



Management Model for University Cooperation at Universidad Técnica de Manabí, Ecuador



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Article history:

Received: 5 June 2016

Accepted: 31 August 2016

Published: 30 September 2016

Keywords:

Internationalization;

Management;

Model;

Strategic alliances;

University cooperation;

Abstract

In researching a management model for university cooperation at the Universidad Técnica de Manabí, with its components, phases, stages, input, and output information as well as the premises of its practical application, thereby achieving qualitative and quantitative changes proposed in the conception of university cooperation for sustainable development. The model for the management of cooperation, the assumptions of the model and the components are exposed, and a map with universities that are currently on the network and the issues raised in the strategy, setting out the results at national and international levels.

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1. Introduction

University cooperation has become an activity with national and international impacts of the policy, organization, and management of higher education and its universities, particularly in the formation of professors and the educative offer of undergraduate, upgrading, formation and specialization of researchers in the scientific investigation process and in the activities linked to the community.

Cooperation for sustainable development at the universities as a potentiator of internationalization of higher education, promoter, and manager of organizational change, is of vital importance to reach high educational standards and move to competitors and contextualized educative models, being able to assimilate a critically the best experience,

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respecting culture and identity of peoples. In the case of Ecuador, its contribution is decisive to the Good Living Plan and to the transformation of the productive matrix.

The slopes of the internationalization process are concrete in two fundamental behaving ways: university cooperation and development cooperation. UTM values the present importance of internationalization from these two perspectives, incorporating them into its institutional development and projecting its missions: teaching, research, and community link outward to national, regional, local and international society. Betting on innovation and knowledge management, as a challenge to be faced by universities in the local endogenous sustainable development in the communities with commitment and social responsibility.

In that order University Cooperation Unit of the *Universidad Técnica de Manabí* (UCU-UTM), is oriented to project and increase the academic, scientific, technical, ethical and humanistic visibility; foster network, wishing to join efforts to optimize media and make possible an efficient and dynamic cooperation of human, financial, material and technical resources.

At the UTM, it detected a group of barriers that tend to stop the development of university cooperation. Among which some stand out: development of few actions, absence of a coherent management model, centred on the university cooperation processes, nonexistence of a reactor unit of this activity, lack of measurement and control of the process and results, lack and limitations in the organizational culture, that does not consider cooperation for development as key factor for success.

The before stated justifies the following scientific problem: how to contribute to the university cooperation management at the UTM. The objective of this article is to propose a model for the university cooperation management at the UTM and to show the results of its implementation.

2. Research Methods

Antecedents of the University Cooperation Management Model

Beltrán *et al.*, (2009), in the book *Cooperation and Internationalization of Universities*. we find an analysis and cooperation corresponding with the management models shown in figure 1, where we can observe cooperation and management as elements that go together and interact during the whole process.

It is stated that the cooperation spontaneous model, depending upon program offers, stands out to be a management model mainly passive and transactor, limiting the university internal process of offers and calls to external organizations and sources. But in the best of the cases, spontaneity is not taken as a blind and inert principle and we can assume a search activity of opportunities, a good organization of information diffusion and a certain support to the academic community for the requests presentation, trying to happen on time and with good technical quality.

Besides, in the integrated model of cooperation, management is active and its organization adapts to the policies and the objectives of the strategic plan for internationalization.

