K 60
Ph.D.	K 80
<u>Accommodation fee:</u>	
(a) 12 Calendar months;	K 1800
(b) 9 Calendar months	K 1350

(ii) In addition to the fees summarised above, the candidates' sponsors are required to pay for book and research costs. These additional fees vary from School to School and from Department to Department, as summarised in Table 39 below:

Table 39: Book - and Research Costs for Postgraduate Students at the University of Zambia:

School/Department	Book Costs	Research Costs
Agriculture	K 250	K 2600
Education	K 500	K 1500
Humanities & Social Sciences	K 500	K 2000
Law	K 300	K 1500*
Medicine	K 1000	K 3000
Mining	K 250	K 3500
<u>Natural Sciences:</u>		
Biology	K 250	K 2600
Chemistry	K 400**	K 3500
Geography	K 250	K 1500
Land Resources Survey	K 250	K 1500
Mathematics	K 250	K 1000
Physics	K 250	K 1000

* Except in Customary Law: K 500;

** Due to photocopying outside Zambia.

- (iii) It was noted that the fees at the University of Zambia are relatively low, and have been the same since 1974. This makes it somewhat easy for students who fail to get a sponsor to support themselves financially.

2.8.7

GRADUATE TRAINING INFRASTRUCTURES

- (1) During the visit it was observed that the University of Zambia has quite good facilities for postgraduate training in its various schools. The staffing situation in some Departments was, however, reported to be unhealthy.
- (2) There are also inadequacies in some Departments connected with the current foreign exchange constraints obtaining in the country. These include inadequate supplies of research chemicals and reagents, research equipment, library books and journals, which must be purchased from overseas.

2.8.8

PROBLEMS PERTAINING TO POSTGRADUATE TRAINING

- (1) Although the academic staff population at the University of Zambia (610) compared with the population of students (4,317) suggests a healthy staffing situation, there are as pointed out above, certain individual/faculties and Departments which are relatively poorly staffed (Table 37), and which must be strengthened for effective postgraduate student training.

- (2) The problem of student sponsorship was also noted during the discussions. Although the Government of Zambia has a Bursary Scheme which caters for financing the studies of all the admitted ^{undergraduate} ~~Zambian~~ students, there is no equivalent scheme which provides financial support for the postgraduate students. Individual students must seek support from their Ministries and employers. Unfortunately, not all Ministries sufficiently appreciate the significance of postgraduate training, and many capable students, therefore, fail to undertake their intended postgraduate studies at the University. Realising this problem, the University of Zambia offers assistance to some of the stranded students through its Graduate Assistantship Fund, although the fund is adequate for supporting only two students for each School every year.
- (3) It was reported also that the University of Zambia experiences some difficulties in academic staff recruitment. It was noted that previously the University could easily recruit competent lecturers and professors from the U.K., etc., who would be paid a salary by the University of Zambia ^{by the expatriate staff members} ~~home governments~~. Such Zambia plus salary topping-up/schemes are, unfortunately, gradually being phased out, and many good lecturers are forced to leave the University, since they consider the local salaries alone unattractive.
- (4) It was noted also that there is a growing problem of exodus of qualified academic staff members of Zambian nationality from the University of Zambia to other sectors of Zambian economy, or to overseas institutions, where there are higher salaries or where the fringe benefits are more attractive than those offered by the University of Zambia.

- (5) On the postgraduate programmes offered, it was reported that one of the problems experienced is the lack of an adequate number of qualified supervisors who can effectively guide the admitted candidates. This problem is most conspicuous in Departments with the most serious staff shortages.

2.8.9.

STAFF DEVELOPMENT POLICIES

- (1) From its inception, the University of Zambia has had an active Staff Development programme. The policy has been to train promising Zambian nationals to Ph.D. degree level in all the academic fields offered by the University, with a view to attaining self-sufficiency and self reliance in University teaching.
- (2) When the University of Zambia was established, almost all the lecturers in the various Departments were expatriates. Currently, 62% of the teachers in the University are Zambians, which shows a relatively healthy development.
- (3) Promising candidates who do exceptionally well in their Bachelor's degree programmes are incorporated into the University's Staff Development Scheme, and each is given the designation: Staff Development Fellow. In its annual budget the University of Zambia sets aside funds for Staff Development Fellowships, and these are distributed in the various Schools according to priority. Older Schools with many Ph.D. holders are usually given fewer Fellowships as compared to younger schools (e.g., Veterinary Medicine).

The Staff Development Fellows are usually trained to the Master's degree level within Zambia if their fields of specialisation are offered at the University of Zambia, and in overseas institutions if their training programmes are not offered in the University.

- (4) In order to attract the best undergraduate students into the University's Staff Development programme, the University of Zambia has an "Undergraduate Fellowship" programme, which provides for the sponsorship of four excellent undergraduate students every year. If the students maintain the expected good performance, they are absorbed into the University's staff Development programme when they graduate.
- (5) When a Staff Development Fellow satisfactorily completes his Master's degree (usually after two years), he is promoted to the status of Lecturer III. As he advances further, he becomes Lecturer II, then Lecturer I, then Senior Lecturer. The movement up the scale to the status of Associate Professor and full Professor gets progressively slower, depending upon the staff member's publications, and contributions to the public and academic community service.

