Communication Strategy through Linkage Offices Integration at Universidad Nacional, Costa Rica

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This paper addresses the need for establishing a communication strategy through the integration of offices related to the linkage at Universidad Nacional of Costa Rica (UNA), with the purpose of enhancing the relationship of the institution with the different sectors of Costa Rican society (business, government and sociaty). This article describes the case of the Oficina de Transferencia Tecnológcia y Vinculación Externa (OTTVE) (technology transfer office), in which the creation of a single channel of communication with the users who need to contact the university to establish some kind of link is proposed. As a result the proposal developed in this article, a web page link was implemented that integrates the various offices related to the linkage. Additionally, a proposal was made to create a coordinating committee of these same offices as an alternative for improving internal communication.

1. Introduction

The Universidad Nacional of Costa Rica is a higher education institution established in 1973. It was founded on the educational experiences of the Escuela Normal, which focuses on the education of primary school teachers and teachers for secondary education schools (Universidad Nacional, 2013a).

OTTVE at UNA was established in 1987 with the aim of establishing agile institutional mechanisms linked with the national and international production sector and state institutions that, in compliance with current legislation, aims to respond in a timely manner to a dynamic and changing reality. (Universidad Nacional, 2013b).

The OTTVE mission is to advise in external linkage, services and intellectual property, in order to contribute to the transfer of knowledge, technology and innovation, resulting from university activities, aimed at different national and international sectors through personalized management, timely, interdisciplinary and innovative, based on a committed talent.

Historically, UNA has made efforts to strengthen its links with the various sectors of Costa Rican society. Work in this area has been strong, given that different offices with designated personnel and operating budgets have been created; this has result in generating momentum in independent efforts and better integration between units, particularly between OTTVE, the UNA Entrepreneurship programme, business incubators, the UNA Nexus programme and the Continuing Education Programme.

UNA directs projects with significant potential for impacting society, e.g., in terms of an environmental impact, sustainable development and information technology. There are many projects with the capacity to promote linkage between institutions and companies; however, integration is required for growth projects.

Today, internal and external UNA users (students, researchers, entrepreneurs, central government officials and citizens in general) lack of specific guidance for contacting and liasing with the University, therefore, we offer a work proposal to improving this problem.

2. Theoretical Framework

The current context of public universities demand these institutions as managers of knowledge as regards Lascaris (2004) notes that "for universities to assume the role as managers of knowledge that business required for productive innovation, must be able to interact efficiently, timely and creatively with this, and promote the accumulation of knowledge that is essential for innovation. For the work of Research and Development (R & D) which universities develop constitutes a source of competitiveness for companies, strategies of interaction between the two sectors should be very operational and coupled to the dynamics of the business process" (p.79).

According to the National Strategic Report of the European Commission (2007-2013) Costa Rica is considered a middle-income country, consequently[1] higher education institutions are less likely to attract resources for developing research projects which is considered a threat to driving the transfer of knowledge and technology, considering that some avenues of financing are restricted to countries with higher poverty rates than Costa Rica, which is why the issue of linkage with the productive sectors can't be neglected.

As a public institution, UNA must respond to the demands of society. In this sense, Bonvecchio (1996) mentions that the role of higher education institutions "is deeply linked to social needs and hence, their vulnerability and dependence on the state and credibility to civil society".

Like other higher education institutions in Latin America, UNA has established a complex structure in which departments and units work on related activities independently. In this context, Jofre (2013) mentions that "the university structures like those you found in any organization should be subject to permanent review and evaluation. The structure, by its very essence, is not everlasting, however, in the traditional university is very difficult, sometimes impossible, to change structures. The universities use to locate the structure and organization of the university even in its details, in the law or in the organic statutes of the university. This has petrified the structure, preventing changes in practice that allows it to be more flexible and adapt to the new challenges of the university in terms of efficiency and organizational effectiveness " (p.2).

As Jofre(2013) notes, the structure of universities can paralyze, can even prevent new challenges, therefore, under these circumstances, it is important to seek alternatives for turning a rigid and complex structure into one that is more flexible in terms of the objectives of the University.

Regarding this, Miranda (1996) notes that "one might wonder about the ability of the structure and organization of universities to make more effective the linkage in terms of administration and management without falling into the tangle of bureaucratic mechanisms that obstruct or discourage any involvement with the productive sector "(p. 86). This question is particulary valid in the case at UNA, considering that the present structure and the lack of communication between university and its state holders may cause discouragement rather than a boost for linkage.