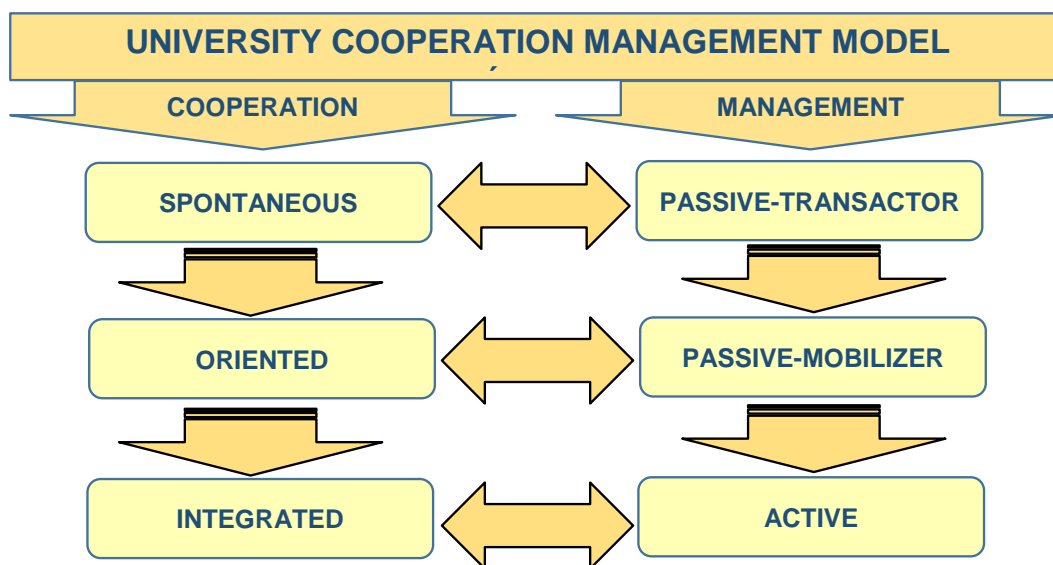


Figure 1. Models of university cooperation management

The concept of Management Model, [del Ecuador \(2008\)](#), is defined as the way to organize and combine the resources with the aim to fulfill the objectives; i. e., the set of principles, policies, systems processes, procedures and behavior guidelines to get the expected results and improve the organization performance. These elements are framed through normativity, mission objectives, basic operational processes, structure and organization, organizational culture, policies and competencies of human talent, and formal strategic planning of the organization [Mao & Casas, \(2004\)](#).

According to Epistemology, the model has been used as a notion that has as the final goal to explain reality. Its conceptualization is used and formed intentionally to emphasize on the explanations of reality, every model is supported by the theory and is specified with a verifiable and testable activity in the surrounding reality (the unit between theory and practice, abstract and concrete thinking). This results in an abstract ideal, but its operatives are concreted when making the set elements and its relations work, that's why its systemic and holistic character.

When we state that the model relates abstract to concrete, it does not mean that forcedly the model must be something material that can be seen and handled. We really wish that somehow the model is able to present the general theoretical framework. When specifying the theory we go from abstract to concrete, applying the fundamental aspects provided by theory ([Herrera et al., 2013](#)).

There are management models that support the use of models close to enterprise level techniques with predominance in the use of Information and Communications Technology (TIC) and modern techniques of management ([Sacasas-López, 2014](#)).

In this case, we consider the proposal of university management model for Key Results Areas (KRA) of Higher Education Institutions (HEI), applied with relevant effects in the Higher Polytechnical Institute José Antonio Echeverría and that could be of reference for other institutions.

In the present investigation we define university cooperation management model: it is the ideal systemic and holistic representation that takes into account different phases, stages, inputs and outputs to plan, organize, lead and control the available resources for cooperation (human, financial, material and technological) through a dialectic interaction that considers: theory-practice, abstract-concrete and reflection-action-reflection to achieve objectives, values and strategies for the university sustainable cooperation, fulfilling the set of principles, policies, systems, processes, procedures and behavior norms to get the expected results and improve the organization performance through the integration of contributions of the different management approaches ([Rosas-Baños & Lara-Rodríguez, 2013](#)).

The cooperation management model considers a group of premises for its practical implementation. In figure 2 we show the model premises and you can see that one of the aspects that are taken into consideration is related to international norms, the social management of knowledge and innovation, quality management with emphasis on continuous improvement and a contribution version of the model to local endogenous sustainable development ([Carlsbecker et al., 2010](#)).