2.9. ZIMBABWE

2.9.1. INTRODUCTION

- (1) The Republic of Zimbabwe, like Djibouti and Seychelles, acquired its political independence from colonial powers only recently (1980). Unlike the latter two countries, however, Zimbabwe inherited from the Colonial Government an already well-established University, the University of Zimbabwe.
- (2) The foundation stone for the University of Zimbabwe, (initially under the name, "University College of Rhodesia and Nyasaland", and subsequently the "University of Rhodesia") was laid down by the Queen of England in 1953. The first intake of students did not, however, take place until 1957 when 68 students, mostly whites, were enrolled.
- (3) Since Zimbabwe gained its political independence, the colonial "Royal Charter" under which the University of Zimbabwe was established, has been, in 1982, replaced by the "University of Zimbabwe Act". The new Act laid down a solid ground for transformation within the University. The transformations included: significantly increasing student population (e.g., from 2525 in 1981 to 3091 in 1982); democratising the decision - making machinery in the University (e.g., separating professorships from headships in Departments) and introducing a system of rotating headships in Departments; reviewing o curricula to focus attention on producing University graduates who are oriented towards solving the socio-economic problems of the people of Zimbabwe, etc.

- (4) Under the recent reforms in the University of Zimbabwe 25 Zimbabwean black lecturers were appointed Heads of Departments, compared with only two prior to that.
- (5) Relatively few Zimbabwean nationals had been afforded the opportunity to acquire University education during the period of colonial rule. Under the new Act, therefore, the University was empowered to expand its student intake by including both direct entrants (who had just completed high school) and qualified candidates who are already in the working force to enrol as part-time undergraduate and postgraduate students.
- (6) The expansion in student intake at the University of Zimbabwe was also facilitated by the fact that the University decided to encourage the students to be non-resident. By 1983, in response to this challenge, 2245 students (60% of the total population of 3600) were non-resident, as compared with 1375 resident students.
- (7) There are now also discussions on the possibility of offering University-level instruction in Zimbabwe through correspondence. Under this plan, the University is to establish centres where tutor-counsellors will be able to assist Zimbabwean nationals to expand their manpower skills while still serving the country.

2.9.2.

UNIVERSITIES IN THE COUNTRY

- (1) Currently the University of Zimbabwe is the only one in the country. This encompasses the Faculties of Arts, Commerce and Law, Education, Engineering, Medicine and Pharmacy, Science, Agriculture, Social Studies, and Veterinary Science. The University also has a Computer Centre, a Centre for Post-Harvest Technology, a Regional and Urban Centre, a Centre for Applied Social Sciences, a Centre for Educational Technology, an Institute of Mining Research, and the Lake Kariba Research Station.
- (2) The current student population at the University is a little over 4000. Compared with a teaching staff population of 430, the staff/student ratio is 1:10. There are, however, variations from Faculty to Faculty.
- (3) The Chief executive officer of the University of Zimbabwe is the Vice-Chancellor, who is assisted by two Pro-Vice-Chancellors. There is also an Academic Registrar and an Administrative Registrar.

2.9.3.

UNIVERSITY CAMPUSES VISITED

- (1) The author's visit was confined to the main Campus of the University of Zimbabwe, located at Mount Pleasant, Harare.
- (2) During the visit he had an opportunity to hold discussions with a number of senior officers of the University, as detailed in Appendix I(attached). He also received a number of brochures which give details on the University.

These included the 1984 University Prospectus, copies of Vice-Chancellor's Annual Reports for 1982 and 1983, the University of Zimbabwe Report for the Triennium Review Committee, and the University of Zimbabwe Research Register.

- (3) The general observation made was that the University of Zimbabwe has an attractive campus with good furnishings, and good facilities for research.

2.9.4.

GRADUATE TRAINING PROGRAMMES OFFERED

- (1) Two categories of postgraduate training programmes are offered at the University of Zimbabwe: those involving thesis research alone; and those involving course-work lectures and examinations, followed by dissertation research. Programmes of the former category lead to an M.Phil. degree qualification at Master's degree level, and to a D.Phil. at the doctorate level. One can register for an M.Phil. or for a D.Phil. degree programme in any Department in the University provided that he satisfies the stipulated admission criteria, and that there is a qualified supervisor in that Department to supervise him.
- (2) Candidates who pursue Master's degree programmes by course-work followed by research ultimately get M.A., M.Sc., LL.M., M.Med., MPH-degrees, etc., depending on their fields of specialisation. Currently, only the following Faculties offer higher degrees by course-work and research: Arts, Commerce and Law, Education, Science, Social Studies, Medicine and Pharmacy.

