# Identificación de variables clave del perfil docente en ciencias políticas

Identification of key variables of the teaching profile in political science

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# Resumen

Durante muchos años se ha intentado subsanar las graves deficiencias de la educación respecto a las competencias de los docentes, dichas competencias son hoy en día marcadas por las tendencias educativas globales; en Ciencias Políticas no se tienen identificadas las competencias de los docentes específicamente en dicha licenciatura y sobre todo en estudios de prospectiva, es por ello, que el objetivo de la presente investigación es identificar las variables clave que representen las competencias docentes para la formación de un perfil de la licenciatura de Ciencias Políticas, mediante el sistema de análisis prospectivo utilizando el sistema MICMAC (Matriz de Impactos Cruzados-Multiplicación Aplicada a una Clasificación), las variables resultantes identificadas en el estudio fueron, habilidades metodológicas e investigativas y el uso de modelos de las Ciencias Políticas.

Revista Iberoamericana para la Investigación y el Desarrollo Educativo ISSN 2007 - 7467

Palabras clave: Perfil Docente, Competencias, Metodología Multicriterio AHP, Análisis

Estructural MICMAC.

Abstract

For many years, attempts have been made to correct the serious deficiencies of

education in relation to the competences of teachers; these competences are today

marked by global educational trends; In Political Science, teachers' competences are not

specifically identified in this degree, and especially in prospective studies, it is for this

reason that the objective of this research is to identify the key variables that represent

the teaching competences for the formation of a Profile of the Political Sciences degree,

through the prospective analysis system using the MICMAC system (Matrix of Cross-

Impacts-Multiplication Applied to a Classification), the resulting variables identified in

the study were methodological and investigative skills and the use of models of political

science.

Key words: Teaching Profile, Competences, Multicriteria AHP Methodology,

Structural Analysis MICMAC.

Fecha recepción: Agosto 2012

Fecha aceptación: Diciembre 2012

Introduction

In the present study, an approximation will be made of the state of the situation of the

competences of university teachers and the development that these competences have

had; Then the study will be explained to obtain the variables through the methodology

of multicriteria, AHP of Saaty; Once these variables are identified, prospective analysis

research will be carried out through the MICMAC system, in which the most significant

key variables will be identified, where academic managers will have to pay special

attention to the moment of planning in the development of teaching skills.

The importance of identifying the most significant competences is due to the great

social, cultural and economic changes that have impacted on the abilities that the

individuals need to adapt to the social context, reason why the people have had to face

new challenges that the system Has created them. In education, teachers have had to develop knowledge and skills to support students in a world with greater demands and new values to measure the use and development of knowledge. The new challenges present areas of opportunity for teachers, since their teacher training should allow them to be integral people whose objective in their area of expertise is to develop competences such as knowledge, skills and values in students that demand the new social context.

The so-called teacher competences are considered as a set of skills associated with operations or performances that do not depend strictly on objective and subjective conditions, but rather on the functionality and efficiency that must occur in teaching-learning practices. For this reason, it is relatively easy to pose competences outside the principles of communication that constitute a pedagogical practice (Díaz, 2005 in ANUIES, 2009).

The competencies of future graduates are in a way the result of what teachers do in the classroom; It is therefore necessary to strengthen the skills of the teaching profile to improve the skills of future graduates.

If the competences of the graduates should be developed according to the increasing complexity of the professional performance, due to the continuous change of the occupational roles and of the different quantitative and qualitative changes of the working environment, the teaching competences must be modified so that the teachers are able to Being, knowing and doing, and developing creatively, innovating and producing new explanations, interpretations and arguments (ANUIES, 2009).

According to the above arguments, the objective of the present study is to identify the key variables, which are represented in the competences for the formation of the teaching profile of the Political Science degree, through the MICMAC (Cross-Impact Matrix-Multiplication Matrix Applied to a Classification); It is through this identification that academic managers will be able to carry out the planning according to which the competences to be treated should be, that is why first a question will be given of the teaching competences of university professors, then the Methodology of the process of obtaining variables (teachers' competences), through the methodology of multicriteria, AHP of Saaty, and finally will explain the study that led to the

identification of the key variables using a prospective method with the MICMAC system.

# CONCEPTUAL REVIEW, GENERAL ASPECTS.

Society demands greater flexibility and ability to give useful responses to learning and the continuous development of people. The new demands of today's society make the exchange of information more open and the generation of knowledge through shared efforts. Reality demands effective responses to the educational institution, which must be renewed and adapted to these new demands.

