PROBLEMS OF RESEARCH IN THE NIGERIAN UNIVERSITIES: A CASE STUDY OF AHMADU BELLO UNIVERSITY

BY

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ABSTRACT

This essay on research problems is presented in four chapters. Chapters I and II discuss research activities in general with emphasis on the Nigerian situation. It was observed that Nigeria lacks concrete policy on research activities. There is no one organization that co-ordinates all government-sponsored research activities in the country. Most of the research activities in the country are conducted in the universities and research institutes established by government. Unfortunately funding research in these organizations is greatly inadequate. The Nigerian private sector was found to play an insignificant role in funding and conducting research.

Chapter III discusses in details research activities at the Ahmadu Bello University with emphasis on problems encountered by researchers. It was observed that although the University established a body to co-ordinate research activities, there was little evidence of such co-ordination. Several problems associated with research activities were encountered. These problems include lack of co-ordination and inadequate funding, equipment, technical staff support, library facilities, computer services and means of dissemination of research information.

Chapter IV summaries the findings of the study and provides suggestions on how to solve some of the problems associated with research in the universities in particular and the nation in

general. It was concluded that research activities in the country are poorly funded, conducted and co-ordinated. It is suggested that each University should establish a University Research Division to co-ordinate research activities in the University. The body is to report to a Nigerian University Research Board (NURB). It is also recommended that a Nigerian Research Institute Board (NRIB) be formed to co-ordinate research activities in the research institutes. The NURB, NRIB and any other government research organizations are to report to a national body on research to be called National Research Council of Nigeria in the office of the Vice President of Nigeria. It is hoped that, through this recommended organization, research will be widely publicised for the benefit of the country.

TABLE OF CONTENTS

CONTENT	PAGE
Title Page	i
Abstract	ii
List of Tables	v
List of Figures	vi
NIPSS Copyright	vii
Preface	viii
CHAPTER I: INTRODUCTION	1
CHAPTER II: RESEARCH ACTIVITIES IN NIGERIA	
Introduction	4
Goverment-Sponsored Research Activities	4
Role of the Private Sector in Research and Development	13
Sources of International Funding for Research Activities in Nigeria	15
Problems Associated with Research and Development in Nigeria	16
CHAPTER II: PROBLEMS OF RESEARCH IN THE NIGERIAN UNIVERSIITES: A CASE STUDY OF AHMADU BELLO UNIVERSITY	
Introduction	19
Materials and Methods	21
Results	21
Discussions	38
CHAPTER IV: OBSERVATIONS AND RECOMMENDATIONS	40
APPENDIX A	48
BIBLIOGRAPHY	50

LIST OF TABLES

		Page
Table 1:	Federal and State Universities in Nigeria.....	6
Table 2:	Research Fund Allocated to Universities by the National Universities Commission, 1987-89	10
Table 3:	Non-University Research Institutes Under the Federal Ministry of Science and Technology.....	12
Table 4:	Documents Examined to Evaluate Research Activities at the Ahmadu Bello University, Zaria.....	22
Table 5	Funds Made Available to the University Board of Research by Ahmadu Bello University From its Recurrent Grants (1979-82).....	25
Table 6:	Postgraduate Degree Theses Produced Through Research at the Ahmadu Bello University, Zaria.....	27
Table 7:	Faculties of the Ahmadu Bello University, Zaria.....	30
Table 8:	ABU Institutes, Centres and Schools Involved in Conducting Research.....	31
Table 9:	Results of Survey on Problems Associated with Research Activities in ABU.....	32
Table 10:	Results of Survey on the Use of Conferences by ABU Researchers in Disseminating Research Findings.....	36

LIST OF FIGURES

Page

Fig 1: Proposed Organizational Structure of Research Administration in the Nigerian Universities..... 46

Fig 2: Proposed Organizational Structure of National Research Administration..... 47

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PREFACE

Developed nations owe their technological advancement to research and development (R & D). Unfortunately, R & D are not given the attention they deserve in Nigeria even though the country is desperately in need of technological advancement. Even more disturbing is the fact that little is said or written about R & D in Nigeria. This was what prompted the choice of the topic of this essay. The intention was to bring to light the numerous problems researchers face in the universities in particular and the country in general. Solutions to some of the problems have been suggested in the essay.

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CHAPTER I

INTRODUCTION

The Chambers 20th Century Dictionary defines research as "systematic investigation towards increasing the sum of knowledge." Since knowledge is the foundation of development, it follows then that research is a fundamental requirement for development. The reasons why developing nations lag behind their developed counterparts is not due to lack of natural resources or innate intelligen among their people but due to lack of knowledge and skills in developing countries. The developed nations owe their technologic advancement to research and application of its findings. It took developed nations such as Britain, U.S.A. and Western Germany many decades of research and at great expenses to be what they are toda Their technologies went through many stages and improved with new research findings. On the other hand, developing nations such as Nigeria are now trying to copy the technologies of developed countries overnight! In most cases, this has not been successful. Developing countries should either develop their own "home grown" technology which is expensive and time consuming or, if they have to copy the technologies of developed nations, conduct research on how best to adapt imported technology to their environment, circumstances and needs. This means that for the imported technologies to be of use to developing countries, they must be "domesticated". Countries such as India, Taiwan, South Korea

and Brazil have shown impressive efforts towards this. These countries are some of the few developing nations that have paid much attention to research and development (Ukwu, 1989). It should be noted , however, developing countries should be conscious of the effects of imported technologies on their cultures to avoid undesirable consequences. It has been pointed out that there is need for agreement between the goals of science and technology and culture (Elmandjra, 1989). That is to say that scientific and technological advancements must have some consideration for cultural values. Similarly, research on indigenous practices is considered a vital link between science, technology and development (Aliu and Mohammed, 1990).

If there is any subject matter today that deserves the attention of Nigerians other than the so-much talked about Structural Adjustment Programme (SAP) it is the need for Nigeria to be technologically advanced. For this to happen, Nigeria has to pay more attention to research and development (R & D) as there is evidence to indicate that for a country to advance technologically, there must be increased awareness to build up and utilize scientific research findings in the country (Ikwele, 1989). Unfortunately, interest in R & D in Nigeria is minimal. Even the government's interest cannot be said to be satisfactory as evidenced by the small budgetary allocations to scientific and technological research. Although the allocation exceeded 1% of the budget in the early 1980s, it amounted to only 0.2% of the GNP (Igwe, 1990). Thus, in 1990, Nigeria failed to meet the Organization of African Unity (OAU) target set in 1980 Lagos Plan of Action recommending

that African countries should aim to devote not less than 1% of their GNPs to science and technology (S & T) research by 1990. This short-coming in funding S & T research is undesirable for Nigeria, a developing country that badly needs S & T advancement. Research and development is given top priority in industrialized nations despite their technological advancement by regularly devoting 2.5% - 3% of their GNP to R & D. In these countries, the private sector (industries) plays a major role in funding and performing R & D and that applied R & D is given more importance. This is in contrast to what obtains in Nigeria where research is mainly done by government and basic research dominates research activities.

CHAPTER II

RESEARCH ACTIVITIES IN NIGERIA

INTRODUCTION

As indicated in Chapter I, research activities are mainly funded by government with little contribution from the private sector. In addition to government-sponsored research activities, there are few research organizations funded by international bodies in the country. Research activities in general in Nigeria are discussed in this chapter.