- (3) Prospective candidates for Master's degree programmes at the University of Zimbabwe must be in possession of a Bachelor's degree of at least Lower Second standard (B-grade equivalent). Relatively higher grades (i.e., Upper Second) are required for candidates who register for Master's degrees by research alone.
- (4) The admitted postgraduate students may pursue their studies on a full-time basis, or may work on a part-time basis. M.Phil. studies usually take two years full-time and three years part-time. The maximum registration period allowed for M.Phil. candidates is five years for full-time students and six years for part-time students.
- (5) It is increasingly being realised that M.Phil. candidates need some course-work exposure also, to give them advanced theoretical knowledge before embarking on research. The University of Zimbabwe is thus currently considering adding some 25% course-work component to the M.Phil. programmes.
- (6) The duration of the course-work Master's programmes offered at the University of Zimbabwe is not uniform in all Departments. Most programmes (e.g., M.Sc. in Food Science; M.A. in History, African Languages and Literature, English, English as a Second Language, French, Philosophy, Religions Studies; M.Ed. in Adult Education; M.Ed.; M.Sc. in Education; LL.M.; M.Sc. in Economics; M.Sc. in Social Anthropology and Sociology, to mention but a few) take one year to complete for full-time students and two years for part-time students.

Some programmes, on the other hand (e.g., Master's in Clinical Psychology; in Regional and Urban Planning), take two years for full-time students, while others are even of a longer duration. The M.Med. programme in Medicine, Surgery, Obstetrics and Gynaecology, for example, takes four years part-time while the M.Med. programme in Pathology takes five years part-time.

- (7) Postgraduate training at the University of Zimbabwe also embraces candidates who enrol for postgraduate diploma, or for certificate courses. This includes candidates who complete the B.A. or the B.Sc. degree and then return to the University to take a postgraduate diploma in Education (for secondary school teaching), or a bachelor's degree course in Law.

2.9.5. RESEARCH METHODS COURSES

- (1) Various Departments and Faculties at the University of Zimbabwe are in the process of effecting curriculum Reforms in their postgraduate programmes with a view to improving the quality of the graduates. There is, however, no common postgraduate course on Research Methodology at University level. Some Departments, nevertheless, offer specific Research Methods courses, which were reported to be very useful to the students. In the M.A. programme in English, for example, one such course is Language Teaching Methodology. In the M.Sc Economics course, there is also a course bearing the title, "Research Methods in Economics".
- (2) For M.Phil candidates, advice on what research methods to follow in executing the research is normally given by the individual supervisors.

2.9.6. GRADUATE TRAINING STATISTICS

(1) STUDENTS

(i) The statistics on the distribution of Master's postgraduate students in the various Faculties at the University of Zimbabwe ^{bwe} (1983/84 academic year) are shown in Table 40 below.

Table 40. Number of course-work- and research Master's degree students (part-time and full-time) at the University of Zimbabwe in (1983/84) in the various Faculties.

Faculty	Course-work degree		Research degree		Total
	Part-time	Full-time	Part-time	Full-time	
Agriculture	0	0	13	16	29
Arts	39	7	26	10	82
Commerce and Law	7	49	8	9	73
Education	250	16	13	2	218
Medicine	27	0	11	3	41
Science	14	15	43	3	75
Social Studies	10	42	9	11	72
Engineering	0	0	5	0	5
TOTAL	347	129	128	54	658
	476		182		

(ii) In addition to postgraduate certificate course - and diploma students, the total postgraduate student population at the University of Zimbabwe during 1983/84 was 907, out of a total student population of 4131.

(iii) It was noted that there are more course-work students than thesis research students, and also more part-time than full-time postgraduate students.

(2) STAFF

(1) The statistics on the distribution of academic members of staff in the various Faculties and Departments at the University of Zimbabwe (as published in the 1984 University Prospectus) are summarised in Tables 41 - 45 below:

Table 41. Distribution of academic staff members at the University of Zimbabwe, Faculties of Agriculture and Engineering 1983/84)

Faculty	Department	Ph.D. holders	Master's holders	Bachelor's degree only	Total
Agriculture	Animal Science	1	3	1	5
	Crop Science	4	2	1	7
	Land Management	2	3	4	9
	TOTAL	7	8	6	21
Engineering	Civil Engineering	2	6	1	9
	Electrical Eng.	3	3	0	6
	Mechanical Eng.	3	2	6	11
	TOTAL	8	11	7	26

Table 42. Distribution of academic members of staff at the University of Zimbabwe, Faculties of Arts, Education, Commerce and Law(1983/84).

Faculty	Department	Ph.D. holders	Master's holders	Bachelor's degree only	Total
Arts	African Language	2	1	4	7
	Classics	2	1	0	3
	English	5	4	2	11
	Geography	2	3	2	7
	Regional & Urban Planning Centre	0	2	1	3
	History	8	1	4	13
	Linguistics	1	4	4	9
	Modern Languages	1	3	2	6
	Religious studies & philosophy	6	2	0	8
	TOTAL	27	21	19	67
Education	Educational Foundations	4	1	0	5
	Adult Education	1	3	1	5
	Associate Coll College Centre	1	7	0	8
	Curriculum Studies	4	6	5	15
	Educational Administration	2	0	0	2
	Centre for Continuing Education	0	0	1	1
	TOTAL	12	17	7	36
Commerce	Accountancy	2	2	2	6
	Business Studies	1	3	5	9
	Law	4	7	4	15
	TOTAL	7	12	11	30

Table 43. Distribution of academic members of staff at the University of Zimbabwe, Faculty of Medicine (1983/84).

