

Scientific Directorate

**Eduardo Mondlane University
Research Policy**

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DELIBERATION OF THE UNIVERSITY COUNCIL

Deliberation No. 03/CUN/2007

The University Council met 13-14 June, 2007 for its Ordinary Session and deliberated upon the proposal concerning the Eduardo Mondlane Research Policy.

Upon deliberation and analysis it was concluded that the proposal is a complete and adequately structured document, which takes into account the principles that govern the scientific research activities within the Eduardo Mondlane University.


Thus, in accordance with line f) of the No. 2 of the Article 18 of the Eduardo Mondlane Statutes, approved by Council of Ministers as in the Decree No. 12/95 of 25 April, the University Council resolves as follows:

SOLE:

The Research Policy of the Eduardo Mondlane University is hereby approved and is thus an integral part of the present deliberation, which enters immediately into force.

Done and signed in Sala dos Actos Grandes, Maputo City on this 13th day of June, 2007.

The Chairperson of the University Council


Prof. Doutor Filipe José Couto
(Vice-Chancellor)

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INTRODUCTION

The Eduardo Mondlane University-UEM has been undertaking significant reforms to its acting domains that consubstantiate the teaching and learning activity, its main mission. In effect, the UEM has successfully implemented curricula reforms aiming to adequate its courses to the reality of the country, introducing the intensive use of new teaching and assessment methods and information technologies with the objective to improve success rates and gain regional and international recognition, among other aspects.

Parallel to high training, research and extension activities make up the vocation of the UEM so as to promote scientific incentive, the study concerning the application of science and techniques in top priority areas of the country's development, dissemination of findings as well as culture, science and techniques onto the Mozambican society; the systematization a valorization of contributions from other sectors in areas of relevance.

The Strategic Plan of the UEM, guided by the above foundations, contemplates the assumptions regarding the use of research and extension activities to finding solutions for the challenges it faces to implementation it.

Thus, with the steady increase of local lecturers and researchers within UEM, skilled with academic degrees such as masters and PhD, this plays positively for the extension and research activities and the dissemination of findings resulting from such activities.

Research activities carried out at UEM lack sufficient research managerial skills of diverse nature, such as clear objectives, quality of the research product, adoption of priorities, administrative and financial management of projects, accountability mechanisms, control of execution and dissemination of results, ethics conduct, dispersion of fund

collection and use mechanisms for research, rights and responsibilities concerning the inventions and literary works, among others.

It is therefore important, within the historical duty of the UEM context, to guide the promotion of the advances in science and technology and put these to the disposal of the economic development of the country as well as reinforce the vision and aims of the Strategic Plan of the UEM.

The growth of research activities, dispersion of funds and other resources, the need to link one academic unit with the others and with the productive sector and the community in general, lead, specifically, to the adoption of a Research Policy at the UEM.

The current Research Policy responds to the objectives and challenges set by the UEM Statutes and Strategic Plan, by establishing parameters that will facilitate the accurate making of decision regarding the integration of UEM onto the development process of the country through research and extension, as well as the efficient use of human, financial and material resources, and onto the balanced development of research and scientific and technological production.

RESEARCH POLICY

1. Rationale of the Research Policy of the UEM – PIUEM

The Science and Technology Policy, the Science and Technology Strategy and the Strategic Plan of the UEM constitute the foundation for the Research Policy of the Eduardo Mondlane University.

The PIUEM also basis itself upon the idea that all lecturers, researchers, students and staff members of the UEM seek to and access knowledge and can, according to their capacities, participate in the production and dissemination of scientific knowledge as well as share the benefits resulting from such an exercise.

2. General Objective

PIUEM has as general aim the setting up of principles and terms for the norms and other tools that shall govern the scientific research activity at the UEM.

3. Principles

Research activities at the UEM shall observe the following principles:

Promotion of research – UEM shall promote and stimulate quality scientific research;

Excellence in research – UEM shall stimulate the prime of scientific knowledge, based upon quality and rigorous scientific processes in the search of knowledge through

research and adoption of solutions that are scientifically proven;

Post graduation – post graduation activities are the foundation of scientific research and of continuous training at the UEM;

Priority areas – the priority of research programs and projects is set in conformity with the areas of research priority defined by the central bodies and each unit;

Decentralization of management – the management of a research program/project is of the competence of the unit that identifies and submits such a program/project for approval to the Scientific Directorate, who monitors it internally, guarantees the quality and the adequate execution by highly qualified people, and secures at all level the accountability mechanism;

Efficiency of research resources management – information related to available resources for research at UEM should be always up to date and centralized, and share among all program/projects, whose execution will be decided according to its priority, importance, urgency, waiting period, among other pertinent criteria;

Extension – the results of a research activity and or technologies and knowledge attained through a research activity should be made available to and serve the communities and other end users for the development of the society;

Dissemination of results – results from all and any research activities carried out within the scope of the research programs/projects should be accordingly systematized and disseminated to the society at large;

4. Public Vectors

4.1. Excellence in Research

UEM facilitates and encourages scientific excellence by providing research opportunities and incentives for scientific research of quality.

