En búsqueda de un modelo comunicativo entre el sector académico del instituto tecnológico de Toluca y empresas representativas del sector productivo en el valle de Toluca para la carrera de ingeniería en gestión empresarial

In search of a communication model between academia Technological Institute of Toluca and representative production companies in the Toluca Valley to the engineering degree in business management

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Resumen

La situación mundial a finales del siglo XX conlleva una nueva realidad económica e industrial que se caracteriza por la globalización, la revolución en el campo de la informática y expansión de las redes de comunicación. Estos cambios propician una nueva visión en las empresas a las cuales las instituciones de educación superior debieron responder de una manera efectiva y novedosa para dar cuenta de sus innovaciones, esto implica una trasformación cambio en la visión de los paradigmas que hasta esa fecha habían funcionado.

El siglo XXI presenta nuevos desafíos ante el desarrollo, sobre todo en países como México, en la necesidad de crear nuevas alternativas a los cambios vertiginosos que se dan en el siglo actual. Uno de sus desafíos es la respuesta que las instituciones académicas deben generar para responder a esos retos, dentro de ellas se encuentran la necesidad de generar carreras inovadoras que respondan al nuevo entorno mundial y que impliquen un compromiso no sólo en el progreso, sino en su distribución para crear así un

mundo más justo y mejor repartido en lo que se refiere a la riqueza, que permita permear sus beneficios a todas las capas del tejido social.

Palabras Clave: Modelo comunicativo, sector académico, empresas, sector productivo, Toluca.

Abstract

The world situation in the late twentieth century entails a new economic and industrial reality characterized by globalization, the revolution in the field of computer and expansion of communication networks. These changes foster a new vision in companies which higher education institutions must respond in an effective and innovative way to account for their innovations, this transformation involves a change in the vision of the paradigms that until then had worked.

The twenty first century presents new challenges to development, especially in countries such as Mexico, the need to create new alternatives to rapid changes occurring in the present century. One of the challenges is the answer that academic institutions must generate to meet these challenges, among them are the need to create innovative careers that respond to the new global environment and which involve a commitment not only progress, but in its distribution, thus creating a more just and more evenly distributed in terms of wealth, allowing benefits permeate all layers of the social fabric.

Key words: Communication model, academia, business, productive sector, Toluca.

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Introduction

The presence of a new discipline or career college technological context presents a challenge not only to the same programmers, but also academic staff and students who wish to join it. Introducing Career in Engineering Management Technology Institutes in

dependent of the Directorate General of Higher Education Technology bring not just a new area of knowledge but also a commitment to constant improvement by the academic staff that imparts a continuous improvement and greater attitude towards the acquisition of knowledge and responsibility to their teammates for students who wish to pursue this career; but also represents an area of opportunity for the industry and the productive sector can see reflected new possibilities for action and create a more equal and profound development in the industrial field.

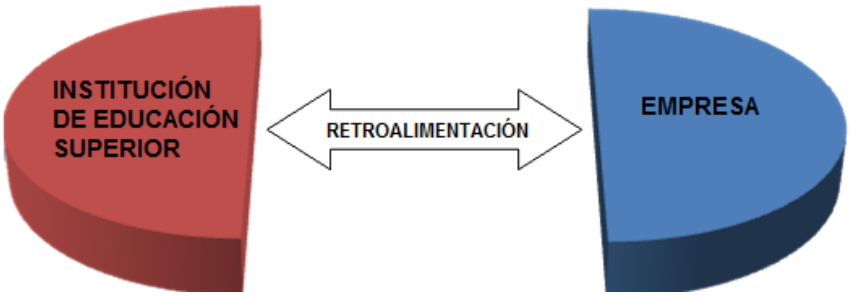
Engineering as an academic discipline is not immune to the changes that the twenty-first century brought, promoting diversification in their areas of work and study to respond to technological development and its rapid development. As disruptive technologies evolve precipitously to bring to market innovative products and to satisfy the demand for a consumer market that increases both in number and demand. One answer is the creation of the Engineering Business Management directly linked to production processes in individuals who execute, with the direct antecedent to administrative careers and their various offshoots in the world of business.

Thus we say: "The Engineer in Business Management encourages and promotes organizational change in institutions, create new businesses, apply the knowledge acquired in sociology, labor law, advertising, processes, quality, marketing and international trade among others, to design processes more efficient in areas related to sales, purchasing, production, planning and bonding, group management roles and work teams "(DGEST, 2010) areas.

One of the great difficulties of introducing a new career: it is as possible to offer it to students and also implies that chances of success for the student at the end of his career on finding a job that fits your needs. In this sense the role of research is critical to achieving this goal. Masses Arango said that so far in the twenty-first century college tuition is distributed approximately two-thirds in public institutions and private institutions in a third. Public institutions are those that have greater historical antiquity but within its features do not contemplate the possibility (at least until recently) that their teachers made a research.

