

REPORT on the Overseas Research

Mozambique Fieldwork 2017.8-9

[G] Fieldwork A (PS)

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1. Introduction

This Report on the Overseas Research is a summary of results from the Research undertaken in Mozambique during summer vacations on "**The Impact of Higher Education Research in Collaboration with Local Communities Organizations on Business Agenda Setting**".

The study took place from August 6th to September 18th in two cities, namely: Chimoio and Beira City – both located in Central region of the Country.

The main purpose of this overseas research was to expose the researcher to the issues related to the Universities participation on the local communities' bigger agenda on the development through collaborations they have with local industries/ organizations.

In order to explore full potential of academic industry research joint venture, a fieldwork research was undertaken in Mozambique from August 6th to September 18th in two cities, namely: Chimoio and Beira City – both located in Central region of the Country. It intended to find out what was really happening on the field. This fieldwork also aimed to find out factors which hinders industry participation in Universities Communities bigger agendas. Furthermore, to research on theories that would rather be helpful to address efficiency

collaboration among Higher Education Institutions with local communities' organizations to promote communities needs in Mozambique, particularly in Chimoio City.

During the fieldwork in Mozambique, the researcher could meet different organizations (Institutions of Higher Education and other organizations that move higher educational institutions to the local communities).

According, the World Declaration on Higher Education¹, cooperation should be conceived of as an integral part of the institutional missions of Higher Education institutions and systems. Therefore, collaboration between Higher Education, the local industries and other community organisations should be strengthened and renewed.

The National Council for Higher Education in Mozambique, indicates that there are 49 Universities, where 18 are public institutions and the rest Privates. And this number represents an increase of 45 universities, from 1992 where there were only 3 universities to 49 universities in 2016. Most of these institutions do not have adequate resources to support their research and other program activities, which hinder parts of society attraction to actively participate in Universities Communities bigger agendas. In other words, most of these universities, lack of strategies emerging solutions. There is no sustained linkage connecting institutions of higher education to the world of work (industries) to help students put theory into practice. There is also, a mismatch between the higher education curriculum and the local industry's needs.

Despite the seemingly remarkable increase in number of Universities in the country that has been growing considerably, it requires a more complex process of regulation by the supervising Ministry as a basis for ensuring the quality of education and programs offered at the universities.

The Strategic Plan 2012-2020 of Higher Education in Mozambique was established to ensuring the efficiency in the design and implementation of governance, supervision and regulation of higher education focused on harmonization, dissemination and enforcement of the Higher Education regulations (HE Strategic Plan 2012-2020: 3).

¹ Higher Education in the Twenty-First Century: Vision and Action, 9 October 1998

Scholars have argued that collaboration in Africa is began as an affirmation of the ability of African universities to transform themselves and promote national development.²

A significant contribution for universities to cope with the ever increase challenges or society demands has been the issue of collaborating with community organizations or industries. Collaboration between academia and industry is increasingly a critical component of efficient national innovation systems. It is defined as a mutually beneficial and well-defined relationship entered into by two or more entities to achieve results they are more likely to achieve together than alone.³

According to, José Guimón, “developing countries face greater barriers to such alliances between universities and industries, calling for a differentiated approach to promoting university-industry collaboration”. (World Bank, 2013)

1.1.Objectives

1.1.1. Main objectives

- ✓ The main purpose of this fieldwork was to investigate and identify factors that lead to the University Participation in a Community bigger agenda. As well as to identify factors that influence Higher Education Institutions to collaborate with NGOs and local industries for business innovation and improve living standards of local community people.

1.1.2. Specific Objectives

The specific objectives were as follow:

- ✓ To evaluate the Impact of Higher Education Research in the collaboration with local industries for business innovation.
- ✓ To determine University Policies and Curriculum effectiveness towards Research and Consultancy traditions for Higher Education Sustainability;
- ✓ To assess the Higher Education Research involvement in social transformation of the local communities

² Higher Education in Africa: All titles published in association with Partnership for Higher Education in Africa

³ Jan Ślusarek: International Conference on Engineering Education July 18-22, 2010, Gliwice, Poland

- ✓ Suggest some practical ways for higher education research involvement in addressing communities issues in Mozambique;
- ✓ To share some factors that influence Business Innovation success through higher education research in collaboration with local communities' organizations.