UEM establishes and promotes Centers of Excellence that secure a guided coordination as well as the setting up of Technology Incubators as a demonstration and dissemination mechanism.

Excellence in research at UEM should be founded upon quality and scientific rigor and in obedience of the following:

- a) It is of the responsibility of the main researcher of the program/project to secure the excellence of the research activity;
- b) It is of the responsibility of the units to coordinate and plan, manage, monitor and evaluate quality standards of the research activity and demand accounts;
- c) It is of the responsibility of the units to guarantee excellence in quality of the research activities in their respective scientific fields of research.

Incentives can be provided through the recognition of the research results to evaluate ones performance, and or through the allocation of research funds.

Monitoring and Assessment results should result in adequate decisions at all levels.

4.2. Post-graduation

Training at post graduation level is a fundamental factor for the increment of quality in research activity. Thus, UEM advocates the valorization of post-graduation as follows:

- a) Continue to develop post graduation programs;
- b) Fixation and promotion of postgraduate programs according to research priorities areas set up within the current Policy and priority areas defined at the units level; and
- c) Conception and development of post graduation programs aiming at continuous and permanent training of lecturers, researchers and staff.

4.3. Management of Research Activities

The best of the management process is the strategy to increase the quality of the research programs/projects, which implies:

- a) Decentralization of the management of the programs/projects into the units;
- b) Fixation of internal articulation criteria between the Scientific Directorate and units, namely through reports, communications, memoranda and other mechanisms;
- c) Rigor in observing the norms set up for financial management of research funds; and
- d) Continuous training of staff in the budget execution and research support divisions at the units.

4.4. Extension and Consultancies

Extension and consultancy activities, appropriately fitted into the system, are a useful tool for research activities through the generation of funds and straight links between the UEM and the social and productive sectors.

UEM promotes extension and consultancy activities through the following mechanisms:

- a) Creation of tools to regulate the participation of lecturers, researchers, students and staff in extension and consultancy activities;
- b) Incentive and guarantee the carrying out of extension and consultancy activities without damaging teaching and learning and research activities;
- c) Stimulate lecturers, researchers, students and staff to harmonize extension and consultancy activities to knowledge and skills transfer and sharing with partners, the productive sector and the community;
- d) Application of extension and consultancy activities for the improvement of the teaching and learning process;
- e) Application of extension and consultancy results onto processes to generate wealth and social and economic development;
- f) Adoption of transparent criteria of distribution of funds for extension and activities and fixation of percentage limits of compensation to the units, lecturers and researchers as well as any partaking parts;
- g) Motivate extension and consultancy activities through the use of the results to evaluate ones performance.

4.5. Publication and Dissemination of Results

The publication and or dissemination transmit and make visible research activities done at UEM. The incentive concerning dissemination of research results, presupposes:

- a) Creation of funds for awarding publications in internationally renown journals and technology innovations;
- b) Creation of scientific magazines and other means of dissemination with editorial lines that secure quality of contents;
- c) Regular realization of scientific events to communicate and interact so as to disseminate findings from research and extension activities;
- d) Incorporate results in teaching materials;
- e) Setting up of a databank to store research results by UEM;
- f) Setting up of a publication fund to publish results from research, extension and or consultancy works in national or international scientific magazines;
- g) Setting up of ways to select, edit and publish research, extension or consultancy works of excellent quality;
- h) Use the UEM as the official address for the publication of research works; and
- i) Incorporate peer revision of works for publication in UEM magazines.

4.6. Ethics in Research

Research activities are governed by internationally accepted ethical principles, which demands:

- a) The adoption of a Code of Ethics;
- b) The institutionalization of an Ethics Committee;
- c) Respect for intellectual property;
- d) Observance of renown principles within the domain of literature and scientific methodology; and
- e) Knowledge and domain of relevant tools related to the researcher's field of research, which govern the research, extension and consultancy activities.

4.7. Intellectual Property and Authorship Rights

Scientific research activity at UEM shall respect the application of the legislation in force in Mozambique concerning intellectual property and authorship rights.

UEM protects the research that is carried as follows:

- a) Innovations resulting from research carried out at UEM are the property of the said institution and that of the researcher(s);
- b) The protection of intellectual property and authorship rights are subject to signed agreement between the UEM and other partners, as well as other international tools that regulate the issue and of which Mozambique is signatory; and
- c) For the effect of intellectual property protection, innovations shall be registered and patented in competent bodies by the Scientific Directorate of the UEM.