From the last century it was stated that the society of the future should be a society of knowledge and that, in this society, education and training would be, more than ever, the main axes that guided it. Through education and training, acquired within the educational system, within the enterprise, and even within informal spaces of socialization, individuals would own their destiny and guarantee their development. In this sense, the knowledge society is defined as those societies that understands that the quality of education has the power to improve reality and that the quality of education is achieved through the strengthening of the link of its education system with the real problem, ie, Knowledge societies are those societies that manage to understand that the development plans of any country depend on citizens aware of their role as social actors capable of improving their environments, and who can only be the result of the exchange of teaching-learning binomial. Education is the engine of innovation and innovation is a guarantee of the improvement of society. Universities through the generation of knowledge are then those that guarantee the improvement of society.

UNESCO believes that the building of knowledge societies is the one that "opens the way to the humanization of the globalization process", with an approach based on "human development" and "autonomy", freedom of expression, which should Enabling a better implementation of universal rights and fundamental freedoms (Mora, 2006).

# TUNING EDUCATIONAL STRUCTURES PROJECT IN EUROPE (2000-2004)

The Tuning Project, as a first phase began in 2000 and began to be developed within the broad context of higher education, which has been imposed as a result of the accelerating pace of change in society. The project is part of the Sorbonne-Bologna-Prague-Berlin process, through which politicians aspire to create an area of higher education integrated in Europe in the background of a European economic area. The compatibility, comparability and competitiveness of higher education has emerged from the needs of students, whose progressive mobility requires reliable and objective information on the offer of educational programs. In addition, future employers will demand reliable information about what a training or a specific title represents in practice. A European social and economic area has to go hand in hand with higher education (González and Wagenaar, 2003).

On the other hand, the Tuning Project promotes the development of curricula in higher education according to the agreements of the Bologna Declaration. This initiative selects the word "competence" which can best represent the new objectives of the European Union. In addition to being developed by the Universities of Deusto and Groningen, with the participation of 70 universities and the support of the European Commission. This project opens the debate on European convergence of qualifications, where competences describe what students should be able to do at the end of a program of studies (Muñoz, 2008).

### TRAINING IN TEACHING COMPETENCES

The subject of competencies is a concept recently adopted by the field of education, and in this area the competences seek to establish the objectives pursued by education in the formation of an individual. However, talking about skills in individuals leads us to two roles that must be differentiated but united as part of the same process, the role of the student and the role of the teacher.

The objectives of vocational training should be to develop general competences with a certain probability of being durable and to provide a suitable basis for continuing training. These key competencies would be those that allow:

- Adapt the teacher to Information and Communication Technologies,
- Acquire easily new skills,
- They make it possible to adapt to the teacher in new organizational contexts and
- Those that facilitate mobility in the education market, as well as develop their own professional careers (Mayo, 2002).

With the above it can be deduced that characteristics like knowledge in information and communication technologies will be important that they are developed by the teachers, on the other hand a flexible attitude towards the changes will be important to be able to adapt to them, but also to propitiate them in the living room Of class if they are needed, but above all to be aware that the changes will follow and they must develop that vision that helps them to anticipate them.

Some other challenges of education are: practice-centered learning, establishing and maintaining lasting interpersonal relationships, clear perception of affect, explanation of assumptions and confrontation, teamwork, conversion Everyday action as a source of knowledge and rational control of their social behavior. All these challenges must be addressed through teaching-learning strategies that result in the competencies of students.

### RESEARCH PROPOSALS

The knowledge age has imposed diverse challenges on individuals, the value that knowledge currently has is one of the reasons that motivate research within the educational field. It has brought about such accelerated changes, so it is necessary that individuals adapt to the new situations that arise. The flexibility to count for it and the development of competences will be the basis for adjusting the personal and professional tools to face these challenges.

One of the actions to be taken will be the training of teachers in higher education in Political Science and Public Administration, the development of skills, attitudes and values aimed at maximizing potentialities.

Based on the results of the research, the following recommendations are suggested:

- Public and / or private institutions of higher education should agree to have a
  profile of teaching competencies in the area of Political Science and Public
  Administration in educational programs and in institutional regulations.
- Higher Education Institutions should have a common basic structure on the competencies of the university teaching profile in the area of Political Science and Public Administration.
- The competencies of the teaching profile should be an important part of the design of the educational programs.