GOVERNMENT-SPONSORED RESEARCH ACTIVITIES

Government-sponsored research in Nigeria dates back to the colonial era when in 1893 a botanical garden and research station was established in Lagos (Igwe, 1990). This was followed by the Department of Agriculture's research stations at Samaru, near Zaria, and Moor Plantation, Ibadan in 1912, the tsetsefly and sleeping sickness research station in 1923 at Kaduna and the Veterinary and forestry research stations at Vom, near Jos in 1924 and Ibadan in 1925 respectively. It is clear from the above that the colonial government's interest in research was focused on agriculture. The colonialists' motivations to establish such research centres was found on the desire to boost cash crop production which formed the major raw materials for their home industries (Idachaba and Erhabor, 1990). In spite of this selfish motive of the colonialists in Nigeria, they succeeded in initiating research in the country.

The pattern of research in Nigeria with emphasis on agriculture

has not changed much. For instance, 17 of the 26 research institutes under the Federal Ministry of Science and Technology are involved in agriculture (including Livestock, Fisheries and Forestry) (Igwe, 1990). In addition, 23 of the 30 Nigerian universities (including 2 Agriculture Universities), 28 polytechnics and 27 training institutes provide invaluable research and supporting services to the agricultural sector (Idachaba and Erhabor, 1990).

Research in the Universities

The Federal Ministry of Education provides research funds to twenty-one federal universities through the National Universities Commission (NUC). Eight state governments fund their own universities where research is also conducted. The Federal Ministry of Defence also funds the Military University at Kaduna. Table 1 shows the Nigerian universities funded by the federal and state governments.

The NUC which came into existence in 1962 following the recommendation of Ashby Commission on Higher Education was in those days an arm of the Cabinet Office and was considered as being in the Civil Service proper like a department in a ministry. The NUC's role at that time was mainly advisory in addition to liaising between government departments and ministries as well as acting as the channel for government funding of the universities. Once the grants were allocated to the universities, NUC had no power to monitor or control how the money was being utilized. With the creation of 12 states in 1967 and the increased control

Table 1: Federal and State Universities in Nigeria

1. University of Ibadan, Ibadan
2. University of Nigeria, Nsukka
3. Obafemi Awolowo University, Ile-Ife
4. University of Lagos, Yaba
5. Ahmadu Bello University, Zaria
6. University of Benin, Benin City
7. University of Ilorin, Ilorin
8. University of Calabar, Calabar
9. University of Port Harcourt, Port Harcourt
10. University of Jos, Jos
11. University of Maiduguri, Maiduguri
12. Bayero University, Kano
13. Usman Dan Fodiyo University, Sokoto
14. Federal University of Technology, Akure
15. Federal University of Technology, Owerri
16. Federal University of Technology, Minna
17. Federal University of Technology, Yola
18. Abubakar Tafawa Balewa University, Bauchi
19. University of Agriculture, Makurdi
20. University of Agriculture, Abeokuta
21. Anambra State University of Technology, Enugu*
22. Ondo State University, Ado-Ekiti*
23. Imo State University, Okigwe*
24. Bendel State University, Ekpoma*
25. Rivers State University of Science and Technology, Port Harcourt*
26. Ogun State University, Ago-Iwoye*
27. University of Cross River State, Uyo*
28. Lagos State University, Ojo*
29. University of Abuja, Abuja
30. Nigerian Defence Academy, Kaduna

* State Universities

Source: 25 Years of Centralized University Education in Nigeria, National Universities Commission, 1988.

of resources by the federal government, the federal government became mainly responsible for the funding of university programmes. This brought all universities under the direct influence of the NUC because only NUC-approved programmes were now eligible for funding. Moreover, external assistance to the universities were obtainable only through the NUC.

Between 1968 and 1974, the NUC was an interim organization. A statutory NUC was created by Decree No. 1 of 1974 and was given the sole responsibility of advising the federal government on all aspects of Higher Education. An Executive Secretary was appointed for the commission for the first time. As at July, 1975 when the Statutory NUC was inaugurated, the Secretariat of the Commission had been functioning as a single unit in its set up. With its newly added responsibilities, the NUC secretariat needed expansion and re-organisation in order to cope with this. Consequently, five main divisions were created, namely: Administration, Academic Planning, Finance, Physical Planning and Statistics/Data Divisions.

Until 1987, the block grants given to the universities were meant to cover recurrent running cost, teaching and research equipment purchases and capital cost. Research and postgraduate development activities were covered under recurrent expenditure. (Table 3 shows the Nigerian universities currently funded by government). Under this arrangement, however, the following were observed:

(i) not enough funds were devoted to research and postgraduate development by the universities;

(ii) departmental research activities were duplicated;

(iii) unco-ordinated research efforts could not lead Nigeria to the desired level of self reliance, especially in its technological quest; and

(iv) Nigerian universities were spending too much of their funds on undergraduate to the neglect of research and postgraduate development.

In the light of the above deficiencies, a new division was created by NUC from its Academic Planning Division in 1987. This new division, called Research and Postgraduate Development Division, was created because of the need for the following:

(i) co-ordination of research projects and programmes in the universities;

(ii) attraction of research funds from outside Nigeria and co-ordination of relevant research projects/programmes with similar ones outside Nigerian universities, especially within Africa;

(iii) creation of a proper liaison between the research work in the universities and other research centres and organizations, especially research institutes;

(iv) co-ordination and streamlining of postgraduate development and programmes in the universities with a view of eventual evolution of "centres of excellence" for various disciplines;

(v) better and meaningful utilization of the large number of professors and other senior academics in Nigerian universities for research and postgraduate development;

(vi) encouraging organizations and individuals to come to the aid of universities financially in research and postgraduate development; and

(vii) maximizing the effective utilization of resources allocated to universities through the Commission for research and postgraduate development.

The creation of the Research and Postgraduate Development Division led to the creation of a new budgetary subhead known as "Research Funds". A total of ₦14,776,542 which was equivalent to 5% of the total recurrent grant to the federal universities for

1987 was approved for the subhead by the NUC (Table 2). Out of this amount, NUC kept ₦2,000,000 centrally in order to:

(i) provide the Nigerian contribution to so many externally-funded research proposals and research linkages which require such local contributions;

(ii) fund some of the nationally-coordinated research involving several universities and for which there is no other source of funding; and

(iii) fund occasional special research.

The 1988 and 1989 allocations are also indicated in Table 2. The universities are required to make quarterly reports on their research activities indicating money disbursed and research conducted or being conducted. They are required to disburse a minimum amount from their respective allocations. Any amount not disbursed will not lapse but will be carried over to the following year. Any university that does not abide by the stipulated regulations is punished by having its allocation witheld the following year by NUC. For instance, the 1989 allocation of the University of Benin was not released because the university failed to account for its 1988 allocation. Similarly, a sum of ₦723,500 was removed from the 1988 allocation of Ahmadu Bello University because the university used the same amount of money to buy books from its 1987 allocation.