IMPLEMENTATION PROCEDURES

1. Rationale

PIUEM sets up the principles that shall govern the planning, financing, organization, management and dissemination of research and extension activities within the institution.

For the implementation of the PIUEM and as a way to respond to the challenges posed in the Strategic Plan of the UEM, it is demanded that priority research areas, procedures for preparation and submission of programs/projects, research monitoring and assessment strategies, funding sources and fund allocation criteria, research resources sharing mechanisms, norms and ethics are defined.

For the implementation of the abovementioned aspects it is important to identify ways to capacitate lecturers, researchers and staff within the UEM in design, implementation and research project management skills.

The ways of acting concerning the implementation of the PIUEM, as put forth in this document, are, whenever necessary, replicated in procedures manuals, codes, regulations and other tools that shall govern the scientific research activity at the UEM.

2. Priority Areas of Research

In conformity with the Science Technology and Innovation strategy of Mozambique, the UEM has selected research priority areas as follows:

- a) Priority Areas:**
 - i. Human Resources Development;
 - ii. Education;
 - iii. Agriculture;

- iv. Health;
- v. Energy;
- vi. Marine Sciences;
- vii. Fisheries;
- viii. Building;
- ix. Ecotourism;
- x. Processing and Industry;
- xi. Water; and
- xii. Mineral Resources.

b) Cross-cutting Strategic Areas

- i. Social, Human and Cultural Sciences;
- ii. Gender and equity;
- iii. HIV/AIDS
- iv. Sustainable Environment; and
- v. Ethnobotanics.

C) Facilitating Technologies

- i. Information and Communications Technologies;
- ii. Biotechnology.

d) Other research areas that are centrally defined

Research activities in priority areas at UEM are provided with financial support corresponding to at least 60% of the available funds for research activities.

UEM elects and disseminates, periodically, at central and units level, the most highly prioritized preferable areas of research. According to the set priority research areas, the units will present, periodically, their research programs and strategies. To lecturers and researchers is reserved the right to choose the area of scientific research.

3. Procedures to Prepare and Submit Research Projects

Research activities at the UEM shall occur upon the publication of Thematic Issues related to priority areas or any others and followed by the submission of research programs/projects proposals.

The programs/projects proposed are designed and submitted to the Scientific Directorate for analysis and selection according to the form and recommendations established by the said directorate.

The proposals are submitted through the units.

The proposals shall be first assessed by the Scientific Boards within the units through a peer review mechanism and based upon previously set criteria.

The units shall submit copies of all proposals, which carry the assessment results, to the Scientific Directorate for analysis and selection.

The Scientific Boards shall issue an appraisal report for all programs/projects submitted, independently from such programs/projects carrying a favorable assessment report, which shall be sent to the proponents.

The assessment reports that shall fall onto the proposals should mention clearly the following aspects:

- a) Relevance and importance of the project;
- b) Project quality;
- c) Technical and financial feasibility of the project;
- d) Fulfillment of the norms and regulations in force; and
- e) Other specifications backgrounds, previously set by the project.

The scientific research projects that are financed by funds under the management of external bodies to the UEM, shall obey the approval criteria set by such bodies, as long as they attain a favorable assessment report from the Scientific Boards of the unit and that of the Scientific Directorate.

4. Monitoring and Assessment

Efficient monitoring of research activities guarantee the follow up and exactness of scientific methodologies that are applied and adoption of other highly scored scientific options. Assessment complements the research activity through the issuing of value judgments about the importance, pertinence and quality of research carried out. The pertinence of these mechanisms has to take into account

- a) The adoption of M&A procedures for research programs/projects by the units to the scientific directorate and by lecturers and researchers to the units;
- b) Adoption of accountability mechanism concerning the ongoing status of the projects; and
- c) Adoption of quality and rigor maintenance mechanisms that guarantee research activities.

5. Research Funding

5.1. Funding Sources

The following make up the funding sources of research activities at the UEM:

- a) Appropriation from the Government General Budget;
- b) Funds from national and international partners;

- c) Funds from program/projects financed by the productive sector and civil society;
- d) Revenue from own rendered services;
- e) Pre-determined percentage from fees from post-graduation programs;
- f) Credits; and
- g) Other sources.

5.2. Fund Raising

Fund raising for research activities presupposes the following:

- a) Timely identification and dissemination of information on funding sources for research activities;
- b) Stimulate the search of additional national and foreign funds for research activities by researchers and units;
- c) Give incentive to research projects in partnership with the productive sector and society at large;
- d) Promote and fund research activities using funds resulting from service rendering;
- e) Retain pre-determined percentage amounts from prices set for rendering of services for a research fund.