From this research it is proposed a catalog of competences of the teaching profile (income or permanence) as a tool for use in later research, where it is applied to know if the teacher complies with or does not comply with said competences.

It is hoped that if the teacher is prepared in these competences, he will be able to develop skills, attitudes and values in his students and that they may have a more active role in their own learning process, creating in them critical thinking and flexibility To face the changes to be individuals with high capacities, with abilities in the resolution of problems and that can create their knowledge in agreement with the reality.

Therefore, the present research aims to develop teaching skills through the Saaty system for the degree in Political Science, which will be explained in the following sections.

# OBTAINING VARIABLES AND ELABORATING CATEGORIES THROUGH THE AHP METHOD

Ten experts are selected for the elaboration of the categories of the teaching profile, which are those that validate the proficient teaching profile with a multi-criterion methodology, Saaty AHP, which has been used for the development and evaluation of competences (Chen, Chen, Lee, You, & Jao, 2011: Cantón, Pérez, & Vázquez, 2008).

The methodology was carried out by a leader with an assistant and an observer. Sessions lasted: the first 3 and a half hours and the second 4 hours.

They were given the preliminary catalog of teaching competencies divided by categories.

The experts evaluate individually, noting the degree of mastery required for each subcompetence indicator. This ensures that competencies, categories and subcompetencies will be relevant and congruent. And no category or sub-competences were eliminated, further detailed reference will be made in the results section of the descriptive statistics of this questionnaire.

The structure and hierarchical relationships by categories were determined as follows:

- Subcommittees
- Categories
- Competencies

Each of the weights, the consistency ratios and the reference index of the subcompetencies, categories and competences were obtained and reviewed. When verifying their congruence and consistency of these indicators, it is possible to comment that the profile of a teacher by competences in the area of political science is defined. Additionally a survey was applied to the participants to know the level of satisfaction of the hierarchical analytical process (AHP) applied.

Subsequently a questionnaire was designed to select the expert teachers, who validate the catalog of competencies of the teaching profile. These teachers were selected according to pre-established criteria such as: 10-year minimum professional experience, minimum 10-year teaching experience, professional distinctions and awards, teacher distinctions and recognition, full-time teachers, professors recognized by the PROMEP program, At least one funded research project, having indexed articles, published books, participation in congresses, participation in forums, colloquia, symposiums, having performance evaluations above 90, punctuality and attendance in their classes and teachers that are Recognized by the program of the National System of Researchers of CONACYT (SNI).

These questionnaires were applied to a group of 34 full-time teachers of the Unit, and 10 teachers were selected, 9 of whom attended the application of the AHP methodology. These 10 teachers were also selected according to an ideal situation defined by Saaty (2008): small group of participants, well informed on the subject, highly motivated, patient and agree and in congruence with the competence-based approach. They were also completely willing to participate in a rigorous structured process, the outcome of which will determine in part their future teaching activities, regardless of differences of opinion that may have arisen during the process. Ideally the group should be patient enough to reconsider the comparisons, through interaction and differences of opinion should be debated until a certain agreement is reached or at least the range of the differences is very narrow, according to Saaty (2008).

The final process after the experts debated their views regarding the teaching competences, a consensus was established and as a last step the data obtained were entered into the software, which will be explained in the following paragraphs.

# DESCRIPTION OF THE SOFTWARE USED FOR THE APPLICATION OF THE AHP.

We used a software developed in Visual Basic by Rositas, J. (2011) with interfaces and windows in Spanish. This software guides the process of applying the AHP method in a working group, being frankly friendly and easy to use.

The method, despite being rigorously based on highly complex theories, axioms and mathematical theorems, with the use of software does not require the mastery of these fundamentals, for the application of AHP, reaching efficient conclusions in decision making.

The principles of disaggregation, preponderance judgments about pairs of elements and the synthesis of priorities, as enunciated by Saaty (2006), are incorporated into the software.