1.2. Study Area:

The present research was conducted in the universities where such a phenomenon has been identified namely 'Pedagogical University' and 'Zambeze University' in Mozambique, particularly in Chimoio city.

Chimoio is a capital Chimoio city of Manica province, located in the central region of Mozambique which is about 1100km north of Maputo (the national capital) and about 200km west of the coastal city of Beira (second major City). With an area of 1.412.248km², this province is divided into 12 districts and has, since 2013, 5 Municipalities: Manica, Chimoio, Gondola, Catandica, and Sussundenga. It is in this Province, where it's located the country's highest elevation at 7,992 feet (2,436 meters) named: Mount Binga.

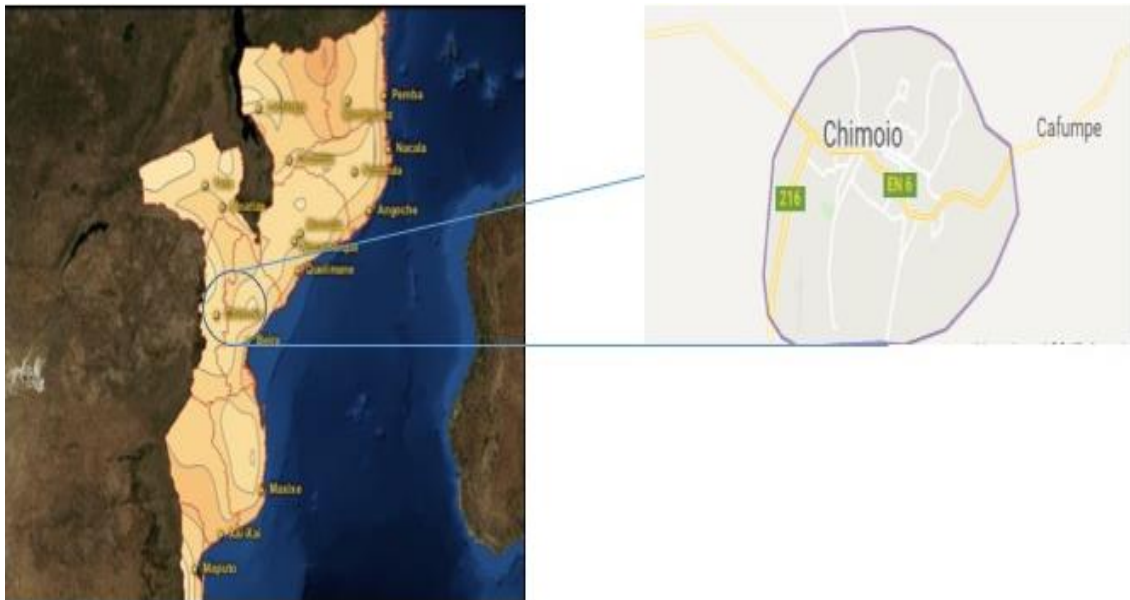


Fig. 1. Research Setting (Source: Google Map)

1.2.1. Zambeze University – Faculty of Environmental Engineering and Natural Resources

Zambezi University (UniZambeze) is a public institution of higher education, maintained by the government of Mozambique, and has its main office is located in Beira City, Sofala Province.

The name Zambeze derives from the Zambezi River that literally crosses the Central region of the country, giving it strategic importance for the development of Mozambique and the Southern Africa Region, due to its enormous potential in mineral resources, water and biodiversity.

The Faculty of Environmental Engineering and Natural Resources is located in Chimoio City, Manica Province, and focuses on the environmental issues and the management of natural resources. Since its entry into operation in 2009, Zambeze University, privileges contact with several higher education institutions and other national entities. This contact is made either by establishing direct cooperation relations with universities and other specific institutions, or through the participation in the sessions of organizations, associations and networks of management of higher education in which it is affiliated, at the national level. Essentially, these actions aim not only at university affirmation in the national academic space, but at the sharing of experiences relevant to the development of science and knowledge.