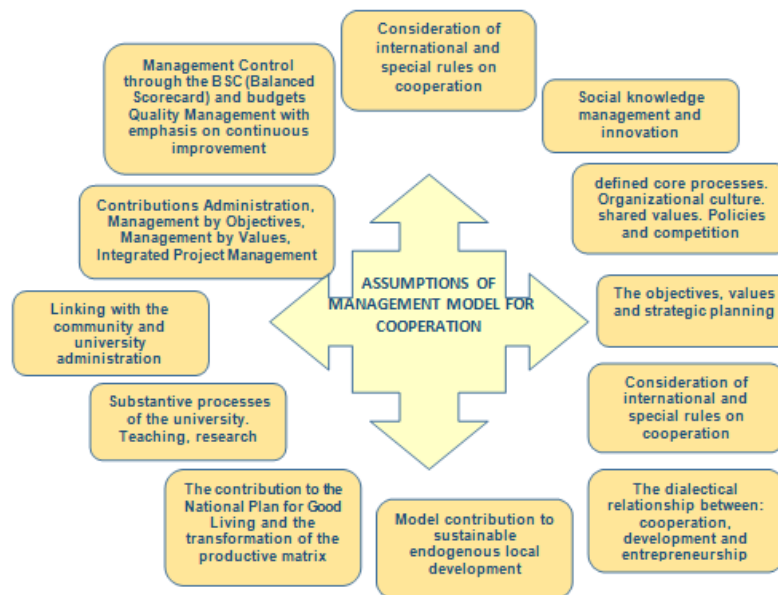


Figure 2. Premises of the model

In figure 3 we expose the different components of the cooperation model beginning with the different phases, stages, inputs, and outputs. Phases are defined as sensitivity, diagnosis and strategic integration where the university cooperation management model is mainly addressed. At the end of inputs and outputs, we have begun the process since the first phase.

3. Results and Analysis

The model was implemented taking into consideration its recognition by the universities of the country and particularly by the Manabí society, put forward to promote and strengthen the university cooperation, showing a higher performance in the sphere links: academic and technical science, knowledge management, innovation, and local sustainable development. We also attempt to internationalize this vision among other Iberoamerican universities.

The mission was intended to manage the university cooperation at UTM in the different processes that allowed to promote and strengthen the links with higher education institutions of high national and international prestige, through networks, reaching sociocultural, economic and environmental impacts in correspondence to lineaments and state policies exposed in the national plan of good living.

The general objective of the first phase is to increase and strengthen the university cooperation through the integration and development of strategic alliances with institutions and associations of regional and subregional character.

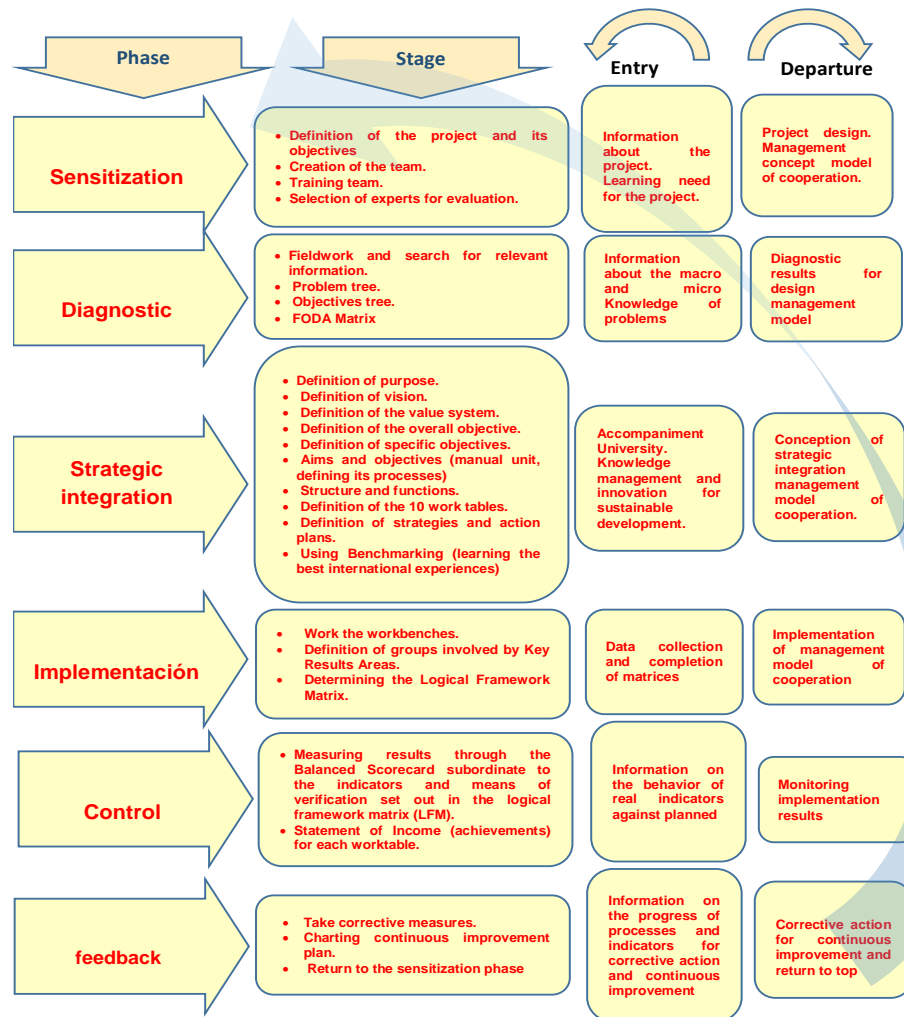


Figure 3. Components of the model

The results obtained in the university cooperation management model at UTM are easily measurable, making cooperation possible and group different universities of Manabí province, Ecuador, and other Iberoamerican countries. In figure 4 we can see a map with the universities integrated into the network.