Department	Ph.D's	Master's holders	Bachelor's holders	Total
Anaesthetics	2	0	8	10
Anatomy	2	0	3	5
Chemical Pathology	4	0	0	4
Clinical Pharmacology	2	1	3	6
Community Medicine	1	3	9	13
Haematology	0	1	1	2
Institute of Continuing Health Education	0	0	1	1
Medical Microbiology	3	2	0	5
Medicine	0	1	16	17
Obstetrics & Gynaecology	0	1	14	15
Paediatrics & Child Health	0	1	11	12
Pharmacy	4	2	0	6
Physiology	5	1	0	6
Psychiatry	1	3	2	6
Radiology	0	0	4	4
Surgery	0	3	21	24
Mpilo Hospital	0	0	3	3
TOTAL	24	19	96	139

Table 44. Distribution of academic members of staff at the University of Zimbabwe, Faculties of Science, Social Studies, Veterinary Science, the University Lake Kariba Research Station, the Computer Centre (1983/84)

Faculty / Centre	Department	Ph.D holders	Master's' holders	Bachelor's degree only	Total
Science	Biochemistry	10	1	0	11
	Biological Science	12	3	1	16
	Chemistry	8	0	0	8
	Computer Science	0	2	2	4
	Geology	7	1	3	11
	Institute of Mining Research	2	3	2	7
	Mathematics	6	1	2	9
	Physics	6	1	1	8
	TOTAL	51	12	11	74
Social Studies	Centre of Applied Social Studies	2	1	0	3
	Economics	2	5	0	7
	Political & Admin. Studies	4	2	1	7
	Psychology	3	1	2	6
	Sociology	3	3	1	7
	TOTAL	14	12	4	30

Table (44 cont'd)

Faculty/ Centre	Department	Ph.D holders	Master's holders	Bachelor's degree only	Total
Veterinary Science	(No Depart- ments)	5	1	1	7
Univ. Lake Kariba Research Station	(No Depart- ments)	1	0	0	1
Computer Centre	(No Depart- ments)	1	0	0	1

Summary showing the total number of academic members of staff in various Faculties

Faculty	Number of staff members			Total
	Ph.D holders	Master's holders	Bachelor's Degree only	
Agriculture	7	8	6	21
Engineering	8	11	1	20
Arts	27	21	19	67
Education	12	17	7	36
Commerce and Law	7	12	11	30
Medicine	24	19	96	139
Science	51	12	11	74
Social Studies	14	12	4	30
Veterinary Science	5	1	1	7
Univ. Kariba Research Station	1	0	0	1
Computer Centre	1	0	0	1
TOTAL	157	113	156	426

(ii) Since the data in the Tables referred to above were extracted from the University Calendar (1984), and since there has been a wave of staff resignations following the University's decision to introduce some reforms in the University system (see 2.9.1 (3) above), it should be noted that the actual number of staff members now present is likely to be somewhat less than the figure of 426 given in Table 45 above.

(iii) It is noted from Table 45 that the proportion of staff members who are in possession of the Ph.D. degree qualification is less than 40% of the total.

(iv) Table 46 below shows the distribution of staff members of various ranks actually present during 1982/83, against the number of established positions in those ranks.

Table 46. Number of Professors, Lecturers, Research Fellows and Teaching Assistants at the University of Zimbabwe (1982/83):

Rank	Established positions	Present	Vacant
Professors	53	45	8
Lecturers	332	271	61
Research Fellows	20	16	4
Teaching Assistants	17	9	8
TOTAL	422	341	81

(Source: Vice-Chancellor's Annual Report, 1982/83).

(v) Table 47 shows academic staff statistics at the University of Zimbabwe as at May 31, 1984.

(vi) It is noted (Tables 46,47) that about 15 - 20% of the Faculty positions are vacant, which is not a very healthy situation. It is noted further that the Zimbabwean blacks occupy less than 25% of the established teaching positions in the University, which is very low.

Table 47. The distribution of Zimbabwean and non-Zimbabwean staff in various Faculties (1983/84)

Faculty	Zimbabwean		Non Zimba- bwean	Vacancies	Total
	Black	Others			
Agriculture	3	11	4	4	22
Arts	30	20	12	14	76
Commerce and Law	5	9	11	8	33
Education	13	18	2	4	37
Medicine	21	44	16	20	111
Science	15	32	17	3	67
Social Studies	11	10	5	5	31
Veterinary Science	1	3	3	1	8
Engineering	0	9	11	8	28
TOTAL	99	156	91	67	413

(Source: Report of the Triennial Review Committee for 1981-84, Univ. of Zimbabwe).

(3) FEES AND OTHER COSTS

(1) The academic fees for postgraduate students at the University of Zimbabwe (1983/84) are summarised in Table 48 below.

