

Piloting Model of Research Management at Mundiapolis University Report

1 Introduction

The Modernisation of Institutional Management of Innovation and Research in South Neighbouring Countries (MIMIR) project aims to help universities in Morocco and Jordan to develop their management research strategy models based on European good practices transferred through a series of workshops and visits at a number of European universities with proven research management models and long experience in research activity.

The project also provides a channel for the dialogue between the European, Moroccan and Jordanian higher education participating institutions in order to collaborate and exchange practices to help develop research management models in each of the participating southern universities.

This report presents the existing research management strategy at Mundiapolis University, the main barriers to change it and how the training received throughout the different events, workshops and dialogues at MIMIR as well as the implementation of the collaborative management platform will help Mundiapolis researchers to overcome the difficulties they encounter in developing a piloting model for research management.

2 Existing research management strategy at Mundiapolis University in Morocco

2.1 Commitment to research

In line with the university strategic goal in teaching and training to become a **benchmark in employability** for its students, the strategic goal for research is to lead a multidisciplinary action allowing the university to become a **center of expertise in multidisciplinary research and innovation** having a measurable **social impact** and contributing significantly to Morocco's development at the private and public levels.

2.2 Research policies

The existing research management model at Mundiapolis University in Casablanca is defined by the following research policies:

- i. **Set up research areas with common interest in the different faculties of the university:**

The research areas in which to develop research projects emanate from the university four faculties: the Faculty of Management, the Institute of the Political, legal and social sciences, the faculty of health studies and the Engineering School.

The limited size of each faculty community of researchers encourage the university in setting this policy in order to create research project that are carried by multidisciplinary teams of teachers-researchers. The collaboration between the various teams is strongly encouraged.

ii. The research areas selection is made in a perspective of encouraging the development and innovation which translate the major concerns of Morocco of today :

Mundiapolis University focuses on research themes with an interdisciplinary dimension, which constitutes a real opportunity for the university. Research areas are selected based on the development strategy defined by the state, the actual needs of national companies, as well as areas of innovation that are considered to be in the centre of interest of development of the country in the near future.

iii. Assure the relevance for every research project, to maximize the chances to have an impact by insisting on stakeholder implication, who are really interested in the results and ready to invest in the project :

The implication of stakeholders, state departments, or partner companies is maximize the chances of success of research projects.

iv. Developing partnerships, in particular in international projects :

It is important to develop partnerships throughout international projects either by signing research contracts with the multinational companies, or the participation and organization of scientific manifestations (colloquiums, study days, congress and conferences).

v. Set up an applied research:

The research areas at Mundiapolis Univeristy suggest answering a double condition: the utility for Moroccan companies and the scientific character of the methods of investigation.

vi. Aim at publishing the applied research results in recognized national and international reviews :

Valuing the research results is important for both researchers and the university and it's a must and obligation towards achieving the university's objectives.

vii. Encourage strongly teachers-researchers to join the research community at Mundiapolis :

Teachers-researchers at Mundiapolis have in addition to their teaching activities a number of administrative tasks which leaves them little time for research. Therefore, they are encouraged to

reorganize their multiple tasks to include research in their objectives and participate in research teams to develop their research activity.

These policies allow setting up two principal research basis:

- The first one consists in promoting an applied research, directed to the needs for the socioeconomic organizations (clusters, banks, administrations, local authorities, etc.).
- The second is to open on the national and international environment, by strengthening partnerships with a number of foreign and Moroccan university institutions.

2.3 Research axes

Based on the policies cited above, Mundiapolis remain convinced that beyond the implementation of laboratories and research centers, it is important first of all to federate teams of women and men wishing to lead research projects on themes which interest them.

It is the reason why, Mundiapolis adopted an approach which consists in identifying federative areas of research, within which are defined a number of projects carried by research teams of which the skills are complementary, and resulting from various faculties.

Our purpose is to allow the cooperation between academics, whatever are their scientific domain, because we know that this cooperation is creative of synergy and added value.