1.2.2. Pedagogical University - Manica Branch

The Pedagogical University, founded in 1985 as a Higher Pedagogical Institute (HPI), is a public institution of higher education, maintained by the government of Mozambique. As a university, it was the first and is the only public totally dedicated to the training of teachers for all levels of the National Education System (NES) in the country. There are UP Delegations (Branches) in all Mozambican Provinces, which allows students easily access to the higher education in their areas of residence. On the other hand, it has significantly reduced the migratory flows in looking for an opportunity to attend higher education. In order to respond with the everlasting changing world, the university has integrated other areas than teaching courses to the needs for other specialties and professionals to induce local development.

2. Data Collection and Methodology of the Fieldwork

A qualitative approach was used in this study because of the personal contact of the researcher with the respondents in the *form of interviews*. The researcher thinks that qualitative approach in this study provided useful data that invites "the completion and acceptance by the reader for his or her part, the message of the text and the interpretation of the significance of the research" (Barone, 1998:154). Qualitative approach, implies a direct concern with experience as it is 'lived' or 'felt' or 'undergone'... Qualitative research, then, has the aim of understanding experience as nearly as possible as its participants feel it or live it. (Ely et al., 1991, in Sherman & Webb, 1988).

Here, the researcher interviewed people in charge of the cooperation sector as well as the head or coordinators of the organizations/ institutions. A formal interview was conducted between the researcher and selected Universities and organizations' staff. All the interviews followed a formal guide, where the respondents were given the opportunity to express their views. The researcher used audio records and notes for further analysis and interpretation.

It should be noted that, this instrument was good to collect as much information as possible as there was a possibility of asking follow-up questions on issues that could be exploited more. According to Weir & Roberts (1994: 142), "an interview response can be clarified and developed through follow-up questioning. If the respondent is unclear on the interpretation of a question, this can be resolved."

The target population and sampling of the present study will be comprised from the following sample as shown in a table below.

2.2.1. Sampling

According to Spector "sample is a subgroup of the total population, specifically those individuals chosen from the population that will be involved in an experiment or are to be respondents in a survey" (1981:2).

Institution	Respondent			Method	Observation
	Lecturer(s)	students	Practitioners		
Zambeze University	3	7		Semi-structured interviews	University academic programs towards students' employability skills
Pedagogical University	4	6		Semi-structured interviews	Collaborative activities; Awareness of University-industry collaboration
Assoc. of Graduates and Fresh Graduates (AEFUM) - MZ		1		Semi-structured interviews	Involvement in Joint-venture educational activities at universities; Career development and employment opportunities; internships
MSTHEPT - MZ		1		Semi-structured interviews	Higher education governance; HE researches incentives and challenges
GIZ Pro Education (NGO)		1		Semi-structured interviews	Involvement in education sustainability; Collaborative activities

The choice of this representative sample size took into consideration the resources and time the research was to take. If the researcher took all the students, it would be rather good. Nonetheless, the research would take a great deal of time for data collection and it would have high costs for its undertaking. Therefore, the researcher opted for selecting such a representative number through a random selection of respondents (students).