Table 48. Fees at the University of Zimbabwe

Category of fee	Programme	Fees in Zimbabwe \$	
		Full-time	Part-time
Academic fees*	Master's degree by course-work, Faculties of Arts, Commerce and Law, Education, Social Studies	500	300
	Faculties of Agriculture, Medicine, Science	565	350
	M.Phil., D.Phil.: Faculties of Arts, Commerce and Law, Education, Social Studies	190	100
	M.Phil., D.Phil.: Faculties of Agric., Engineering, Medicine, Science, Vet. Science	250	150
Examination fees*	Master's	65	65
	D.Phil.	95	95
	Higher Doctorates	125	125
Supplementary examination fees*	Master's	30	30
	D.Phil.	40-50**	40-50**
Caution money*	All programmes	50	50
Laboratory deposit*	Science-related Master's programmes	50	50

Category of fee	Programme	Fees in Zimbabwe \$	
		Full-time	Part-time
Students' Union contribution*	All programmes	20	(optional)
Students' Health service fee*	All programmes	50	(optional)
Residential fee	Shared room (3 terms)	1470	
	Single room (3 terms)	1680	

* Foreign students pay double the amounts shown

** \$40 for re-submission of same thesis and \$50 for revised thesis.

(ii) It was reported that the fees shown in Table 48 are currently under review.

2.9.7. GRADUATE TRAINING INFRASTRUCTURES

- (1) During the discussions it was noted that the various laboratories, the University library, and other postgraduate training infrastructures at the University of Zimbabwe, are quite satisfactory.
- (2) It was noted that (Tables 41 - 45) the various Departments and Faculties at the University differ in their staffing strengths. Some are relatively strong in terms of the number of Ph.D. degree holders (e.g., Departments of History, Biochemistry, Biological Sciences, and Chemistry), while others are relatively weak (e.g., Departments of Business Studies, Geography, Modern Languages, Educational Administration, etc). Some of the Departments have been weakened by the staff resignations referred to above. In 1982 alone, there were 34 resignations by five professors and 29 lecturers.

2.9.8. PROBLEMS PERTAINING TO GRADUATE TRAINING

- (1) The problem of staff exodus, especially by Zimbabwean non-blacks, has already been mentioned, and apparently, the trend has not yet stabilised.

During the discussions it was pointed out that some Zimbabwean blacks were also resigning from teaching positions at the University for better-paying jobs (or jobs with more attractive fringe benefits) in the private sector, or in the Government, both within Zimbabwe and overseas. The staff members resigning are often the most highly qualified ones, the very people who are badly needed in strengthening the University's postgraduate training programmes.

- (2) Another problem which was pointed out during the discussions is that of securing an adequate number of scholarships to support the applicants who secure admission in the various postgraduate courses. This problem, as discussed earlier, is not unique to Zimbabwe. In recognition of the problem, the University of Zimbabwe offers a few scholarships for postgraduate training, but the competition for these is very intense and only those who possess First Class and Upper Second degrees are allowed to complete.
- (3) In some fields, e.g., Engineering fields, it is proving to be difficult to convince potential candidates to leave their jobs and pursue postgraduate degree courses. Those with an eagerness to undertake the studies are often blocked by their employers, who show reluctance to release them. Consequently, the students who enrol in some courses are very few, making the unit training costs relatively high.
- (4) The problem of non-uniformity with respect to the duration of the Master's degree courses was also noted. The wide variation, ranging from one to five years, suggests that there is a need for a critical review of the University's postgraduate courses. Apparently, the University of Zimbabwe is already looking into this matter.

2.9.9. STAFF DEVELOPMENT POLICIES

- (1) The University of Zimbabwe has quite an aggressive Staff Development Policy. The focus is to train more Zimbabwean nationals to the Master's and ultimately to the Ph.D. degree level. The policy in Zimbabwe is, not only to balance the races, but also the sexes.
- (2) The University recruits candidates for Staff Development by advertising the available positions through the press. Interested candidates who possess the required academic qualifications (at least Upper Second first degree) submit their up-to-date Curriculum Vitae to the University's Appointments Committee for consideration. After consultation with the relevant Departments and Faculties, followed by interviews, the strongest applicants are then recommended to the University's Staff Development Committee for further consideration and approval. Those appointed are slotted at the appropriate salary scale, and are given the title of Staff Development Fellow.
- (3) The recruited Staff Development Fellows are then given an opportunity to enrol for higher degree programmes, either in Zimbabwe (if the University offers Master's degree courses relevant to their fields of specialisation), or in suitable Universities overseas.
- (4) Staff Development Fellows who receive scholarships for postgraduate training normally sign a bond with the University, and the duration of the bond is usually twice the training period. The University of Zimbabwe receives from the Government about US \$ 3.0 million annually for financing her Staff Development programme. In addition the University benefits from a number of scholarships from overseas Governments (e.g., the U.S.A., the U.K., etc.) and international funding agencies (e.g, the Rockefeller Foundation, the Ford Foundation, etc.).
- (5) During the discussions it was learnt that the University of Zimbabwe is making serious efforts to accelerate the training of her Staff Development Fellows to the Ph.D. degree level. From the data in Tables 41 - 45, however (see also Table 47), it is evident that the University still has a long way to go before self-reliance can be attained.