The NUC Research and Postgraduate Development Division intends to re-examine the present practice in the universities whereby research activities are the exclusive preserve of the departments that conceive and execute them with a view to replace such practice with a more centrally co-ordinated research. This is intended to cultivate a research culture that will be impactful in the country's nation building exercise. The division also intends to give the universities the

Table 2: Research Fund Allocated to Universities by the National Universities Commission, 1987-89

University	Amount (₦) 1987	1988	1989
University of Ibadan	1,379,000	2,152,000	2,093,873
University of Lagos	1,264,000	1,972,500	1,919,315
University of Agriculture, Abeokuta	184,000	171,500	214,014
University of Nigeria, Nsukka	1,276,000	1,991,500	1,960,710
Ahmadu Bello University, Zaria	1,447,000	2,257,500	2,165,301
Tafawa Balewa University, Bauchi	187,000	295,000	328,961
Obafemi Awolowo University, Ife	1,245,000	1,943,500	1,884,822
University of Benin	900,000	1,428,500	1,383,085
University of Jos	655,000	1,024,500	1,015,394
University of Agriculture, Makurdi	193,000	304,500	338,679
University of Calabar	587,000	917,500	920,860
Bayero University, Kano	526,000	823,500	822,499
University of Maiduguri	637,000	995,500	989,843
Federal University of Technology, Yola	113,000	179,500	221,759
University of Sokoto	391,000	612,500	627,136
University of Ilorin	599,000	936,500	934,244
University of Port Harcourt	473,000	741,500	757,745
Federal University of Technology, Owerri	206,000	324,500	359,602
Federal University of Technology, Akure	131,000	205,500	250,761
Federal University of Technology, Minna	120,000	191,500	232,576
Adeyemi College of Education	83,000	128,500	122,044
Advanced Teachers Colleges, Zaria and Kano	176,000	265,000	258,175
Division of Agricultural Colleges, Zaria	80,000	126,000	121,434
University of Abuja	-	-	77,170
Total	12,852,000	19,988,000	20,000,002

Source: A Special Bulletin on Research Fund Allocation to Federal Universities, NUC, 1989

required co-operation so that the 1990s will witness the evolution of well-defined research priorities in line with the national goals and aspirations. The need to establish how the universities are performing and what must be done to ensure better performance and effectiveness in research shall be given priority by the division.

Research Activities in Research Institutes and other Government Agencies

Currently, the Federal Ministry of Science and Technology funds and co-ordinates the activities of 26 research institutes in the country (Table 3). As indicated earlier, some of the institutes were established by the colonial government and that most of them are agriculture-based. It is noteworthy to observe that some useful inventions have resulted from the activities of these institutes (Igwe, 1990). For instance, between 1971 and 1986, the Federal Institute of Industrial Research, Oshodi (FIIRO) achieved 30 inventions. Of these inventions, the two most widely diffused and commercialized are the palm wine bottling and pasteurization, laundry and soap-making. Project Development Institute, Enugu (PRODA) has also achieved a number of inventions the most successful being laboratory equipment manufacturing. Other PRODA inventions are gari processing machine, industrial blender, industrial adhesives and washing machines. In the area of agriculture, research has also led to a number of new discoveries (Idachaba and Erhabor, 1990). Thus new crop varieties with improved disease resistance and higher yield are now widely used in the country. Similar successes have been recorded in the area of livestock and fish production, forestry and food processing. Several agricultural equipment and machinery have also been invented

Table 3: Non-University Research Institutes Under the Federal Ministry of Science and Technology

Institutes	Location
National Cereals Research Institute	Bida
Institute for Agricultural Research	Samaru
National Veterinary Research Institute	Vom
National Animal Production Research Institute	Zaria
Cocoa Research Institute	Ibadan
Nigerian Institute for Oil Palm Research	Benin
Nigerian Institute for Social & Economic Research	Ibadan
Nigerian Institute for Trypanomiasis Research	Kaduna
Forest Research Institute	Ibadan
Federal Institute of Industrial Research	Oshodi
Nigerian Stored Products Research Institute	Lagos
Rubber Research Institute of Nigeria	Benin
Agricultural Extension & Research Liaison Services	Zaria
Leather Research Institute (now National Research Institute for Chemical Technology)	Zaria
Kainji Lake Research Institute	New Bussa
Nigerian Educational Research Council	Lagos
Institute of Agricultural Research & Training	Ibadan
National Root Crops Research Institute	Umuahia
National Institute for Medical Research	Lagos
Lake Chad Research Institute	Maiduguri
National Horticultural Research Institute	Ibadan
National Institute for Oceanography and Marine Research	Lagos
National Centre for Agricultural Mechanization	Ilorin
Project Development Institute	Enugu
National Centre for Energy Research Development	Nsukka
National Institute for Pharmaceutical Research and Development	Abuja

Source: Ukwu, 1989.

(eg. crop planters, threshers, shellers and dryers).

Several government agencies and institutes other than those mentioned above are also involved in research activities in Nigeria. Some of these agencies and institutes include the following:

Nigerian Educational Research and Development Council

National Institute for Policy and Strategic Studies

Nigerian Institute of International Affairs

Administrative Staff College of Nigeria

National Centre for Economic Management and Administration

Petroleum Research Institute

Steel Raw Materials Exploration Agency

National Office of Industrial Property

Geological Surveys

Metallurgical Institute

Federal Office of Statistics

Raw Material Research and Development Council

Research Unit of the Central Bank

Defense Industries Corporation

(Source: Ukwu, 1989).

THE ROLE OF THE PRIVATE SECTOR IN RESEARCH AND DEVELOPMENT

As mentioned earlier, private industries contribute little to research and development in Nigeria. They do not establish research units in their organizations and sponsor only little research activities in the universities and research institutes in the country. Several reasons have been given for this unfortunate situation with the

government taking its share of the blame. Until recently, it was alleged that government policy on industries since 1960 was not designed to encourage sourcing of local raw materials (Ikwele, 1989). Materials and machines were imported for industries and virtually every product manufactured in Nigeria was an international brand with strict licencing conditions on the type of raw materials to use. However, most of the industries were and are still owned by multinational companies which prefer to conduct research and development in their home countries. Thus Nigerian industrialists have completely depended on their foreign partners for research on their products. Even the Nigerian populace has not been spared of the blame. It is alleged that Nigerians prefer imported items to locally-produced items (the so-called "made in Nigeria syndrome"). Recent events have shown that the government intends to pay more attention to the sourcing of raw materials locally as indicated by the formation of Raw Materials Research Development Council. The Members of Manufacturers Association of Nigeria (MAN) have also indicated their commitment to local sourcing of their raw materials provided that government policies are supportive of their efforts. For instance, the Diamond Breweries Limited has a plant that uses Sorghum to brew beer in Nigeria (Ikwele, 1989).

The private sector's financial commitment to research and development is expected to be channed through their contributions to the National Science and Technology Fund. The Trustees of the Fund have recently imposed a levy of 1/4% of turnover on all businesses with annual turnover of ₦4 million and above (Igwe, 1990).

It is hoped that the proceeds from the fund will go towards sponsorship of research and development in the universities and research institutes. Presently, there are only a few individuals and banks that support research activities and/or endow chairs in our universities.

SOURCES OF INTERNATIONAL FUNDING FOR RESEARCH ACTIVITIES IN NIGERIA

There are now three research organizations in Nigeria solely funded from outside Nigeria. These are the International Institute of Tropical Agriculture (IITA) at Ibadan, Agricultural Research and Management Training Institute (ARMTI) at Ilorin, and International Livestock Centre for Africa (ILCA) at Kaduna. In addition to these institutes, other international organizations supporting research activities in Nigeria are shown below.