5.3. Financial Management of Funds

The financial management of research funds shall observe:

- a) A centralized control at the units;
- b) Periodic financial reports by the sector executing the budget at the unit, in coordination with the main researcher;

- c) Scientific accounts report by the main researcher; and
- d) Allocation of an institutional tax over the total budget for the program/project for the units that take part in programs/projects, safeguarding the participation proportion set forth.

5.4. Allocation of Funds

Fund allocation to research programs/projects obeys, among other criteria, those that observe the following elements:

- a) Programs/projects within the research priority areas framework;
- b) Programs/projects of high quality
- c) Programs/projects in post-graduation courses;
- d) Programs/projects that contemplate the participation of assistants/junior lecturers;
- e) Programs/projects with great impact on community problems resolution;
- f) Multidisciplinary programs/projects; and
- g) Programs/projects that scientifically and academically relevant, independent from their insertion in the research priority areas,

6. Sharing of Research Resources

The scarcity of research resources at UEM, presupposes a rational management where these research means are shared as follows:

- a) Creation of communications conditions on material resources among research programs/projects within the units and or with other units;
- b) Set up norms and procedures to share resources;
- c) Disseminate the existence of laboratory, bibliographic and filed experimentation resources so as to allow maximum sharing; and
- d) Give incentive to the carrying out of multidisciplinary research programs/projects.

7. Databank

Principles of participative management, transparency and dissemination of research activities demand:

- a) Availability of information on resources for research activities;
- b) Permanent up to date information on the status of the projects during their course and any other period, mainly those submitted, approved recommended for improvement, and ongoing;
- c) Specification of research areas as related with projects being executed;
- d) Availability of final reports for research programs/projects;
- e) Dissemination of results from the research activity;
- f) periodical accounts reports on the research, and extension and consultancy activities; and
- g) Other relevant information.

8. Lecturers and Researchers Capacity Building

The process regarding quality and rigor improvement of research requires training and continuous training of stakeholders that take part into the management of research programs/projects, which determines:

- a) The continuous capacity building of lecturers and researchers on procedures for research, extension and consultancy activities;
- b) Motivate training of junior lecturers/assistants by senior lecturers and researchers;
- c) Promote courses to prepare and manage research programs/ projects;
- d) Provide incentive to well known and experienced lecturers and researchers to undergo pos-graduate courses; and
- e) Conceive programs/projects with the productive sector for service rendering.

9. Ethics in Research

Professional conduct of lecturers and researchers shall observe the following parameters, which require:

- a) the adoption of specific ethics tools and their dissemination; and
- b) Sensitize and hold lecturers and researchers accountable for the authorship and publication of research results.

GLOSSARY

For the effect of the present Policy, the expressions and abbreviations below carry the following meanings:

Consultancy – paid service provided by a unit of the UEM to an external entity;

Dissemination – publication and or the act of divulging results and data resulting from research activities to a scientific community and the public;

Ethics in Research – conduct principles and rules that guide the scientific research activity;

Extension – activities that consubstantiate the transfer of technology and transmission of knowledge resulting or not from research, including short courses, experiments with new technologies, in partnership with the end users, and technical assistance to public, private and the civil society, in general;

Management of Research Activities – conjunction of integrated acts within the process of identification of research areas, preparation and submission of research programs/projects, fund raising and management of allocated funds, design and control of research reports, monitoring and assessment of projects and other acts that occur to carry out research programs/projects effectively;

Scientific Research or Research – systematic activity seeking to understand or find solutions for a given problem that is embedded within a hypothesis, which is carried out with the recourse to scientific methodology;

Applied research – research done through extension to contribute to the understanding and or solve, totally or partially, a current or potential problem, or even the immediate use of results;

Pure Research – research carried out based on the inquisition of curiosity to know more without aiming at applying

immediately the solutions resulting from such research activity;

Main Researcher – person in charge of the scientific aspects of research program or project;

Research Project – detailed plan of research activities that refers to pertinent elements as aims envisaged, execution plans, programmed activities and others;

University Partners – public or private institutions, local or international that collaborate or establish a partnership with the UEM in domains concerning scientific research activities;

PIUEM – Scientific research Policy of the Eduardo Mondlane University;

Intellectual Property – rights concerning scientific innovations resulting from research works, literary works and art works;

Research Resources – conjunction of human, material and or financial means provided by UEM and partners to support research activity expenses/costs;

UEM – Eduardo Mondlane University

Unit – Faculties, Higher Education Schools, Centers, Mozambique History Archives, museums and others whose mission is to carry out teaching, research and or extension activities.