III. GENERAL OBSERVATIONS

3.1. DJIBOUTI:

- (1) Djibouti is one of the smallest of the countries visited, both in terms of land area and human population. It is also one of the youngest independent African nations.
- (2) The country has a hostile climate, almost a desert. Pastoralism is the principal human activity, and modern developments are largely confined to the harbour and capital city, Djibouti.
- (3) The country does not possess any University, and there are no immediate plans to establish one. Very few Djibouti nationals are educated to Secondary School level. In fact most of the jobs requiring high school and University level education, are performed by expatriates. Even in the Secondary schools, 80% of the teachers are expatriates.
- (4) Because of historical factors, Djibouti has very close ties with France, and her nationals who undertake their training overseas mostly go to France. Exceedingly few Djibouti nationals have had opportunities to undertake postgraduate training.

3.2. ETHIOPIA:

- (1) Ethiopia is one of the oldest independent African countries, yet University education in the country began only 30 years ago.
- (2) The country is amongst the few visited that has more than ~~one~~ University: Addis Ababa and Asmara Universities.

- (3) Since 1978, Addis Ababa University has been taking postgraduate training seriously. The University is, in fact, the only one amongst those visited, which has a definite School of Graduate Studies, headed by a Graduate Studies Dean.
- (4) Addis Ababa University has the largest student population of the Universities visited (over 10,000 students), but somewhat unhealthy staff: student ratio (1:23). The University is, however, making serious efforts to promote staff training to Ph.D. level.
- (5) One of the unique elements of Addis Ababa University is its Continuing Education Programme, which allows working people to complete a degree course through participation in evening-, week-end-, and summer courses.

3.3. KENYA

- (1) Until recently, Kenya had a single University, the University of Nairobi. With the establishment of Moi University this year, she now has two Universities.
- (2) Postgraduate training at the University of Nairobi is quite well established. With a total postgraduate student population of 1,600, the University is the leading one in terms of student numbers amongst the Universities visited.
- (3) Although many Departments at the University of Nairobi have vacant posts, the over-all staffing situation at the University is more favourable than that of Addis Ababa University referred to above, both in terms of the staff/student ratio, and in the number of staff members with Master's and Ph.D. degree qualifications.

3.4. MAURITIUS

- (1) Mauritius has only one University, the University of Mauritius. The University is unique amongst the Universities visited in that it has Her Royal Highness, Princess Alexandra of England, as its Chancellor.
- (2) One of the observations made during the visit is that postgraduate (and also undergraduate) student population at the University of Mauritius has shown a significant decline during the past few years. In fact there are now less than 10 postgraduate students in all, which is very low. This is partly due to the lack of employment opportunities for those who complete their Master's degree courses, and partly due to the recent re-introduction of University fees.

3.5. SEYCHELLES

- (1) Like Djibouti, Seychelles is a small country, with a relatively small human population (65,000 in all). It is also one of the youngest independent African nations.
- (2) The country does not possess any University, and relatively few Seychellois are in possession of any degree. Bachelor's degree studies, Master's degree studies, and Ph.D. training, must thus be done in suitable Universities overseas.
- (3) Because of historical factors, Seychelles has close ties with the U.K. and France. Most of the Seychellois who leave the islands for overseas study thus largely go to the U.K. and France.
- (4) The country has a very long way to go in training her manpower. Currently there is an over-dependence on expatriate staff.

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2.6. SOMALIA

- (1) Somalia has had a University, the Somali National University, since 1970, but this does not, as yet, offer postgraduate training opportunities.
- (2) During the visit it was, however, noted that the Somali Institute of Development and Administration, SIDAM, together with the California State University, Fresno, offer an MBA training programme. The course involved a total of 250 postgraduate students during 1983/84 and 1984/85. Although the MBA course is taught in Somalia, the admission and examination standards are those of the California State University.
- (3) It was observed that the total number of Ph.D. degree holders at the Somali National University is less than 10. The University is thus ^{relatively} weak with respect to high level manpower.

3

2.7. TANZANIA

- (1) Tanzania has had a University since 1961, and over the years she has established a number of postgraduate programmes. In addition to the University of Dar es Salaam, a second University, the Sokoine University of Agriculture was recently established.
- (2) In recognition of the need for effecting good co-ordination in the various postgraduate courses offered, the University of Dar es Salaam has established the post of a Director of Postgraduate Courses to co-ordinate the efforts.
- (3) The University of Dar es Salaam was noted to have a very active Staff Development programme, and this has enabled many Departments to have a good number of Tanzanians with Ph.D.'s. In the newer Departments and Faculties, however,

the University still has a long way to go in her staff development efforts.

3.8. ZAMBIA

- (1) Zambia has only one University, the University of Zambia, established in 1965. The University offers both undergraduate and postgraduate degree courses. The postgraduate degree programmes are offered either by course-work and dissertation, or by research alone.
- (2) The various schools at the University of Zambia publish mimeographed handbooks containing all the regulations pertaining to postgraduate training in the University.
- (3) The University of Zambia also has an active Staff Development programme, and many of her nationals have, or are in the process of attaining the Ph.D. degree qualification.

3.9. ZIMBABWE

- (1) Although the Republic of Zimbabwe attained its political independence only recently, she had a well established postgraduate training programme even before independence. In fact, in terms of the number of postgraduate students, the University of Zimbabwe comes only next to that of Nairobi.
- (2) The various Departments and Faculties at the University of Zimbabwe also have relatively good research facilities. Some Departments are, however, experiencing staff shortages, especially following the recent wave of resignations referred to in the text.