Tabla 1: Competencias para la Formación de un Perfil Docente de las Ciencias Políticas y Administración Pública por categoría

CATEGORÍA: PRELIMINAR	CATEGORÍA: FINAL					
Categoría A: Conocimiento de las Ciencias	Categoría A: Conocimiento de las Ciencias					
Políticas y la Administración Pública	Políticas y la Administración Pública					
Categoría B: Uso de Modelos de las Ciencias	Categoría B: Habilidades Metodológicas e					
Políticas y de la Administración Pública	Investigativas					
Categoría C: Habilidades y Conocimientos	Categoría C: Uso de Modelos de las Ciencias					
Económico-Jurídicas	Políticas y de la Administración Pública					
Categoría D: Habilidades Metodológicas e	Categoría D: Habilidades y Conocimientos					
Investigativas	Económico-Jurídicas					
Categoría E: Competencias de práctica docente	Categoría E: Competencias de práctica docente					
Categoría F: Habilidades Personales	Categoría F: Habilidades Personales					
Categoría G: Comportamientos Profesionales,	Categoría G: Comportamientos Profesionales,					
Sociales y Éticos	Sociales y Éticos					

Fuente: Elaboración propia.

After the hierarchical analysis process (AHP), the preliminary categories were modified in order, resulting as presented in table number 1.

# METHODOLOGY PROSPECTIVE ANALYSIS THROUGH MICMAC RESEARCH DESIGN

The prospective analysis starts from the identification of variables, which were explained in the previous paragraphs, once the variables have been studied, the research is carried out using the MICMAC system.

The research was developed through the prospective structural analysis to establish the reflection on the future of a given system, with the purpose of identifying the main influencers influential variables and dependent of the study.

In this study we used prospective analysis through MICMAC. The acronym MICMAC comes from the words: Matrix of Cross Impacts Multiplication Applied to a Classification, method elaborated by M. Godet in collaboration with J.C. Duperrin (Godet, 2007: 65).

Structural analysis is an instrument designed to link a set of elements, which represents a system as a matrix, where all its components are related, as well as the variables essential for the evolution of the same and could be defined as a Collective reflection relating different elements of a system with the perspective of provoking change in the future and is based on the qualitative judgment of actors and / or experts who are part of a system, as shown in figure 1 (Godet, 2007).

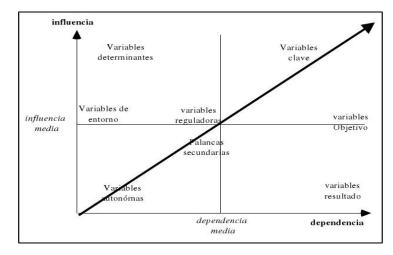


Figura 1. Plano de Influencia y Dependencia

Fuente: Laboratorio de Investigación en Prospectiva y Estrategia (LIPS)

The structural analysis was developed through the realization of three sequential stages:

# Step 1: Inventory of system variables or factors.

In the first stage the scope of the study system was defined, an inventory of the variables was then made through interviews with experts and / or actors that are part of the system and as a result a list of categorized and described variables was elaborated with The purpose of formalizing the meaning of each variable within the group. It is important to mention that this stage constitutes for the group the opportunity to identify the relations of the variables, as well as to have common references to represent and understand the system.

# Stage 2: Description of the relationships between variables and / or factors.

In the second stage the variables were linked in a Structural Matrix, being distributed in rows and columns corresponding to the variables previously classified. Later, the structural matrix is applied in order to investigate the direct influences of the system, by means of evaluating the intensity among the variables through qualitative evaluations such as: Strong (3), Moderate (2), Weak (1), Null (0) or potential (P). The influence of each of the variables will be systematically evaluated.

# Stage 3: Identification of key variables and key system factors.

In the last stage, the results through MICMAC are represented through graphs to improve the understanding of the system, in addition to transmitting the structure of the network of influences and their interrelationships. The interpretation of the Influence and Dependency Plan allows us to better analyze the system according to whether they are the driving or dependent variables. That is, for any variable its strategic value would be determined by the sum of its motor value and its dependence value (Godet, 2007).

The location of the variables in the plane gives us a clearer idea of the operation of the system and its possible evolution, besides presenting areas in which it is advisable to intervene in order to influence the transformation of the system.

### Variables

Based on the theoretical references and expert assessment, previously identified through a multi-criterion methodological study, Saaty's AHP defined the study variables, Table 2 shows the capture in the MIC MAC software of the variables study.