Our purpose also is to make this scientific production useful for the private and public decision-makers. At first, to the companies because they are is the main actor of value creation. Then, to public authorities because they are the architects of any socioeconomic policy. The end purpose is the development and the improvement of the climate of the business in the country.

Therefore, Mundiapolis research strategy focuses on four research axes that are presented below.

i. Engineering, Complex systems and information technologies for the Development

Faculties and schools involved:

- Engineering school
- Political, legal and social sciences Institute
- Business school

This axis, based on complex systems, focuses on Moroccan development challenges with an accent on the human development.

More specifically, we look for the innovative solutions which draw from methods of engineering, organizational systems and information technologies. This axis aims at contributing to:

- Introduce new research themes in IT and engineering of complex systems to deal with problems which have a relevance turned out in the objectives of the development of our country
- Draw from the multidisciplinary to innovate and create a moving plate for the public sector, the private sector and the civil society, to experiment new manners to contribute to the human development
- Develop the attractiveness of systems engineering and IT jobs with students and researchers
- Produce original research outcome based on innovative approaches or practices allowing to improve the knowledge
- Develop Mundiapolis capacities in this domain, thanks to the implementation of scientific partnerships with international universities, by enriching the exchanges between researchers

ii. Innovation

Faculties and schools involved:

- Engineering school
- Business school
- Health studies faculty

This axis focuses on the new strategic development axes of Morocco: competitiveness based on clusters. It seems to bring answers to the new stakes in economic growth, in particular in terms of knowledge economy in general, and innovation, in particular.

Two dimensions are considered in this axis:

1. The first focuses on the economy evolution of the knowledge in connection with the new stakes in economic growth.
2. The second concerns the Moroccan analysis of the competitiveness poles.

iii. Sustainable development and social responsibility of companies

Faculties and schools involved:

- Engineering school
- Business school
- Political, legal and social sciences Institute

This axis focuses on the set up of strong relations between Mundiapolis University and its socio-economic environment.

iv. Decision, risk and finance

Faculties and schools involved:

- Business school
- Political, legal and social sciences Institute

This axis focuses on the decision problems in the Moroccan context for companies evolving in turbulent market.

Research activities identified in this axis include:

- Reviewing the classic models by testing them in the Moroccan reality
- Reviewing the alternative methods developed in the field of the finance, such the theory of the real options, the methods of multi-criterion decision, etc.

2.4 Implementation of the research management strategy

The research management strategy at Mundiapolis sets up guidelines and objectives to develop research activities at Mundiapolis. However, little has been made to get to those objectives. Having no centres for research and no doctoral studies, research at Mundiapolis is done by teacher-researchers who can devote only a limited part of their time to research as most of their activity is reserved to teaching and most of these teacher-researchers are involved in administrative tasks.

As for innovation, it is supported by an entrepreneurial program integrated in the training program of each faculty, and complemented by multidisciplinary projects and innovation competitions.

Collaboration in research with other institutions at the national and international levels is done personally by each researcher based on his/her own network. Creating multidisciplinary research activities to involve researchers from different backgrounds and faculties is not yet developed, but some ideas are proposed and are discussed.

3 Barriers to the implementation of research management strategy and to the application of MIMIR guidelines and recommendations

Mundiapolis University encounters a number of challenges making it difficult to implement its research management strategy. Recall that it is a young university with a small size, while a "classic" performing system of scientific research requires a mobilization in time and effort of a critical mass of teachers-researchers.

It's known that some research structures stop their activities because of financing problems, and we realize that we are in a delicate equation (researches-resources).

As of the main barriers to the implementation of the research management strategy and to make changes in order to apply MIMIR guidelines and recommendations, we can cite the following items:

- Lack of funding and lack of knowledge in attracting funding and creating opportunities.
- Long fund management process not adapted to the specificities of the research activity.