IV. SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

4.1. POSTGRADUATE CURRICULA

- (1) It was noted that the various types of postgraduate programmes offered in the region are of three principal categories: those involving course-work and examination alone; those involving course-work followed by dissertation research; and those by thesis research alone.
- (2) It was noted that the significance of introducing some kind of course-work component to thesis research programmes was increasingly being realised, and it is recommended that the issue be discussed by the Universities in the region.
- (3) It was observed that many Universities offer Research Methods courses in the various programmes. The need to have Research Methods courses offered to all the postgraduate students in the region was suggested. It is recommended also that the Universities in the region discuss this matter.
- (4) From the points raised above, it seems necessary to recommend a Postgraduate Curriculum Review Workshop, attended by Deans and Directors of Postgraduate Studies in the region, and also by subject experts.

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1960 to do?*

4.2. REGULATIONS PERTAINING TO GRADUATE STUDIES

- (1) It was observed that there is a wide variation from one University to another on the admission criteria, the examination regulations, and the duration of the training programmes. The Master's degree programmes, for example, vary from one year, two year, three year, or even four year duration. In many cases there are wide variations even within the same University. It is recommended, therefore, that this problem also be addressed

- (3) The University of Zimbabwe also has an active Staff Development programme. The current focus in the University's staff development efforts is to offset the current imbalances in terms of races and the sexes.

to the Universities in the region, e.g., through a Post-graduate Programmes Workshop/Seminar, etc.

- (2) It was observed further that some of the Universities in the region publish handbooks which neatly summarise all the regulations on postgraduate training in the University, in addition to the information which is incorporated in the University Calendars. The production of such handbooks should be encouraged in the region, and the various Universities should be encouraged to exchange the information so compiled.

4.3. PROBLEMS OF POSTGRADUATE RESEARCH STUDENTS

- (1) It was observed that candidates who undertake their postgraduate degrees studies by thesis research alone often work in isolation, and also encounter problems of lack of adequate research facilities, library resources, and challenge by fellow postgraduate students. It is recommended that this problem be alleviated by bringing together such students through short courses arranged regionally.
- (2) It was observed also that students who undertake their studies by research alone sometimes encounter supervision problems as well. The problem here is that either the supervisor is too busy a man, or that he lacks the needed experience in postgraduate student supervision. It is recommended that the issue of postgraduate student supervision be addressed to the Universities in the region, e.g., through workshops like those suggested above.

4.4. PROBLEMS OF STAFFING

(1) All the Universities visited which offer postgraduate training programmes showed some staffing problems, at least in some Departments. This was partly due to the problems involved in recruiting qualified staff members from overseas, since the salary structures are not attractive enough, or due to resignations by the local members of staff. Since it takes a long time (and it is also expensive) to train a first degree holder to the Ph.D. degree level, it is vital that every effort should be made to retain at the Universities those already trained to the top. It is recommended, therefore, that the relevant African Governments be made aware of the need to offer more attractive terms at their national Universities, and hence help to alleviate the problem of brain drain.

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(2) In the countries which do not have any national University, the main problem noted is that there is an over-dependence on staffing the various secondary schools, etc., by expatriates. For such countries, it is recommended that potential donor agencies be requested to give the much needed scholarship support to effect staff development.

4.5. STAFF DEVELOPMENT POLICIES

(1) All the Universities which were visited showed definite plans for developing well trained manpower, capable of teaching or conducting meaningful research at the Universities. The efforts of some of the Universities were, however, being curtailed by the lack of an adequate number of scholarships to cope with the needs.

- (2) Previously the trend was to have those selected for the Universities' Staff Development Programmes trained in Europe or North America. During the visits it was noted that some University Departments in the African Universities visited are very healthy in terms of research facilities, and in terms of the number of staff members with a Ph.D. training experience (see relevant Tables in the text). It is recommended that possibilities for exchanging postgraduate students in the region (e.g., a Tanzanian Master's degree holder to do his Ph.D. in Zimbabwe) be explored and promoted.

4.6. RELEVANCE OF THE POSTGRADUATE COURSES

- (1) During the visits it was noted that all the Universities make special efforts to offer postgraduate training programmes which are relevant to the socio-economic needs of the countries.
- (2) It was observed, however, that some areas were rather neglected. Mauritius is, for example, surrounded by the sea, and hence one would expect to find Marine Biology courses included in the curricula. Somalia, similarly, has a long shoreline with rich marine resources, but also does not offer any courses in that discipline. Such discrepancies should be discussed in regional workshops/seminars as proposed above.

4.7. OTHER CONSIDERATIONS

- (1) From the information presented in this report, it is evident that there is a need for similar studies to be conducted in the Universities which were not visited.

- (2) During the visits the various Universities expressed the need to receive a copy of this report, when compiled. It is recommended, therefore, that IDRC make ^s a copy of _{/available} this report/ to each University/institution visited.

V. ACKNOWLEDGEMENTS

- (1) The author is most grateful to the International Development Research Centre (IDRC) for affording him the opportunity to undertake the study, to the University of Dar es Salaam for giving him permission to embark on the study, and to all those listed in Appendix I for the valuable discussions which resulted in this document.