Tabla 2. Lista de variables de la Investigación prospectiva

Ν°	LONG LABEL	SHORT
		LABEL
1	Conocimiento de las Ciencias Políticas y la Administración Pública	Concipolad
2	Uso de Modelos de las Ciencias Políticas y la Administración Pública	Usmodcpyap
3	Habilidades y conocimientos económicos y jurídicos	Habconecoj
4	Habilidades metodológicas e investigativas	Habmeteinv
5	Competencias de práctica docente	Compraedoc
6	Habilidades personales	Habpers
7	Comportamientos profesionales, sociales y éticos	Comprofsye

Fuente: Elaboración propia en software LIPSOR-EPITA-MICMAC

# Participants or sample.

The type of sample is non-probabilistic, because 10 experts were selected where the instrument was applied in a group and face-to-face manner.

The criteria for the selection of experts are as follows:

- Have experience in the areas of Political Science preferably with a Doctorate degree.
- Full-time teachers and doctors.
- Both genders.
- Average age fluctuated between 35 and 55 years of age.
- Have publications in magazines, congresses and / or books.

# **Instrument Format**

The format for obtaining the data was carried out by means of a matrix structure like the one that is presented in the following table.

Matriz Estructural por Rubros Variables de Calidad del Servicio 1.- Conocimiento de la Ciencias Políticas y la Administración Pública. 2.- Uso de Modelos de las Ciencias Políticas y de la Administración Pública. 3.- Habilidades y Conocimientos Económico-Jurídicas. 4.- Habilidades Metodológicas e Investigativas. 5.- Competencias de práctica docente. 6.- Habilidades Personales. 7.- Comportamientos Profesionales, Sociales y Éticos

Tabla 3: Formato para la aplicación de la Matriz Estructural.

Clasificación para llenado:

F= Fuerte (3)
M= Moderado (2)
D= Débil (1)
N= Nulo (0)
P= Potencia (3\*)

Fuente: Elaboración propio.

#### Results

Ten questionnaires were applied to different experts in the Political Science area, with the information collected, the opinion was synthesized in a single value for each cell of the matrix. In the study it was decided to choose the fashion value, because the MIC-MAC software only allows to use integer values and when using the average would have to decide on rounding, which would end up altering the value of the statistic.

The data with the fashion value were as follows as shown in figure 2.

Figura 2: Matriz estructural de variables

	1 : concipolad	2 : usmodcpyap	3 : habconecoj	4 : habmeteinv	5 : compracdoc	6 : habpers	7 : comprofsye	01
1:concipolad	0	3	2	3	2	2	2	LIPSOR-EPITA-MICMAC
2:usmodcpyap	3	0	3	3	3	2	3	[ 유
3:habconecoj	3	2	0	2	2	2	3	翌
4 : habmeteinv	3	3	2	0	3	3	3	]
5:compracdoc	2	3	2	3	0	2	3	] [
6: habpers	1	2	2	3	3	0	3	Ĭ₩
7:comprofsye	3	3	1	2	თ	3	0	5

Fuente: Elaboración propia en software LIPSOR-EPITA-MICMAC.

In Figure 3 we can see the different types of influence categories and dependence according to the MIC MAC program. The following section describes in detail the analysis of research results according to the categories defined by the method.

Direct influence/dependence map habmeteinv usmodcpyap **Variables Variables** determinante Clave **Variables Variables Variables** Reguladoras **Objetivo** de entorno Palanca Secundaria comprofs **Variables Variables** autónomas Resultado habpers concipolad

Figura 3. Plano de Influencia y Dependencia de Estudio Directas

Fuente: Elaboración propia en software LIPSOR-EPITA-MICMAC.

### **ANALYSIS OF RESULTS**

Next, the characteristics of each of the variables that the MICMAC system will be described will be described and the variables identified in each plane will be mentioned.

Key Variables. They are the variables that are in the upper right zone of the plane of influence and dependency, also named variables system challenge; Are very motor and very dependent, disrupt the normal operation of the system. These variables are by nature factors of system instability, since any action that is applied on them will impact the system, besides being the variables that keep the system lubricated.

- Methodological and investigative skills (habmeteinv)
- Use of Models of Political Sciences and Public Administrationa (usmodcpyap)

Result Variables. They are variables that are characterized by their high dependence and low motor; Are in the lower right of the plane of influence and dependence, and are usually, together with the objective variables, descriptive indicators of the evolution of the system. These are variables that can not be addressed from the front, but through those that depend on the system. These variables require close monitoring and monitoring to verify the effectiveness of the system, in addition to being considered as the output variables of the system.