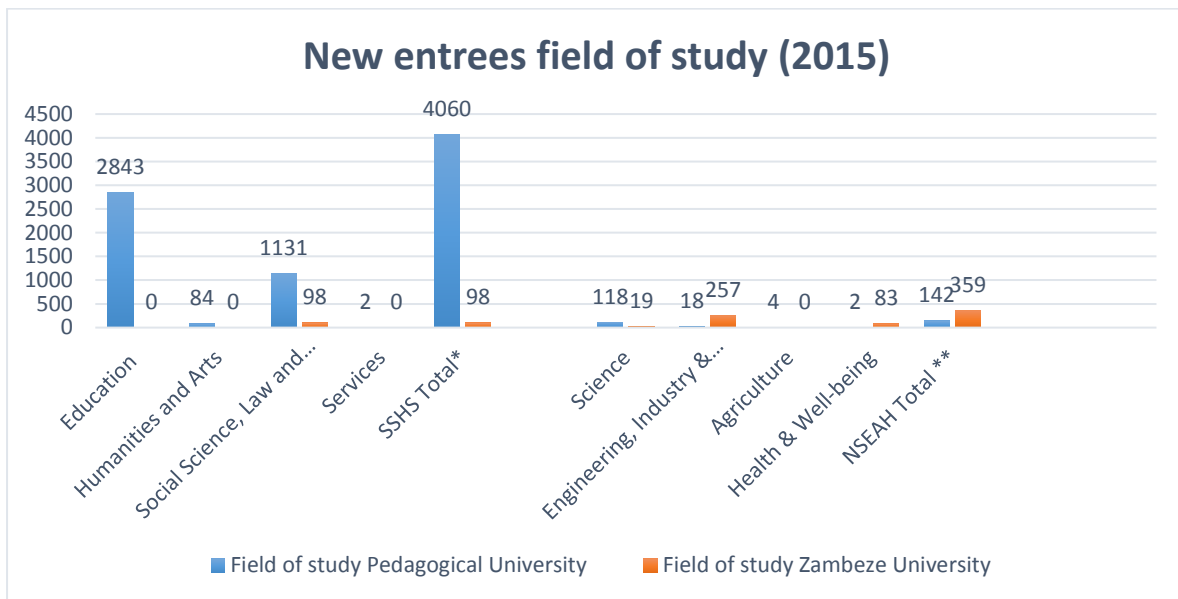
2.3. Limitations of the Study

The undertaking of this fieldwork was not a problem-free. The researcher comes across some difficulties, such as, difficult to find Similar cases. Nevertheless, the limitations beyond fieldwork control helped to understand university-industry collaboration and explore learning points, which could be rather be helpful to assess how Mozambican Universities involve practitioners in university communities' bigger agendas.

2.1.1. Findings

Despite the seemingly remarkable increase in number of Universities in the country that has been growing considerably, it requires a more complex process of regulation by the supervising Ministry as a basis for ensuring the quality of education and programs offered at the universities.

The graph below shows a projection indicating an increase number of students enrolled in social science, humanities and Services programs. And this, might lead to the local industries difficulties in finding appropriate and highly skilled human capital capable of responding to their needs. Thus, the companies will be forced to hire people (students) from different fields of study.



Connecting stakeholders into lecturers or universities life can be a fundamental tool and an aid to boost higher education sector. It would be more valuable and adds more value to the sector, by providing opportunities for students to be motivated in technical fields of study. The Universities in partnership with industries can organize joint-venture activities, and advice upper-secondary schools and senior-technical and professional schools' students on their Academic programs and which kind of training they would expect, providing scholarships and guarantee internships, students would be motivated to join the field of study (technical programs).

This is transformation period in Mozambique, as the country seeks to build a sustainable future to the nation due to economic crisis since 2016. Involving industries (practitioners from public and private sector, government), gives practical experiences to the students. Because all intervenient partners come from different professional background. They can help in building a stronger and sustainable institutions of higher education in the country.

Our fieldwork also revealed that, there is no Curriculum Collaborative activities between Universities and Industries. When we tried to find out what are the reasons that hinders the universities to collaborate in Curriculum Development with organizations, here are the answers from the universities:

- Lack of administrative support;
- Lack of Financial resources;
- Difficulties in finding partners.

On the other side, organization and practitioners side, they do not collaborate with Universities in curriculum development, because the industries lack of information on university life, that is, the Universities do not disseminate their results. There is also difficult to find related academic programs to the industry.

In the context of Mozambican universities (UP and Unizambeze), the interaction between universities and industries is based on principles of mutual understanding and common interest. Lerner & Simon, have also suggested that to be successful, a collaborative model must be based on mutual respect and co-learning, each participant must learn about others knowledge and culture (1998).

In addition to this, Fullan, believes that *“the key to successful change is the improvement in relationship between all people involved and not simply the imposition of top-down reforms. The new emphasis is educational change, which is based on creating the conditions to develop the capacity of both organizations and individuals to learn...”* (1991)

We also found out that, there is willingness of Collaboration with other institutions:

a) Pedagogical University

The university accesses public schools’ technicians for the improvement of school teaching and management. It has also been supporting the improvement of teaching quality within the surrounded schools (High and Junior High Schools), though different activities in order to create sustainability in the sector and sustain its social responsibility. This year, in April 20th – the University offered thirty (30) bags of cement to Tobacco Primary School to build classrooms for students who study in inappropriate conditions, as the imagine below illustrate.