- (2) He would also wish to express his deep appreciation to the staff of IDRC, Nairobi, particularly to Prof. I.M. Omari, who facilitated his work, to those who assisted in the typing of the document, and to my wife, Grace, for her kind co-operation throughout the research and writing phase.

APPENDIX I

LIST OF PEOPLE MET

1.1. DJIBOUTI:

- (1) Miss Fozia Ahmed, Office of the UNDP Representative, Djibouti.
- (2) Dr. N. Gaddes, Consulting ecologist, FAO Section, UNDP Building, Djibouti.
- (3) Mr. Ahmed Dirieh Ahmed, Director, CEPA, P.O. Box 267, Djibouti.
- (4) Mr. Hassan Farrah Awaleh, CEPA, P.O. Box 267, Djibouti.
- (5) Mrs. Lise Giroux, International Human Resource Programmes, CEPA, B.P. 2320, Djibouti.
- (6) Mr. Djibril Youssouf, Ministry of Foreign Affairs, Djibouti.
- (7) Mr. Anis Abdallah Kamra, Director, ISERST, P.O. Box 486, Djibouti (Telex 5811 DJ).
- (8) Jacques Godet, ISERST, Box 486, Djibouti.
- (9) Mr. Guedda Mohamed, ISERST, Box 486, Djibouti.
- (10) Mr Nader Abdoukarim, ISERST, Djibouti.

1.2. ETHIOPIA

- (1) Dr Duri Mohammed, Associate Professor and President, Addis Ababa University, Addis Ababa, Ethiopia.
- (2) Dr. Aby Kifle, Associate Professor and Academic Vice-President, Addis Ababa University.
- (3) Dr. Aregay Waktola, Assistant Professor and Research and Publications Officer, Addis Ababa University.
- (4) Dr. Negussie Tebedge, Dean Faculty of Technology, Addis Ababa University.
- (5) Dr. Amha Belay, Chairman, Department of Biology Addis Ababa University.
- (6) Ato Abhana Mengste-ab, Assistant Librarian, Addis Ababa University, Ethiopia.
- (7) W/t Mebrat Gebre Selassie, Associate Registrar, School of Graduate Studies, Addis Ababa University.

1.3. MAURITIUS

- (1) Yousuf Maudarbocus, Pro-Head,
School of Industrial Technology,
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1.4. KENYA

- (1) Prof. G.M. Mugeru, Dean,
Faculty of Veterinary Medicine
Kabete Campus, University of Nairobi.
- (2) Mr F. Waweru, Deputy Registrar, Main Campus,
University of Nairobi.
- (3) Mr J N Mwaniki, Assistant Registrar,
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- (4) Miss B. Wanyala, Administrative Assistant
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- (5) Mr W W Ndeti, Kenyatta Univ. College,
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1.5. SEYCHELLES

- (1) Miss Noellie Alexander, Assistant Secretary,
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- (2) Mr David Brawn, Manager,
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- (3) Mr Robert Smyth, Assistant Director (Studies)
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- (4) Mrs E Brassel, Assistant Director
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- (4) Mr Willy Confait, Principal Assistant Secretary
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1.6. SOMALIA

- (1) Mohammed Bullaleh
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- (2) Mohamed Said Samater
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- (4) Jama Abdillahi Shuriye
Director of Planning
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P O Box 1182
Mogadishu, Somalia
- (5) Mr Ahmed Artan Hange (on behalf of
Dr Abdirahman Hirsi, President, NASA)
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- (6) Mr Farah Abokor Khayre
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- (7) Mr Abdullahi Hersi, Office Manager
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- (8) Mr Abdurahman Amin Mohamed
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- (9) Mr Abdalla Adde Ikar
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1.7. TANZANIA

- (1) Mrs J M Minja, Principal Manpower Management Officer
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- (2) Mr E G M Jambo, Principal Manpower Management Officer
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- (4) Mr S C N Kagoma, Senior Manpower Development Officer
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- (5) Mr E P Msangi, Manpower Development Officer
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1.8. ZAMBIA

- (1) Prof B F Mweene, Pro-Vice-Chancellor
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- (2) Ms J M F Calder, Acting Research & Postgraduate
Student Secretary, Univ. of Zambia.
- (3) Dr F D Yamba, Dean, School of Engineering
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- (4) Prof E K Waddimba, Acting Director
Education Research Bureau
University of Zambia.
- (5) Mr C M Sikazwe, Permanent Secretary Ministry of Higher
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- (6) Prof. A A Siwela, Dean, School of Natural Sciences,
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- (7) Dr N N Munkombwe, Assistant Dean (Postgraduate)
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- (8) Dr D Theo, Assistant 'Dean' (Undergraduate)
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- (9) Dr Patrick M Haamujompa, Dean
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- (10) Prof. N N Pearsall, Assistant Dean (Postgraduate)
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1.9. ZIMBABWE

- (1) Dr P M . Mukhurane, Pro-Vice-Chancellor
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- (2) Dr A E Ngara, Pro-Vice-Chancellor
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- (3) Mr G I Chittenden, Academic Registrar
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- (4) Dr N T Chideya, Information Officer
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