3. Objective

The objective of the UniTransfer programme is to enhance the abilities of those responsible for knowledge and technology transfer with higher education institutions (HEIs) in order to improve science and business cooperation.

In this programme, a proposal was developed with a short-term objective to develop communication strategy offices through linkage at UNA, particularly among the following: OTTVE, the UNA – Entrepreneurship programme, business incubators, the UNA Nexus programme and the Continuing Education programme, all of which together aims to improve linkage within the University.

The proposal aims to establish a communication strategy that allows for instances related to the topic "Linkage of the Universidad Nacional" to have a single communication channel that can be employed by users, thereby improving linkage withing UNA. It also seeks to improve the projection of the University in linkage, specifically in terms of the external sector (business, government and university), proposing this sector to have a single window within the institution.

It is expected that the immediate result of this project will be the integration of the different linking offices' websites. It is also expected that a linkage coordination committee will be established in order to improve communication between the related offices.

4. Methodology

This research took as reference the hybrid research methodology and included the combination of methods mentioned in Molina (2012), since this approach includes several activities: literature analysis, best practice analysis and meetings with coordinators.

4.1. Literature Analysis

As part of the initial activities, literature related to the subject under study was consulted, particularly literature concerning the issue of communication, information and communication technology (ICT), the implementation of the "single window" concept and theories about the concept of the triple helix.

Valenzuela (2002) notes that "one of the main strategies that should be implemented by universities is to incorporate Information and Communication Technologies (ICT) in all administrative and academic management processes (and), involving all components of the system in a meaningful and substantial institutional transformation to ensure the permanence and the insertion of the University in a globalized world" (p.24). Aligned with this approach, and considering linking as a cornerstone of academic management UNA has chosen to make use of available Information Technologies at the Universityl and develop a project to unify the websites of the offices involved. This task was carried out in collaboration with students from the Systems Engineering department of the Informatics School at the same university, as there were no resources available for outsourcing during this development.

Another key reference for the development of this project was drawn from the recommendations and guidelines issued by the United Nations Centre for Trade Facilitation and Electronic Business (CEFACT/ONU-2005), whose indications state that "the single window does not imply necessarily the implementation and use of sophisticated information and communications technology (ICT), although the service is significantly improved if governments identify and implement appropriate ICT measures to this end". Thus, it is proposed that a technological solution can improve the service provided to general users for their contact with the University.

On the other hand, the theory of triple helix theory proposed by Etzkowitz (1997) referred to the multiple reciprocal relationships that are consulted among institutional sectors (public, private and academic), all of which are part of the public. Therefore this components were used as a basis for creating the new site; specifically, research was conducted according to the type of audience, ie., companies, academic institution, students and government.

4.2. Best Practice Analysis

Based on the knowledge gained from the research performed, the Unitransfer programed was conducted; an analysis of best practices were identified related to linking, wich in this case included Mexican universities such as the Universidad Autónoma del Estado de Hidalgo, the Münster University of Applied Sciences in Germany and in Costa Rica, the Universidad Estatal a Distancia who has created within their universities different practices to meet the linkage as detailed below.