Among the causes of this lack of interest: both are few economic incentives as academics to conduct research, lack of experience in research by teachers and often the focus in which students learn to meet certain procedures and rarely to pose real problems and alternative solutions thus giving a better sense of what they learned (Masses Arango, 4-5.2002 pp). This has not meant that efforts to link institutions of higher education with the productive sectors without them escaping the Technological Institutes, supported by the Science and Technology Act of the State of Mexico are cut: II. Promote the development and linkage of science and technological innovation to updating and improving the quality of education for science and technology are a key element in the economic, social and cultural development of society mexiquense ... (L . of Science and Technology, p8.2005)

According to the above some teachers Toluca Institute of Technology and students of the Engineering Business Management have doomed us to carry out a project aimed at engaging a communicative link with various production companies Toluca Valley whose function is to provide feedback the academy of the institute so that you can suggest changes to the elements of the plans and programs of this race for a permanent update, also prepare students that discipline with prior contact to the completion of their studies so that they are prepared to face the labor market and offer companies best prepared candidate to fill the requirements that today's world demands.



Several studies and research aimed at to relate to higher education institutions (in this case the Technological Institutes) with established companies in the country and ultimately to Mexican society. This relationship generally seen as links with the productive sector is one of the major focus of research in the field of academic and technological educational institutions. As Zubieta and Jimenez said:

"Bonding is also a process that involves handling solidarity and human values that are distorted when the state and businesses see the link only as an imposition to universities designed to achieve the goals in plans and curricula attitudes that understand the social implications of the concept linking. In this sense, we can say that in Mexico there is currently a lack of political linkage between national production and higher education, research and technological development. "(Zubieta and Jimenez, 2003). "However few of them seek to establish a permanent communicative system between institutions of higher education and productive both the public and private sectors in order to provide feedback for curriculum and continuous improvement. Our intention is to develop a feedback model that allows to perform this task permanent and functional.

As we have previously noted the introduction of a new career as is the Engineering Management presents new challenges, which coping involve creativity and implementation of a model that allows us to interrelate the various contents of each of the materials that make up the program in Engineering Management with the needs and demands of both public and private productive sector; because there the graduate find your field and therefore is an important factor that academic institutions provide a comprehensive and current at the same view, so you can compete in the best way in the world of work and contribute in the most effective way to the benefits of development are present at all levels of society with a proposal for an equitable distribution and increasingly participatory society and the world around him, in favor of a development.

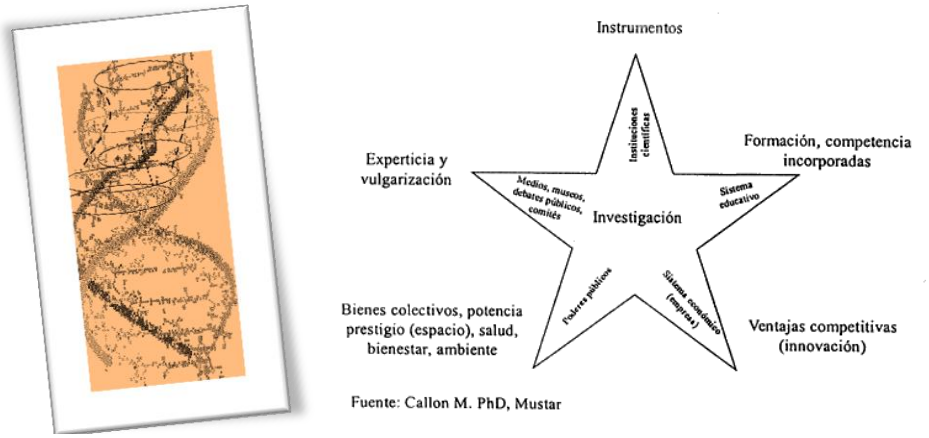
The proposal of any feedback model between academia and the productive sector must face academic institutions in general, are often insensitive to innovation and patterns of society thus losing the opportunity to be the first source to be a trigger in future economic and social development in the area where it is located. The interaction between universities and public and private sector should be the source and origin of both scientific and technological development (and the equal and fair development) on a regional, national and local context.

We start from the idea that the link between industry and academia produce a multivalent knowledge, that that is the sharing of pedagogical vision with the production, which unlike

the univalent (one that only provides one of these sides) transforms knowledge and its application in the context of development and innovation. Innovation, we will agree, generates changes in the physical and social environment that inevitably involve issues of sustainability and equality, so there is a growing need to address the needs of future generations scientific and technologically in a globalized world; but at the same time promote a more just and balanced development primarily in emerging nations (Etzkowitz and Chuyanan, pp. 79-81).