(i) The European Economic Community (EEC)

(ii) The Economic Commission for Africa (ECA)

(iii) The British Council

(iv) The United Nations Development Programme (UNDP)

(v) The Ford Foundation

(vi) The United Nations Educational, Scientific and Cultural Organization (UNESCO)

(vii) The Japanese International Cooperation Agency

(viii) The Food and Agricultural Organization (FAO)

(ix) The West German Fellowship (DAAD)

(x) The African Development Foundation (ADF)

(xi) The world Health Organization (WHO)

(xii) The International Atomic Energy Agency (IAEA)

(xiii) The United States Information Service (USIS)

(xiv) The United States Agency for International Development (USAID)

(xv) The Canadian International Development Agency (CIDA)

PROBLEMS ASSOCIATED WITH RESEARCH AND DEVELOPMENT IN NIGERIA

Several problems mitigate against appreciable progress in research and development in Nigeria. The problems include the following:

(i) Lack of Proper Co-ordination

The government has not yet formulated concrete policies on research activities to govern all its research organizations. Although the boards of research institutes and the Nigerian Educational Research and Development Council have been given the responsibility of formulating research policy for their organizations, there is need for a national policy on research similar to such policies on agriculture and health. For instance, there is need to identify areas of priorities (eg. research on science and technology). There is also need for a policy on research findings and development.

The lack of proper co-ordination of research activities in the country has led to duplication of efforts (Igwe, 1990). Moreover, research findings are not adequately disseminated for use by industries and individuals in the country (Ikwele, 1989). For instance, at the moment, there is no institutional vehicle for bringing inventions and their potential users together (Igwe, 1990). The need for such a vehicle stems from the fact that, very often, inventors are not skilful or financially capable of packaging and marketing their inventions, and potential users, on their part are

ignorant of new inventions and innovations. The need for bridging the gap has long been recognized by government. Unfortunately, however, a Research Products and Development Company (RP & DC) which was proposed for this purpose in the Third National Development Plan (1975-80) never took off. Like many other unexecuted useful proposals in past development plans in the country, the reasons for RP & DC not taking off have never been made public. The failure to have a national policy on research in Nigeria has been largely blamed on the National Policy Development Centre (NPDC) which was established in 1975 (Ajakaiye, 1989). The NPDC is expected to initiate policies on important things that have implications on national development.

(ii) Inadequate Funding

As already indicated in Chapter I, research activities in Nigeria are not adequately funded. Unless funding is improved, research activities will continue to have insignificant impact on national development in the country.

(iii) Lack of Utilization of Research Findings by Policy Makers

Another problem that discourages research activities in Nigeria is the fact that policy makers hardly utilize research findings in formulating policies (Ajakaiye, 1989; Ikwele, 1989). In contrast, in developed countries, policy formulation is largely dependent on results of research.

(iv) The Effect of Structural Adjustment Programme (SAP) on Research Activities

Devaluation of the naira under SAP has adversely affected research activities in the country. This is because most of the

equipment and the spare parts needed to maintain them as well as reagents and chemicals have to be imported. Thus, the equipment have become highly expensive and, in some cases, inavailable. Also, as a result of high cost of imported printing materials, many Nigerian journals that carry research findings have gone out of circulation.

CHAPTER III

PROBLEMS OF RESEARCH IN THE NIGERIAN UNIVERSITIES: A CASE STUDY OF AHMADU BELLO UNIVERSITY

INTRODUCTION

Ahmadu Bello University (ABU) is one of the so-called first generation universities in Nigeria. A month before independence in October, 1960, the Ashby Commission on Higher Education in Nigeria suggested the creation of a university in Zaria to serve the then Northern Region of Nigeria. In April, 1961, a Provisional Council was set up under the Chairmanship of Honourable Shettima Kashim who had served on the Ashby Commission. By July, 1961, Professor Norman Stanley Alexander, a New Zealander and Professor of Physics at the then University College, Ibadan was appointed as the academic head of the proposed university.

The university was named after the late Sir Ahmadu Bello, the Sardauna of Sokoto and Premier of former Northern Region. Sir Ahmadu Bello, the first chancellor of the university, performed the opening ceremony on October 4, 1962. The university started operation in an already built up campus used until then by the now defunct Nigerian College of Arts, Science and Technology at Samaru village near Zaria. The Institute of Agricultural Research and Specialist Services, Samaru, and the Institute of Administration, Kongo also became part of the new university. Starting with 4 faculties, 15 departments and 426 students in 1962, today ABU has become the largest university in Sub-Saharan Africa; it covers an area of about 7,000 hectares and has 11 faculties, a postgraduate school, 80 departments, 5 research and training institutes,

6 specialised centres, a division of 4 agricultural colleges, a school of general and remedial studies, a demonstration secondary school, a primary school and 3 organised extension and consultancy services. The current student population is about 21,600 drawn from every state of the federation and abroad.

At the first convocation ceremony in 1963, the founder and mentor of the university, Sir Ahmadu Bello said:

> The first duty of every university is the search and spread of knowledge and the establishment of thruths...
>
> But it must also serve the needs of the nation...

Hence the objectives of ABU as enuciated in its 1962 law are to:

(i) provide regular and liberal courses of instruction in the humanities, the science and other spheres of learning of a standard required and expected of a university of the highest standing;

(ii) promote research and the advancement of science and learning; and

(iii) secure the diffusion of knowledge throughout Northern Nigeria...

Over its 28 years of existence, ABU had 7 Visitors, 5 Chancellors, 4 Pro-Chancellors, 6 Vice-Chancellors, 5 Registrars and 5 Bursars. The university has produced many prominent Nigerians with national and international recognition. These include people who have served or are serving as Governors of States, Vice-Chancellors of other Nigerian universities, Ministers, High Court Judges, top military

officers and senior officers in the Civil Service and the private sector. The university has also provided academic and administrative staff to the young Nigerian universities (the so-called second generation universities), particularly in the northern states.

Since research is one of the main functions of Nigerian universities and considering the size and age of ABU, it was thought worth-while to study the research activities in the university with a view to detecting problems, if any, and to suggest solutions which can be applied to ABU and other Nigerian universities. The objective of this essay, therefore, is to present the results of investigation into research activities of ABU.

MATERIALS AND METHODS

Information on research activities in ABU was obtained through interviews with relevant officers such as the Deputy Vice-Chancellor (Academics), the Dean of Postgraduate School, Deans of certain faculties, Director of Academic Planning and the Secretary of University Board of Research. Questionnaires (Appendix A) were also filled by academic staff from various faculties and institutes of the university. Several documents on ABU were examined for relevant information (Table 4).

RESULTS

Research Co-ordination

It was discovered that the body in the university responsible for co-ordinating research activities is the University Board of

Table 4: Documents Examined to Evaluate Research Activities at the Ahmadu Bello University, Zaria

Name of Document	Year of Publication
Ahmadu Bello University Calendar	1988
Quarter-Century of ABU: Pictorial History	1987
ABU Postgraduate Theses Abstracts	1980-90
Order of Proceedings of Convocation Ceremonies	1980-90
History of Ahmadu Bello University	1989
Records of the University's Board of Research	-
Annual Reports of Units in ABU	-

Research (UBR). The UBR is a body constituted by ABU Senate under the provision of Section 20 of the university statutes. The terms of reference of the UBR are given below:

(i) To advise Senate on:

(a) the priorities for and co-ordination of research work;

(b) the financial need of research work; and

(c) the making of grants from the University Research Fund.