We can see that there are 10 national universities and 4 foreign universities, 3 of them in Central America, where different activities and joint works have been carried out.

Regarding national and Manabí universities, we set work tables that include the writing of teaching books, assessment and accreditation processes, publishings, organization of international congresses, seminars, workshops, development of research projects, teachers-students movability, use of laboratories, organization of upgrading programs, informatics cooperative link and development, taking advantage of this last element with the objective of using ICT to implement the model.

In the case of foreign universities the cooperation allows to obtain results related to books publication in specific nets as Latin American Net of Organizational Competitiveness (Red de Investigación Latinoamericana de Competitividad Organizacional, RILCO), in which professors-researchers of both universities are members, besides the participation in congresses, proposals of postgraduate, doctorate and master programs with Spanish universities.

Another aspect taken into consideration for international cooperation is related to the application of techniques to the problems solutions of agricultural engineering, inclusive education as a pedagogical imperativeness with a radical formation and inclusive approach, with didactic strategies for the teaching at the university. We are working on a memorandum agreement between the Autonomous University of Mexico and the UTM.

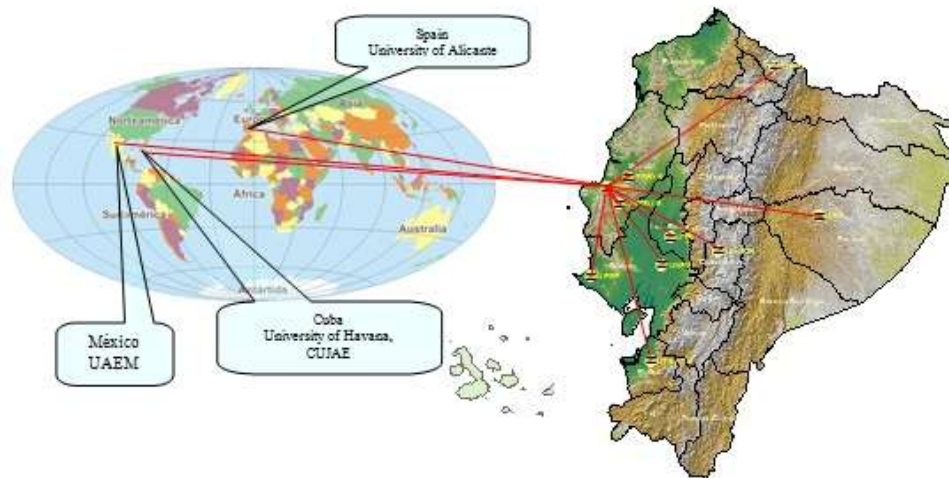


Figure 4. Universities of the network

We reached an international specific agreement of academic and scientific collaboration in the area of Human Geography Local Development, Patrimony and Tourism between the University of Alicante, Spain, to improve the laboratory system, the coordination of a tutelary doctorate and a strategy for the formation of human talent in the endogenous sustainable development of Manabí province.

4. Conclusion

The work allowed generating a university cooperation management model among UTM and other higher studies institutions of Ecuador and the Iberoamerican area focusing on reaching the high academic standards and move to a more competitive educative and contextualized model, where we defined the phases, stages, inputs and outputs of the process.

We value the initial effects already obtained by the network through the concrete results of the implementation of policies, objectives, values, strategies and action plans with instruments of measure and continuous improvement.

We show the initial results of indicators that impact the social acknowledgment and higher visibility of the institution, fomenting the network since the knowledge management, innovation, and local development.

Conflict of interest statement and funding sources

The author(s) declared that (s)he/they have no competing interest. The study was financed by the authors.

Statement of authorship

The author(s) have a responsibility for the conception and design of the study. The author(s) have approved the final article.

Acknowledgments

The authors thank all universities is associated with the inter-university cooperation program have been able to contribute their ideas and work to the realization of this article.

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Biography of Authors

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