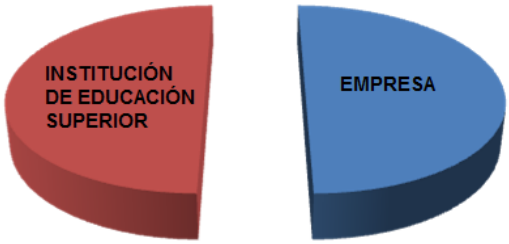
Any model that involves an interaction between academic and industrial or public spheres mark the trend of more equitable development and innovation from tip to involve aspects of knowledge, values and constant innovation with production of goods and services they landed in society .

In support of our proposed feedback we rely on two theories applied to the development of research; "The Triple Helix" based on a genetic model and "The Compass Rose" taking as a model of marine source orientation. (The following figure shows both models).

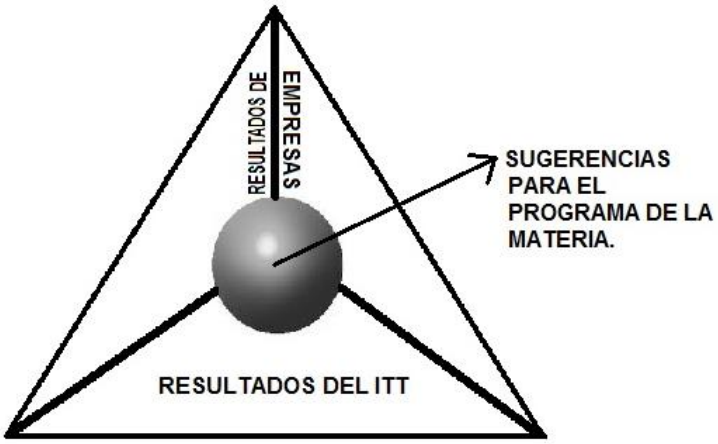


Fuente: Callon M. PhD, Mustar

This enables us to generate from a model where academics divided into two professors and students to profile their interests, opinions and experience in managing the programmatic elements of the subjects comprising the curriculum of their specialty. On the other hand, the second factor will be the productive sector through its development and production needs allows us to compare the data obtained from the school sector and reach the final factor is the synthesis of both points of view on a product that will be a suggestion for programmers and specialty teachers. So we have two major parts.



The goal is to produce a multi-knowledge (ie the relationship Technological Institute of Toluca and public and private companies) for which it is unavoidable to find fields that allow us to take the feedback between both sectors continuously and effectively with a view to achieve a virtuous triangle where each content Engineering program in Business Management is subject to both views to be continuously developed and achieve the function you want, this is to say give the student technological Toluca this career right for your job performance tools at the end of his career, while on the other hand provide companies of trained personnel and can deal with situations and challenges every day both public and private sectors face; while promoting a sustained development in professional ethical values to ensure that the benefits of progress are equitable in the various social strata.



To achieve these criteria relate we needed (to our opinion) three activities that allow us to give an idea and a proposal to link the academic environment with companies in the Valley of Toluca. The first is the ability to place students in companies race via professional residences; to achieve their personal experience by allowing us to formulate conclusions

settings. This period has been placed three students placed in three different companies (large, medium and small) seeking information on the following subjects: FOUNDATIONS OF RESEARCH (first half of the race), SOCIAL DYNAMICS (second half) and MANAGEMENT SKILLS I (fourth semester).

Another approach is the development of ongoing surveys, through the Internet, key enterprises, students and teachers of the race the same to build a communication network that allows us to obtain continuous information flow permanently people.

It has recently concluded a first approach to career students in three different sub-units in the program and in three different subjects outlined above: Foundations of Research, Social Dynamics and Skills I. The questions are related to the following proposal employability skills IGE (based on proposals by the Faculty of Business Administration and Accounting from the University of the State of Mexico):

1. SENSE OF SOCIAL RESPONSIBILITY (ENVIRONMENT, AND EQUAL desrrolló SUSTETENTABLE).
2. INNOVATION (RESISTANCE TO CHANGE, ORIGINALITY)
3. LEADERSHIP.
4.-CAPACITY ANALYSIS AND REFLECTION (decision making, conflict resolution, ect).
5. SKILLS TICS (INFORMATICAS TOOLS, PLATFORMS, ECT)
6. CONTINUOUS IMPROVEMENT (TRAINING, UPDATE)
7.- ETHICS (RESPONSIBILITY, HONESTY, RESPECT).
8.- LIABILITY WITH TECHNOLOGICAL CHANGE (SOCIAL, CULTURAL, ECONOMIC).

The questions were as follows:

1.-On a scale of 1-10 How important is this sub?
2.-Do you think that this sub reinforces your sense of social responsibility (towards others, nature, egalitarian development, etc.)?
3.- Orienta your innovative spirit this sub?

What Motivates 4.- be leader?