(ii) To constitute a subcommittee to process applications for University Research Associateship, and to approve applications on conditions and in accordance with the procedures approved by the Senate.

(iii) To promote the development of research work by:

(a) initiating university research projects for the solution of problems not being dealt with by existing organisations;

(b) encouraging and assisting co-operative development of multi-disciplinary research projects;

(c) acting as a link with outside scholars and bodies;

(d) advising departments or members of staff, on request, on the probable implications of research work for the university's external relationships;

(e) requesting and receiving annual research reports or summaries from all parts of the university and distributing them to interested persons; and

(f) acting as a clearing house for information on research problems and work in progress.

The composition of UBR is as follows:

Vice-Chancellor - Chairman

University Librarian

Director, Academic Planning Unit

Dean, Postgraduate School

Two members elected by Senate

One representative each from each faculty and centre

In attendance

Registrar

Bursar

Secretary, Academic Planning Unit is Secretary to the Board.

Until the creation of the Research and Postgraduate Development Division in the National Universities Commission (NUC) in 1987, the UBR was getting research funds from the ABU's recurrent grant (Table 5). Since 1987 the UBR has been getting money directly allocated by NUC for research (Table 2).

Investigation into the activities of the UBR indicated that the only aspect of its terms of reference it operates now is item (ii) above. The UBR members sit down only to consider applications for research grants from members of staff and disburse money for research when available from NUC. Although the UBR requires that progress reports and terminal reports (including financial aspects, significant findings and publications arising from the funded research) be

Table 5: Funds Made Available to the University Board of Research by Ahmadu Bello University from its Recurrent Grants (1979-82)

Academic Session	Recurrent Grant From National Universities Commission*	Allocation to the University Board of Research (%)**
1979/80	31,835,735	639,184.00 (2.01%)
1980/81	39,826,871	715,436.00 (1.80%)
1981/82	46,221,458	715,436.00 (1.55%)
Total (1979-82)	117,884,064	2,070,056.00 (1.76%)

* Grant for the Main Campus only

** Allocation to all the campuses

% per cent of the recurrent grant

Source: Budget Unit of Ahmadu Bello University.

submitted by all researchers who benefit from its research funds, this is not strictly enforced. As such, the UBR cannot be said to be co-ordinating research effectively in ABU. There are no guidelines on research priorities for departments and centres to follow. Even within a given department, some members of staff conduct research without the knowledge of the Head of Department! This has given rise to conflicts and duplication of efforts. Even when departments make new inventions, there is no vehicle in the university to link the inventors with the industries that can develop the inventions. This situation has resulted in researchers jealously guarding their inventions.

The ABU Postgraduate School requires that all postgraduate students perform some form of research for partial fulfilment of higher degrees. The extent of research involvement depends on the type of degree sought. While some Masters degree programmes pay more attention to coursework and require only minimal research involvement, others require extensive research work. Extensive research is always required of Ph.D. candidates. Although the Postgraduate School is not responsible for research coordination in ABU, it publishes a book of abstracts of all research work conducted by postgraduate students submitted in the form of theses. Table 6 shows the number of theses submitted to the Postgraduate School over the years. The abstracts are the only easily available information on research activities in the university. Unfortunately, the Postgraduate School does not determine the areas of research priorities; it only collates the findings after the research has

Table 6: Postgraduate Degree Theses Produced Through Research at the Ahmadu Bello University, Zaria

Academic Session	Number of Theses Produced				
	Humanities		Science and Applied Sciences		
	Masters	Ph.D	Masters	Ph.D	Total
1980/81	101	5	144	3	253
1981/82	99	10	174	4	284
1982/83	150	10	159	5	324
1983/84	121	5	196	12	334
1984/85	98	10	67	6	181
1986/87	169	13	233	17	432
1987/88	121	13	147	13	294
1988/89	98	11	163	15	287
1989/90	134	12	68	21	235
Total (1980-90)	1091	89	134	96	2624

Source: Order of Proceedings of ABU Convocation Ceremonies, and ABU Postgraduate Theses Abstracts.

been conducted. Moreover, the school has no access to information on research conducted by staff members who are not postgraduate students.

Although units are asked by the university to submit annual reports including information on research activities, the information on other matters of the units over-shadow that on research. Moreover, the reports are mainly used for budgetary purposes after which they are kept in the archives. The UBR does not routinely request the units to submit a report on research activities.

Units Involved in Research Activities

All the academic departments located in the 11 faculties (Table 7) are involved in research. In addition, some of the centres and institutes also conduct research (Table 8). Some of the institutes were created mainly to conduct research. Three of the institutes are solely funded by the Federal Ministry of Science and Technology but are affiliated to ABU. The other units depend on the UBR for funding although some external sources irregularly become available to them.

Problems Associated with Research Activities

Several problems mitigating against research activities in ABU were encountered. A summary of some of these problems is given in Table 9. The information given in Table 9 was obtained from the questionnaire distributed to staff members. A more detailed information is given below:

(i) Lack of Co-ordination: As indicated earlier, no effective co-ordination is done by the UBR which has been given the responsibility of doing so by the ABU Statues. Out of the 85 researchers who filled a questionnaire, 80 indicated that there is insufficient research co-ordination in the university.

(ii) Inadequate Funding: Until 1987 when NUC created a special fund for research in the Nigerian universities, ABU used to squeeze some money for research from its meagre recurrent appropriation from NUC (Table 5). The amount allocated was usually adequate for conducting basic uncomplicated research but was not enough for applied research which often requires expensive equipment. The UBR's regulation that a Masters degree candidate could only be given a maximum of ₦5,000 while a Ph.D candidate could only get ₦7,000 for research is still in force. Due to the high rate of inflation aggravated by devaluation of the naira, these amounts are grossly inadequate. The amounts do not allow for extensive travelling which is often required for data collection. However, although the funds were not adequate, ABU staff have claimed to have always enjoyed some degree of research funding.

Although NUC started to directly fund research in ABU since 1987, the funds, though appreciable, are yet to fully satisfy the large number of researchers in ABU. However, many of the researchers are pleased with the new NUC policy of directly funding research in the universities.

It was also discovered that ABU researchers are not aggressive in seeking funds from outside the university to supplement

Table 7: Faculties of the Ahmadu Bello University, Zaria

Faculty	Number of Departments
Administration	4
Agriculture	6
Arts and Social Sciences	8
Education	4
Engineering	8
Environmental Design	5
Law	4
Medicine	16
Pharmaceutical Sciences	4
Science	8
Veterinary Medicine	6
Total	73

Source: Ahmadu Bello University Calendar, 1986/88.

Table 8: ABU Institutes, Centres and Schools Involved in Conducting Research

Institutes, Centres and Schools (Year Established)
Institute of Administration (1962)
Institute of Agricultural Research (1962)*
Institute of Education (1965)
Institute of Health (1967)
National Animal Production Research Institute (1975)*
National Agricultural Extension & Research Liaison Services (1975)*
Division of Agricultural Colleges (four Colleges) (1971)
Centre for Islamic Legal Studies (1971)
Centre for Adult Education & Extension Services (1971)
Centre for Nigerian Cultural Studies (1972)
Arewa House: Centre for Research & Historical Documentation (1972)
Iya Abubakar Computer Centre (1973)
Centre for Educational Technology (1973)
Centre for Social and Economic Research (1974)
Centre for Energy Research and Training (1982)
The Veterinary Teaching Hospital (1988)
School of General and Remedial Studies (1988)

*Research institutes fully funded by the Federal Ministry of Science and Technology

Source: Ahmadu Bello University, Calendar, 1986/88.