- Limited human resources (researchers and administrative staff).
- Non-trained staff for managing research activities and tasks.
- Limited knowledge of opportunities of collaboration and fund sources.
- Limited time devoted for research by researchers who have teaching as main priority.
- Teacher-researchers take care of all administrative work related to research activity as there is no specific department that helps and support researchers in these tasks.
- Insufficient communication and exchange between researchers about their research activities mainly because the lack of steering bodies for the research activity at the university level.

Our objective is to develop a research model that will likely bring sustainable solutions able to answer these limitations while considering the specificities of the university, its environment and its vision for its development.

Some of the limitations that we encounter may turn out to be assets. For instance:

- The small size of our university endows us with a high degree of flexibility and with capacity of entrepreneurship.
- The multidisciplinary faculties offer interesting opportunities of innovation and optimization
- Our industry orientation for the education purposes predisposes us (and predispose our professors) to a culture of productivity and projects.

These peculiarities, in this current phase, could bring our research strategy to success, but it should be carefully managed and included in an adapted framework to boost research activity. All this requires a dose of innovation and help by partners who are in more advanced phases of research.

4 Impact of integrating collaborative management platform developed within the MIMIR project on the research management strategy of Mundiapolis University

It is obvious that implementing a collaborative management platform in Morocco, with Jordan and European partners through the MIMIR project will have an important and positive impact on the implementation of the strategy for research management at Mundiapolis.

It addresses the different barriers identified and helps solve them:

i. Lack of funding and lack of knowledge in attracting funding and creating opportunities.

The platform would help sharing ideas, collaborating in common research projects. As well, would help creating larger groups of researchers would help attract funding.

ii. Limited human resources (researchers)

The limited number of Mundiapolis researchers when combined to larger groups of researchers connected throughout the platform would certainly help Mundiapolis researchers to be part of other research groups and work on bigger projects with greater impact.

iii. Limited knowledge of opportunities of collaboration and fund sources.

Sharing ideas and opportunities throughout the platform help identifying opportunities for research contracts and funds.

iv. Limited time devoted for research by researchers who have teaching as main priority.

Collaborating with other researchers help getting results faster as there is greater number of researchers collaborating.

v. Insufficient communication and exchange between researchers about their research activities mainly because the lack of steering bodies for the research activity at the university level.

The developed platform helps keep researchers in touch and provides multiple ways and opportunities for communication and exchanges.

5 Impact of the training received during the MIMIR project on the research management strategy of Mundiapolis University

The training received at the different workshops, seminars and visits at MIMIR would have a great impact on the development and evolution of Mundiapolis research management strategy. It helps in different ways. For instance:

- Creating a network of researchers
- Opening to opportunities
- Getting in touch with experienced European partners
- Training administrative staff and giving them insights and ideas for the innovation and research management

6 Insights for adapting the research management strategy

To overcome the difficulties encountered for implementing the management research strategy and research policies, it is important to adapt taking into account the particular case de Mundiapolis, considering its size and young age and its little experience in the field.

Instead of creating classical structures and units of research, the university proposes to allow the current skills of dynamic and "polymorphous" project teams to evolve naturally, so that they can be transformed through research into laboratories. This gradual approach will take two or three years to come to fruition, but we are convinced that it will give us more stable, more permanent structures.

Thus, the structuring of teams in research laboratories will be done gradually. An autonomous structure is formalized when the research axis is developed through its projects and resources.

This was the case, for example, in a first phase, for our axis "Engineering, Complex Systems and Information Technologies for Development". The development of its activities led to the establishment of the Information & Communication Technologies for Development Center (ICT4Dev).

The reasons for this choice of managing research are:

- Not multiplying research teams, in order to optimize existing human resources
- Being able to easily evaluate the results obtained by projects
- Mutualize each other's energies, pushing for collaboration around projects
- Open the research of Mundiapolis University to its national and international environments through projects
- Maximize the chances of sustaining work on our lines of research, in developing our ability to develop projects, find partners, find funding, carry out research, and deliver results whose added value lies in the approach and scientific input.