5.- Increase your ability in decision-making, conflict resolution, communication, discussion, etc.?

6.- encourages the use of IT tools?

7.- Support your self-improvement and continuous improvement?

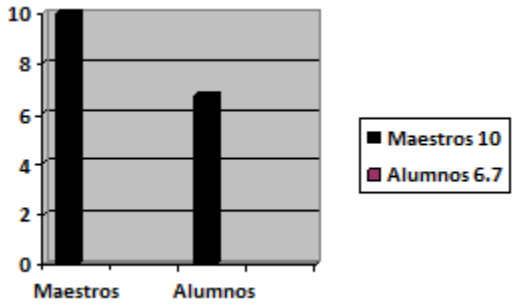
8.- The subtheme relates to ethical values?

In your opinion 9.- subtheme helps raise awareness of the need for equitable development?

Here are some examples of the results compared between students and teachers, a subtopic of matter: MANAGEMENT SKILLS fourth semester of studies. I. Unit Title subtheme: "Negotiating in different social contexts." Where he met 100% of the teachers who teach the subject, and 70% of students that took the course that semester.

From question number one was the result: teachers considered this sub-item is of greater importance and students on the contrary, the following figure illustrates the results:

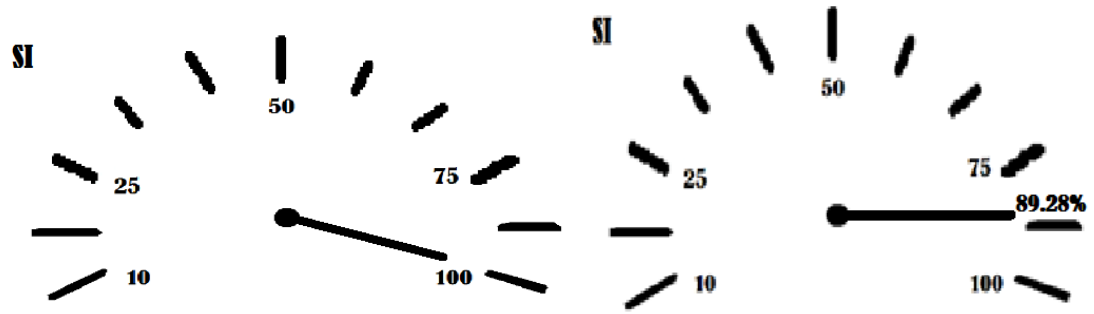
1.-On a scale of 1-10 How important is this sub-item and why?



As shown in the figure above there is a relative difference of 3 points on the importance of this sub between faculty who teaches the subject and students.

The following example of the same material and the same sub allows us to see that both groups reached a similar conclusion:

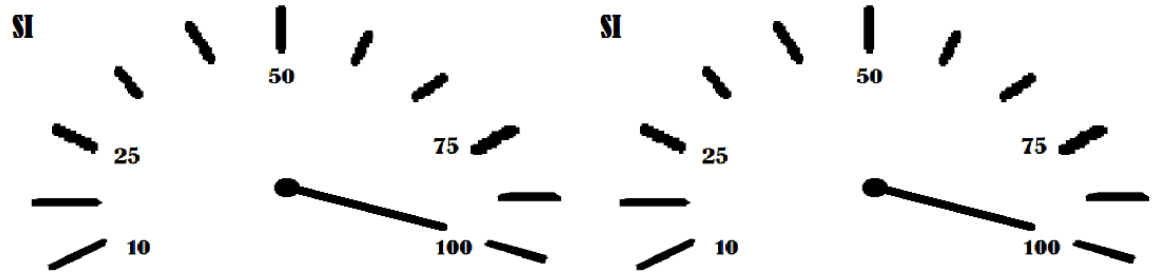
2.-Do you think that this sub reinforces your sense of social responsibility (towards others, nature, egalitarian development, etc.)?



TEACHERS **STUDENTS**

The third example shows equality in opinions about the following topic:

4.- Does it motivate you to be a leader?



TEACHERS **STUDENTS**

As will be seen through their examples the result is similar in all questions. For question number one is about the importance of sub-item in the overall context of matter might suggest programmers to emphasize the importance of this sub-item to students through exercises and reflections thereof. Conduct this survey with missing the other important factor of communication model: the productive sector.

However, the total value we place on this project to the results of a survey via questionnaire is minimal compared to the other techniques to be used; interview and direct experience the following table shows a value proposition to each of these proposed techniques:

QUESTIONNAIRE 10%
INTERVIEW 40%
EXPERIENCE 50%

Conclusions

You end our intervention noted that the feedback between production and business sector with the Toluca Institute of Technology should be ongoing and sustained so that it benefits both the graduate student of the institution as well as companies in the future so get hired way to impact the future development of toluqueña community. Thank you very much.

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