Table 9: Results of Survey on Problems Associated with Research Activities in ABU

Nature of Problem	No. of Respondents and their Areas of Specialization: Humanities (n=27)*	Basic Sciences (n=8)	Applied Sciences (n=52)	Total (n=87)
FUNDING				
Insufficient Funding	14	2	22	38
Bureaucratic Delays	7	2	9	18
Multiple Problems	5	4	20	29
			Total	85
EQUIPMENT				
Insufficient Number	10	5	24	39
Obsolete	5	1	8	14
Multiple Problems	4	1	17	22
			Total	75
TECHNICAL STAFF SUPPORT				
Insufficient Number	9	1	16	26
Inadequate Training	7	5	19	31
Multiple Problems	4	1	8	13
			Total	70

*n= Total number of respondents

Source: Response to questionnaire (See Appendix A)

the money disbursed by the UBR. Only 3 out of 67 ABU researchers claimed to have requested for and obtained research funds from the private industries.

(iii) Inadequate Equipment: Many departments have indicated that some of their equipment are absolete and have not been able to replace or repair them for a number of reasons. Firstly, the money given to them for equipment maintenance is grossly inadequate. Secondly, purchase of new ones has been impossible due to inavailability or prohibitive prices; many companies that used to supply such equipment have gone out of business due to the general economic depression in the country. Thirdly, spare parts required to repair or maintain the equipment are also either not available or too expensive to acquire. It should be noted that ABU provides a special fund for equipment to each faculty. However, the amount becomes grossly inadequate when shared by the departments.

Researchers have also complained that they did not have easy access to computer services to aid them in analysing research data. However, it was discovered that ABU recently bought many micro-computers which were distributed to the various units of the university. What seem to be lacking now are the trained personell required to handle the computers. Currently, the Computer Centre of the university cannot handle the data from all the researchers.

(iv) Inadequate Technical Support: Although ABU has an appreciable number of technologists used as supporting staff, researchers have complained that the technologists are not adequately trained to handle

research equipment or perform complicated research techniques. On the other hand, ABU administrators have indicated that whenever a technologist is fully trained (usually abroad), the staff usually resigns to establish a private company! Even if such staff decides to remain with the university after training, he tends to spend a lot of his working hours doing "private practice." Recently, the university has experienced a number of thefts of equipment involving some technologists.

(v) Difficulties in Dissemination of Research Findings: The researchers in ABU are finding it more and more difficult to inform their colleagues in other universities and the general public their research findings. This has arisen mainly due to lack of a body that can communicate such findings to the public. The only means of disseminating research findings from ABU is through seminars, conferences and journals. Unfortunately, financial constraints have not allowed much use of these means as seminars and conferences (both local and international) are expensive to organize. Moreover, ABU can only afford to sponsor its researchers to attend local meetings; it can no longer afford to fully sponsor staff to attend international meetings (Table 10). Sabbatical leave which used to afford staff an opportunity not only to disseminate their research findings but also get them exposed to (usually in developed countries) research activities has now been greatly restricted to only a few staff yearly. This is primarily due to lack of funds and the large number of staff of ABU qualified for sabbatical leave. The university can no longer provide return air tickets for the families of staff going on sabbatical leave.

Many Nigerian journals used by ABU researchers to disseminate their research findings have either gone out of circulation or are irregularly published. Researchers are now, in many cases, required to pay for page charges for their papers to be published in the few surviving journals. Unfortunately, ABU does not and cannot provide such funds to its many researchers.

There is an arrangement by which the externally-funded research institutes in ABU have extension units that disseminate their research findings. The National Agricultural Extension and Research Liaison Services has as its main duty the dissemination of agricultural research findings.

(vi) Frequent Staff Turn-over: Over the last decade, ABU had lost many lecturers/researchers to the newer universities in the country. This often had adverse effect on research as departure of some of the researchers had led to the premature termination of research activities in some cases. It takes newly recruited staff some time to settle down before embarking on meaningful research activities.

(vii) Inadequate Library Support: The central ABU library and the faculty libraries offer limited support to the researchers. This is mainly because the libraries do not stock current issues of journals, books and other publications. Many of the libraries have not received current issues of international journals since 1982! Not even abstracts of recent research work are available in many of the libraries. Researchers in many areas are therefore

Table 10: Results of Survey on the use of Conferences by ABU Researchers in Disseminating Research Findings

Type of Conference	No. of Researchers and Their Length of Service				
	1-5yr	6-10yr	11-15yr	over 15yr	Total
Local	20	16	16	9	61
International*	1	0	1	0	2
Both Local and International	0	5	5	7	17

*ABU only provided return air tickets to researchers attending international conferences

Source: Response to questionnaire (See Appendix A)

ignorant of recent advancements in their fields. It is pleasing to note that National Universities Commission had recently asked ABU and other universities to improve their library services using one-third of the money they got from a World Bank loan for books and journals.

(viii) Lack of Constant and Uniform Power Supply: Many Heads of Department complained that NEPA power source has been unreliable due to frequent failures. Frequent fluctuations in current and voltage of the supply had also led to destruction of certain research equipment in the university. Certain equipment were said to be so sensitive that even slight fluctuation in power could render them non-functional. Unfortunately, the university has not been able to supply alternative power supply on a large scale.

DISCUSSIONS

To the best of my knowledge, the only written report on the problems of research in the Nigerian universities I am aware of is that of Arene et al. (1980) which indicated similar findings of inadequate research funding, equipment and trained technical support staff. It is obvious from the proceeding findings on research activities in ABU that research co-ordination is not given its deserved importance. Although it may be argued that strict research co-ordination may interfere with the so-called academic freedom in our universities, it is important that the funding authorities should give some guidelines on the type of research to be conducted by academicians. This is particularly important in our present stage of development. The nation needs to define its areas of priorities. The situation whereby academicians are free to conduct any kind of research they want has led to the production of low quality research findings in line with the unfortunate attitude of "Publish or Perish" in the universities! In developed countries, research priorities are largely determined by the needs of the institutions, the government or any other funding organizations (eg. individuals or companies).

Most of the other problems associated with research in ABU have their roots in inadequate funding. Thus inadequate equipment, technical staff support, difficulties in dissemination of research information and inadequate library support can be traced to inadequate funding. Funding of research in the universities has been minimal due to a number of reasons. Firstly, there are too many universities funded by the federal government. The federal government which

largely depends on revenue generated from petroleum has experienced some difficulties in executing its enormous responsibilities due to low petroleum prices in the last decade. Moreover, the prices of research equipment and other materials used in the universities have more than doubled as a result of naira devaluation; most of the equipment and materials needed for research activities in the universities are, by necessity, imported.

Dissemination of university research information in developed countries is achieved through organized extension units. The units are adequately funded to organize seminars, symposia, conferences, short courses, and provide information on request to individuals and organizations. These extension units also provide information to a national information clearing organization that further disseminates the information at national and international levels. Most extension units of universities in Nigeria are restricted to information on agriculture. Again, for these extension units to be effective, they need to be increased in number as well as adequately funded.

Solutions to research problems in ABU and other universities in Nigeria are suggested in Chapter IV.