Tobacco Primary School in Herois Mocambicanos – Chimoio/ Source: Pedagogical University - DCI

Another example of the University social responsibility was launched this year, a mobile library to ensure consultation of students from neighboring schools. This library is made by a mini-bus, through which the basic library services are provided to surrounding neighboring schools and it is also available to disadvantaged community schools which are far from the general public and private libraries services.



Mobile Library (PU) - Source: PU - DCI

b) Zambeze University

Concerning, collaborative activities, the dean of this faculty assesses national and international partnerships at as more or less materially positive. Since many of the national partnerships have not had a continuity of activities previously planned. They are mostly short-term partnerships, and their main purpose is to solve a given situation in a given period. Most of international partnerships memoranda agreements, few of them are taking place due to limited and financial resources difficulties, as we found out during the interview session. The Collaboration between this university and local community's organization, has been witnessed by few actions, it has been developing with its partners in the various fields of academic life and in the improvement of living standard of local communities.

According to, the Dean of this Faculty, the university has been developing projects of inestimable impact in the local communities, translated into different mechanisms from material support means, knowledge and technologies transfer, participation in technical support, mobilization and participation in awareness-raising movements to change behaviors in different spheres of life.

Here are some examples of in and off-campus activities that the university is running separately and with its partners:

1. Recovery of degraded areas with the use of the Leocaena Consortium with Vitiver grass

This is another project the university is running individually and aims at recovering the soils of a degraded area unsuitable for any use by rural communities, such as grazing areas, with the use of the Leocaena Consortium with Vitiver grass. Leocaena is a legume that grows in soils of low fertility, rapid dispersion, long cycle, high food value for animals at the beginning of the vegetative phase. The project involves students in Leocaena seeds collection and seedlings of Vitiver, for later plantation of alternating series of Vitiver and Leocaena.



2. Capacity building in Sanitation Engineering with emphasis on Water

This is a collaborative project with the Water Research Centre in the Netherlands. It aims at training the academic members and local community in the sanitation system (water treatment, water waste, drainage, hydraulics, solid waste and latrine management). Currently, the project has trained 22 members in different domains, such as:

1. Water treatment for human consumption;
2. Design and management of drainage and hydraulic systems;
3. Treatment, transportation and final destination of solid waste; as well as in
4. Sanitation and hygiene issues (good practices in the use of latrines).



The university in partnership with the ISPM⁴, developed a project of reproduction and production of chickens. In partnership with the local governments, developed soil improvement studies for agriculture due to local challenges and great agricultural potential the surrounded community has.

3. Fieldwork Outcomes:

- 1) Industries lack on technological knowledge can be seen as a result of few students enrolled in technical educational programs;
- 2) Lack of administrative support and financial resources are likely to affect Curriculum Collaborative activities;
- 3) Mutual understanding and common interest can influence UIC;
- 4) Universities that collaborate with other institutions are more likely to solve other institutions problems + additional income;
- 5) Centralized Universities Policies may hinder academics engagement in Collaborative programs with other Professionals;
- 6) Universities with collaborative programs involving practitioners are more likely to enhance students practical skills;

⁴ Polytechnic Higher Institute of Manica

4. Conclusion

Among our main findings, Mozambican universities seem to have an understanding on collaborative activities with other institutions but fail to contribute to the local economy. On the other hand, the national policies and strategies might not help in encouraging universities to collaborate with industries to help students put theory into practice. Universities can do many things individually, but in collaboration with other professionals/ practitioners, they can act and do things in productively way. Thus, collaboration in Curriculum Development is important and necessary. An effective university-industry interaction in Curriculum development, must have an in-depth understanding of each other's mission, goals and values and respect other partner's cultural differences. Their curriculum collaborative activities, should be centred in developing students' employability skills by integrating local interest (societal and industrial needs), taking into account their available resources. Otherwise, it will be a silent and fruitless collaboration and, in the end, it might create disharmony and discrepancy among partners.

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