4.2.1. Case 1. Universidad Autónoma del Estado de Hidalgo in México.

During 2012 the UAEH implemented the creation of a Science and Technology Park, with the objective of developing activities related to the transfer of knowledge, technology, research results, rescue and protection of culture heritage in their region. In this way, the Knowledge Transfer Office acts as one of the branches of the Science Park of the Universidad Autónoma del Estado de Hidalgo, which includes the **single window** for converging the supply and demand on both the productive sector and academia. This creates a platform for accelerating linking and technology transfer. Currently, the organisation chart of the Science Park is displayed as follows:
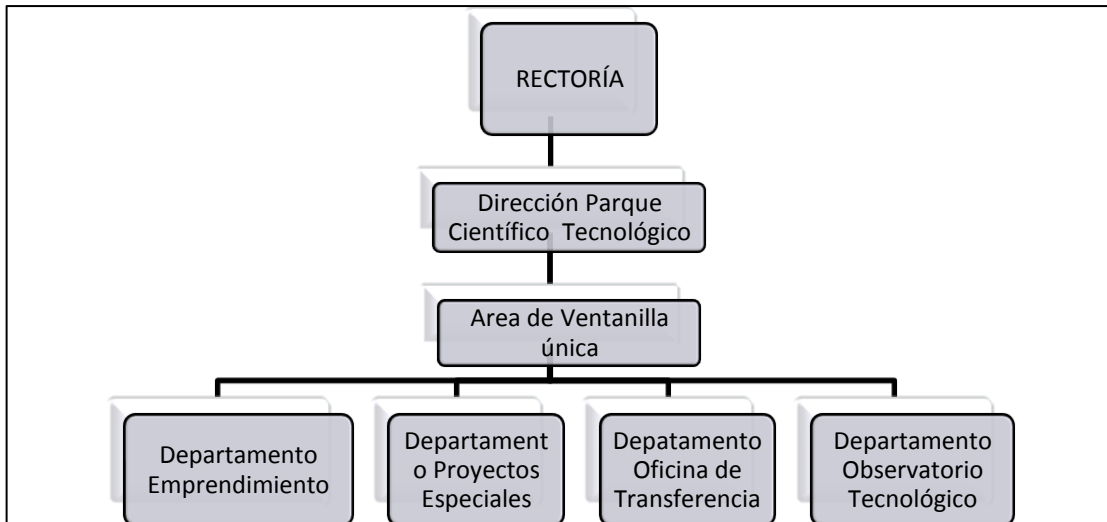
Figure 1: Organization chart, Science and Technology park at Universidad Autónoma del Estado de Hidalgo (PCyT). Source: Illustration based on organization chart, Science and Technology park at Universidad Autónoma del Estado de Hidalgo (PCyT). Accessed at: http://www.uaeh.edu.mx/pcyt/.

As previously illustrated, the concept of Scientific and Technological Park incorporates the theme of entrepreneurship, Projects in the area of MSMEs, the Office of Technology Transfer and Technological Observatory, all of which are supported by a single window that guides the requirements of different sectors.

In this institution a linkage model was created consisting of a management system that integrates four interface structures operating as strategic applications, among these is an internal University linkage Network of (RIVU), which aims at enhance internal and permanent communication between the linkage coordinators and academic staff of the university schools and faculties, and that interacts with the functions and guidelines of the teaching, research and linkage divisions in the faculties with consolidated academic bodies and researchers, in order to be timely and effectively operative "(Linkage Model UAEH 2012).

4.2.2.   Case 2. Münster University of Applied Sciences

The Münster University of Applied Sciences has created in its organizational structure an external transfer and linkage agency, which is supervised by a vice rector; in this matter, it is important to mention that the principal or "CEO of the linkage agency" has a profile that includes practical experience in the business sector either in industry or government which allows him/her to view knowledge transfer from the university to the company in a much broader way. This is an interesting practice considering the vision this professional may have about the university linkage which may be different to the traditional approach.

In this university and other German organizations the communications, that occurs between offices for monitoring and implementing its objectives is essential. For example at the Münster University of Applied Sciences, a mode called "jour fixe" is used, in which the directors of the offices related to the linkage regularly meet at a set time (e.g., once a month) to address general issues pertaining of the functioning of the organization. In each session the date of the next meeting is fixed so that all participants can participate and thus ensures attendance. Additionally, topics are also defined in this manner.

Further good practice used by the Münster University of Applied Sciences Germany is thinking of linkage from the perspective of what the business needs. As noted by Baaken (2013) "to take the customer's needs, the customer's expectations, and the customer's benefit in the centre of your thinking ". Based on this criterion an integration of the offices is proposed, which allows the external user to easily locate the type of relationship you want to set depending on your needs and not according to the internal audience of the University as is currently the case.

4.2.3.   Case 3. Universidad Estatal a Distancia, Costa Rica (UNED).

At present, UNED is in the process of setting up a linkage office; however, the Directorate of International Relations and Cooperation (DIC) also requires the creation of a commission project that facilitates communication and cooperation within projects that come before that direction. This is a case of interest for the current proposal considering that it is immersed in a similar reality throught the OTTVE and in practice has resulted in an effective form of work for topics related on cooperation projects, which in the case of UNA is a function of the International Technical Cooperation Office (OCTI), one of the offices involved in this proposal.

The results of good practice analysis are: identifying as an alternative for improving communication and the creation of a "Committee similar to the Internal Linkage University Network (rivu) used in the UAEH, to ease communication and linkage between the offices of the Universidad Nacional and different external sectors, without creating a new structure that instead becomes an obstacle to the objective. The purpose of the Coordinating Committee is to become an integration space for the work of the numerous offices, facilitated through a coordinator (figure N°2).