CHAPTER IV

OBSERVATIONS AND RECOMMENDATIONS

OBSERVATIONS

Based on information in the two proceeding chapters of this essay, the following observations were made:

(i) there is no concrete policy on research activities in Nigeria;

(ii) research is poorly funded, conducted and co-ordinated in ABU in particular and the country in general;

(iii) research in Nigeria is mainly funded by government with little contribution from the private sector;

(iv) facilities needed to support research activities in ABU, and perhaps other Nigerian universities, are lacking;

(v) although there are many universities, institutes and agencies involved in research in Nigeria, their effect is not significant on the country's quest for technological advancement; and

(vi) although some research institutes have made certain inventions, there is little interaction between them and industries to enable the latter develop the research findings.

RECOMMENDATIONS

The following recommendations are suggested for funding, conducting and co-ordinating research in the universities in particular and the country in general.

(i) Research Funding

(a) The Federal Government of Nigeria should ensure that at least 1% of its Gross National Product (GNP) goes to research and development activities in science and technology as recommended by the Organization of African Unity (OAU). The funds should be disbursed to research organizations through a body to be known as National Research Council of Nigeria recommended in (ii) (a) below.

(b) In order to increase private sector participation in research and development, businesses should be made to compulsorily contribute part of their after-tax profits to research. Industries should also be encouraged to be involved in R and D by giving them R and D tax credits as this has been shown to improve R and D activities elsewhere (Mansfield and Switzer, 1985).

(c) Efforts should be made by government to secure more external funds for research. This can be achieved by linking Nigerian universities and research institutes to international organizations. This will not only improve funding of research in the universities and research institutes but also improve their efficiency in problem-solving through research as well as improve their staff development programmes (Ruttan, 1986).

(ii) Research Co-ordination

(a) It is recommended that for an effective co-ordination of research activities in Nigeria, a single body to be called National Research Council of Nigeria (NRCN) be established in the office of the Vice President as a parastatal of the federal government. This body should, among other things, determine the nation's research priorities, research funds needs and fund research activities in the universities through the National Universities Commission's Research Division and in the research institutes through a proposed Research Division of the Federal Ministry of Science and Technology. The NRCN should have three divisions, namely: co-ordination, co-operation and communication divisions. The Co-ordination Division is to co-ordinate research activities funded by the NRCN. It is to organize research projects based on national priorities and to monitor and evaluate research. The Co-operation Division is expected to explore and develop national, regional and international co-operation in research and related activities for the benefit of research organizations in Nigeria. The Communication Division is to regularly organise workshops, symposia and conferences for the purpose of interaction between researchers. It is also expected to undertake the publication of annual reports, journals, bulletin , monographs, news-letters, books and manuals. This division is to serve as a research repository and

clearing-house. The functions of the Communication Division will be facilitated by laws which will require that all data emanating from research activities supported in any form by public funds be deposited with the unit for reproduction and public dissemination.

(b) For the purpose of co-ordinating research activities in the universities, a University Research Division (URD) should be established in each federal university. The division should be under the Vice-Chancellor's office and should be headed by a Professor with national and international recognition. He should be appointed by the Vice-Chancellor and should normally serve for a reasonably long enough time to be effective. The division should have the same units which will perform the same functions as those enumerated for the NRCN (i.e. co-ordination, co-operation and communication units). To provide policy guidelines for research, each university should also form a University Board of Research (UBR) under the chairmanship of the Vice-Chancellor. The board should have the following terms of reference:

(1) to provide general guidelines for directing the efforts of the URD;

(2) to determine the areas of research priorities of the university taking into account national and local needs;

(3) to consider and approve research projects and their funding;

(4) to consider and approve annual research budget

for the university; and

(5) to submit annual reports on research activities to the University Council through the Senate.

The membership of the Board should be as exists at ABU (see Chapter II). The organizational structure for the administration of research in the university is as shown in Fig. 1.

(c) For the overall co-ordination of research activities in the universities, the NUC should create a research Division from its existing Research and Postgraduate Development Division. This is the division that will co-ordinate research activities in all federally-funded universities. The NUC is to form a body termed Nigerian University Research Board (NURB) under the Chairmanship of an experienced Professor with the Director of the division and Directors of all University Research Divisions as members. The NURB is to meet at least twice yearly to discuss research funding and reports from the universities. The NUC Research Division is to directly deal with the proposed NRCN at the national level.

(d) All research institutes in the country should be under a body to be called Research Co-ordination Division (RCD) in the Federal Ministry of Science and Technology. The RCD is to be charged with the responsibility of co-ordinating research in research institutes and will be headed by a Director. The ministry is to form a body termed Nigerian Research Institutes Board (NRIB) under the chairmanship of an experienced scientist with the Director of RCD and Directors of research institutes as members. Like the NURB, the NRIB is to meet at least twice yearly to discuss research

activities in the research institutes. The NRIB is to directly deal with the proposed NRCN.

(e) The organizational structure for national administration of research in Nigeria is suggested in Fig. 2.

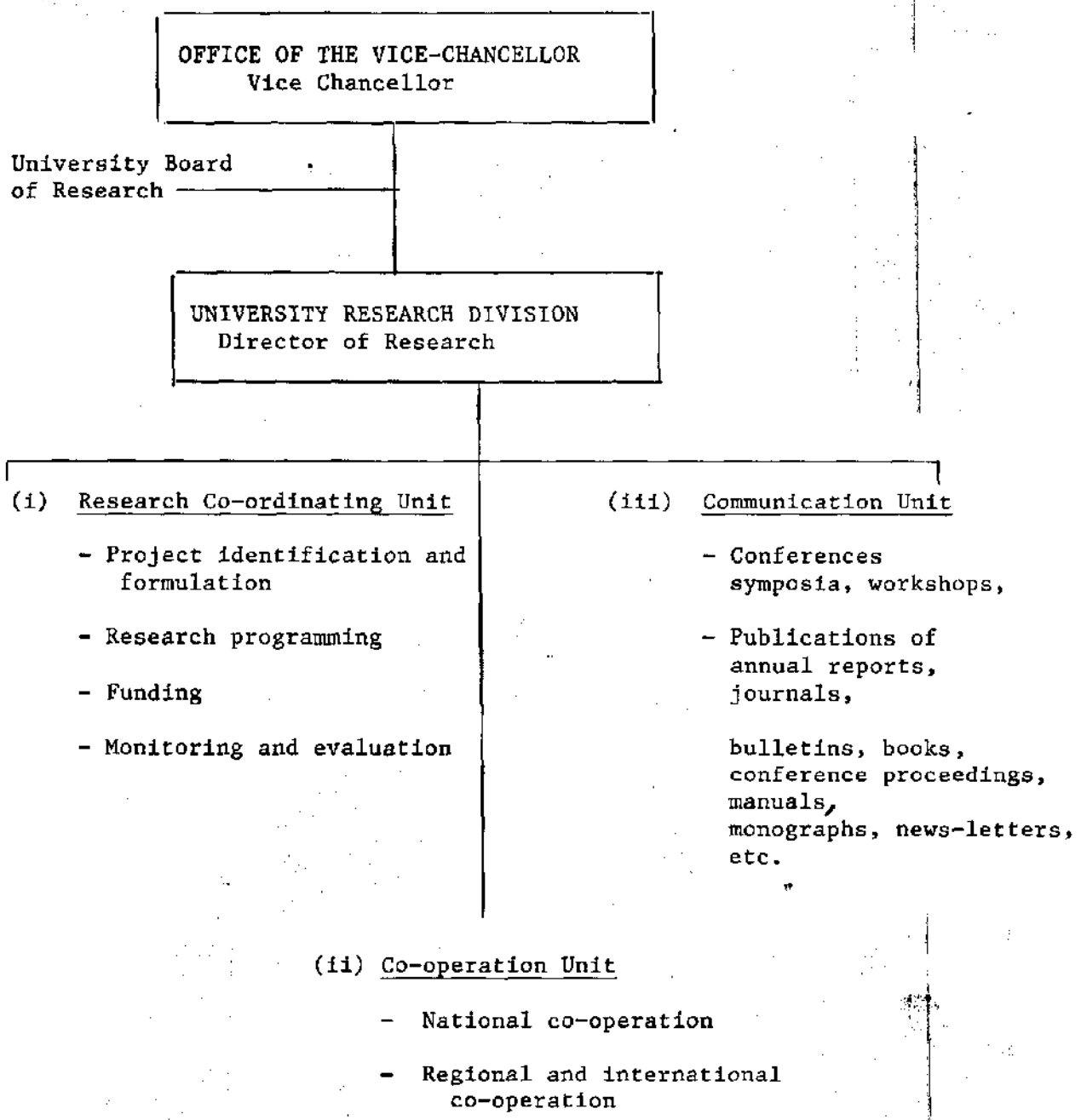
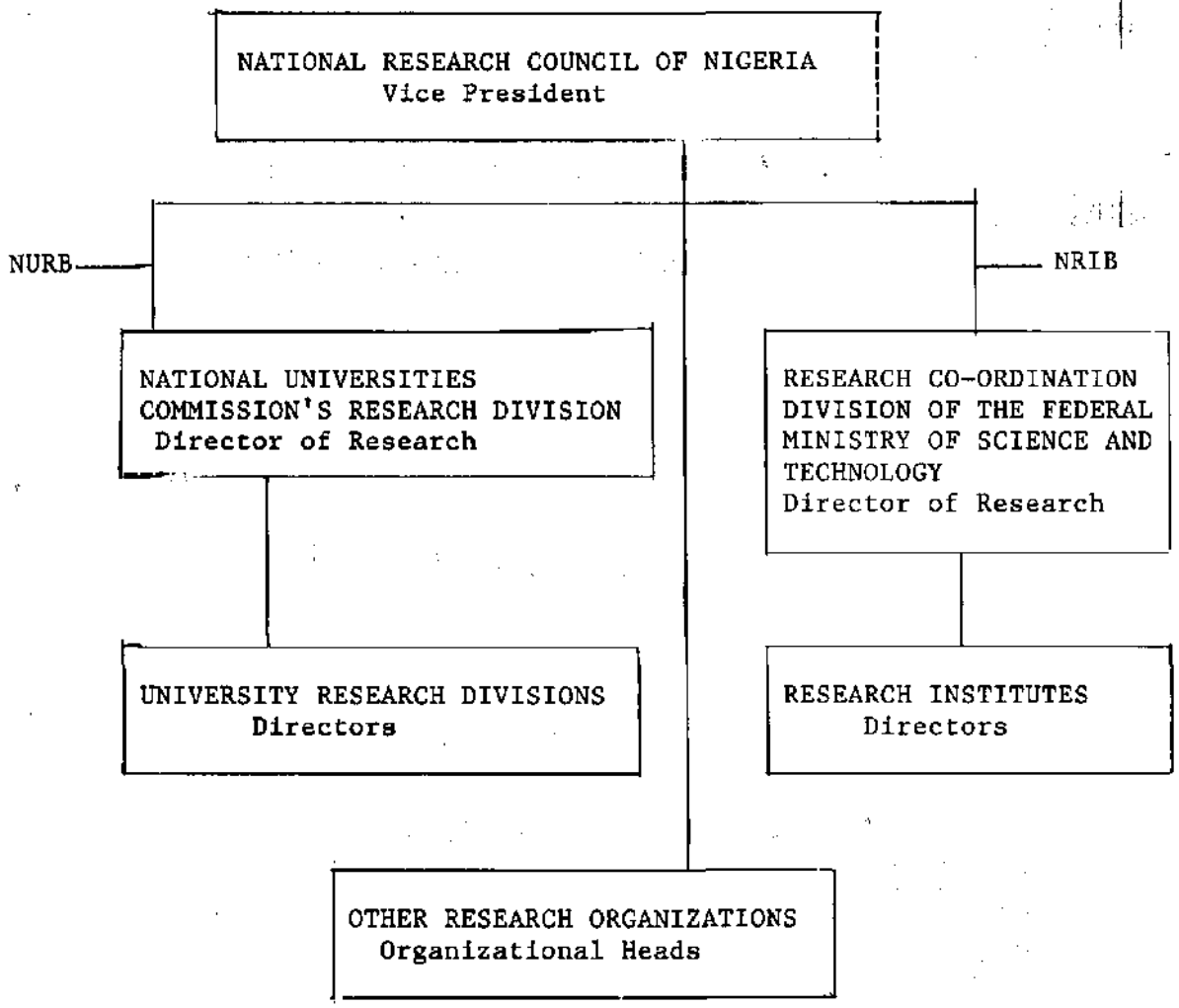


Fig. 1: Proposed organizational structure of research administration in the Nigerian universities.



NURB = Nigerian University Research Board

NRIB = Nigerian Research Institute Board.

Fig. 2. Proposed organizational structure of national research administration.

Appendix A

QUESTIONNAIRE SURVEY OF PROBLEMS OF RESEARCH IN AHMADU BELLO UNIVERSITY

Please tick where appropriate:

Your speciality: Humanities ☐ Basic Sciences ☐ Applied Sciences ☐

Your major assignment: Teaching ☐ Research ☐ Services ☐

Your length of service: 1-5yrs ☐ 6-10yrs ☐ 11-15yrs ☐ 16yrs ☐

Your major source of research funding so far:

University Research Board ☐ Nigerian Private Industries ☐ Nigerian Parastatals ☐

NUC ☐ State Govts Min. or Dept. ☐ Fed. Govts Ministry or Dept. ☐

External Sources ☐ None ☐

Assign any problems you have with conduction research to the given categories:

FUNDING

No Problems ☐ Insufficient ☐ Bureaucratic Delays in Processing ☐ Others (Specify) ☐

EQUIPMENT

No problems ☐ Insufficient ☐ Obsolete ☐ Others (Specify)

TECHNICAL SUPPORT

No problems	Insufficient number	Not Adequately Trained	Others (Specify)
☐	☐	☐	

Your means of disseminating your research findings:

Nigerian Journals	Foreign Journals	International Journals
☐	☐	☐

Local Conferences	International Conferences
☐	☐

State main problems with Nigerian journals in your field:

(a) _____

(b) _____

(c) _____

(d) _____

Your source of funding publishing costs:

A.B.U.	Nig. Priv. Industries	Nigerians Parastatals	NUC
☐	☐	☐	☐

State Govt Ministry or Dept	Fed. Govt. Ministry or Dept	External Sources	None
☐	☐	☐	☐

Who has shown interest in your published articles?

Nigerian	Other Africans	Non-Africans
☐	☐	☐

Your views on coordination of research in ABU:

Insufficiently coordinated	Sufficiently coordinated
☐	☐

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