The Coordinating Committee will have as its main objective integration and improving communication within offices related to linkage within the Universidad Nacional. This include OTTVE, the Entrepreneurs Program, Lifelong Learning Office, International Cooperation Office, and the Incubator and the Academy Activities Office. To improve linkage within the University, the committee will be comprised as follows:

Figure N°2. Proposed Structure of the Coordinating Committee on Linkage. Source: author's own illustration

It is proposed that this coordinating committee becomes a space for improving the management perform by offices related to linkage and to allow for protecting the single channel of communication among external users. The Committee will be composed of the director or coordinator of each of the departments listed in the structure and will meet regularly according to the agreement of the directors, a monthly meeting (five meetings biannually) is proposed for taking care of the issues addressed by each office, actions for integrating efforts and improvements to benefit users, as well as other issues raised by each director. Additionally it is proposed that coordination and convening of these meetings is rotated annually, starting in 2014 with coordination by TTO and later moving to other offices successively.

4.3. Meetings with the coordinators

Another of the steps executed for the development of this proposal was to hold meetings with the coordinators of the offices involved in this project, in order to learn about their opinions regarding the proposal, which consider in the first instance the integration of the web sites of the different offices, to achieve this a preliminary version of the new link was made and was presented to those responsible for each of the offices involved in order to realize their opinion and observations. At these meetings, requests for changes and modifications that had been incorporated after evaluating functionally were presented.

4.4. Main barriers

The implementation of this proposal presented some difficulties:

- Organization Culture: views on the work of each office and the identification of the offices with a specific name. Regarding this issue, negotiation skills were very important for reaching an agreement, finally 3 names were proposed for the new site and those responsible had to choose between these names. In order to achieve an agreement, the benefits of the proposal for unifying all offices into a single concept were explained.
- Technological solution vs. personalized attention. The solution for integration of the websites did not solve the issue of personal assistance; therefore a method for answering inquiries (see procedure developed) was created. In addition to the website the options personal attention and telephone support remained enabled for those who required it.
- Time (scheduling meetings). Scheduling the meetings was a challenge considering the commitments of the directors. However, meetings were as brief as possible to present main milestones and progress of the project.
- Resources (students assigned for only one semester). Collaboration among students from the same university at a professional practice level was employed, as no additional resources were available. Through these resources, integrated web development was realized.

5. Results

The main impact of this project is aimed at corporate image and user perception. An internal or external user who wants to contact the University can now enter the main page of the Universidad Nacional 1 and find an specific link called Vinculación Externa y Cooperación (External Liaison and Cooperation). Via this single window, people will be able to access different offices and clerks and find solutions. Prior to this project, the user had to undertake an extensive process to contact offices, whereas currently, there exists the single window concept of web queries.

Regarding the proposal for creating the Coordinating Committee, this was presented to the Área de Planificación Económica (Economic Planning Department) at UNA as part of a restructuring process requested by UNA's University Council; as a result, this work offers important input for justifying the results of the comprehensive analysis conducted.

An important outcome of this process is the networking with people of other Technology Transfer Offices in different universities, which can establish collaboration and cooperation in terms of linking the university with business sectors.

6. Conclusions

The development of the personal application project (P.A.P.) offers the possibility for proposing real solutions to existing problems in higher education institutions. Interactions with the other universities are important for the exchange of experiences and allows for learning from successes and failures achieved, which in turn creates valuable opportunities for gaining knowledge. Within this process, project tutors follow the progress of participants and evaluate team members who provide feedback.

The knowledge acquired through the Unitransfer programme reaches far beyond technology transfer, allowing professional growth through the acquisition of much needed skills for achieving university linkage; for example, the ability to negotiate, considering that most of the linking projects involve a number of people and consequently different ways of thinking. This particular proposal involves the

participation of the different offices of an institution, whose historical culture identifies it as a training organization of educators and not as an entity in relation to companies. For this reason, the proposal concerning this topic may seem contrary to the existing culture; however, changes are needed in this regard and negotiation skills are essential.

One of the primary aspects of the Unitransfer programme is that it offers the opportunity for thinking differently about cooperation between universities and companies; for example; being sensible to the needs of stakeholders (costumers/users) before offering a product or service, to improve the relationship between the parties, as well as the importance of effective communication. Addionally, learning about successful models in other institutions and meeting people involved in the productive sectors of the industry were valuable ways to acquire new knowledge.

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Since 2012, she has been carrying out proposals in the OTVE for linkage projects promotion with external sectors and companies. In this role, she has promoted the use of government procurement systems as part of services that promote the link between the university and the productive sectors. She is business administrator.