- Teaching practice competences (doc purchase)
- Knowledge of Political Science and Public Administration (concipolad)
- Professional, social and ethical behavior (comprofsye)

Autonomous Variables. They are variables of low motor and influence and little dependent, correspond to past or inertial tendencies of the system or are disconnected from it. In the plane of influence and dependence they are in the zone inferior left. It seems that they are not a determining factor for the future of the system. It is suggested to give more value to these variables.

- Personal skills (habpers)
- Economic and legal skills and knowledge (habconecoj)
- Professional, social and ethical behavior (comprofsye)
- Teaching practice competences (compracdoc)

Another of the results that we can establish is the graph that shows the system (Figure 4) as it is the plane of direct influence; This plane helps us to determine which are the variables that exert an influence with respect to the other, so that to analyze a treatment of the competences that must be attended we must start with those that initiate the influence.

As we can see in figure 4, the variable Professional, social and ethical behaviors (comprofsye), influences reciprocal with respect to Personal skills (habpers) and in the same way Professional, social and ethical behaviors, influences reciprocal with Competences of Teaching practice (Compracdoc), this identification gives the academic director the possibility of knowing which are the competences that must be monitored on a constant basis, due to the strong influence they provoke each other.

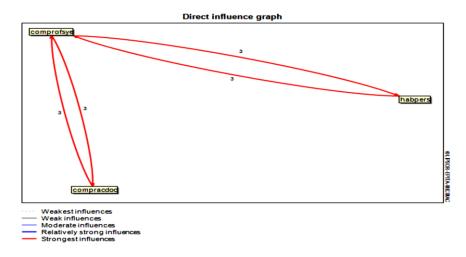


Figura 4. Plano de Influencias Directas

Fuente: Elaboración propia en software LIPSOR-EPITA-MICMAC.

We can determine from this influence graph that the variable Professional, social and ethical behavior is a relevant competence in who are the facilitators and trainers of the future professionals of political science and public administration, since it directly impacts two operational variables in The educational space: the competencies of teaching practice and the competence personal skills.

The variable professional, social and ethical behavior is impacted reciprocally with the variable competences of teaching practice, which throws light on the duty to be the relationship that must be between students and teachers. Teachers who adhere to the professional, social and ethical codes allow to generate confidence before the students.

The value of trust allows students to be guided in a dynamic way, as they commit to the activities designed by the teacher, converting the educational space into a virtuous circle, making schools proactive learning spaces.

The second level of influence that has the variable professional, social and ethical behaviors is with the variable personal skills; The relation of these variables guarantees the value of the congruence that a professional of the educational field must have. The teacher is one of the most important elements in the educational fact, so that congruence is a factor that motivates to be a model of student behavior. Education is a human action that requires a basic premise, can not communicate what is lacking, so the congruence between what is said and what is done in school, strengthens the human condition of coexistence Healthy and purposeful.

The strong influence of these three variables is worthy of reflection, since in the evaluation models of teachers are not indicators including these three variables. Teachers are generally evaluated on values such as attendance, punctuality and the ability to share knowledge, but there is no element of congruence between what happens between teachers and students.

### CONCLUSIONS AND RECOMMENDATIONS

The main objective of this study is to identify the key variables that have a higher incidence in the rest of the variables, so that it can be argued that methodological and investigative skills (habmeteinv) and the Use of Political Science Models (usmodcp) are the Two competences that must be evaluated with constancy.

With respect to the first of the key variables, it is important to point out the impact that this competition has for the professional development of a student graduated from the area of political science and public administration, since they are responsible for transforming the institutional life of the State. The generation of knowledge gives way to innovation and innovation in the institutional system of the State and the social structure, in general provides social welfare. Political scientists and civil servants need this competence as a vital requirement to be transformers of the State for the benefit of the common good.

The methodological and investigative skills in the professionals of this area of knowledge guarantee the presence of modern institutions that respond to the citizen demands; If we understand that social change is dynamic, research is the necessary premise to generate the change of public institutions ie the generation of researchers prevents institutional statism.

This competence in the graduates of this area of study would improve the legitimacy of the State institutions, since it would help to generate innovation in the institutions with which the State provides its services to society.

Focused research would help the university to fulfill one of its values, that of social responsibility, to fulfill its role as the crucible of rational decision making on public affairs.

With respect to the second key variable: the Use of Models of Political Sciences, allows to give academic rigor to the proposals that arise from the professionals in the solution of the social problems. Having this competence strengthens university commitment to educational quality, theory serves to explain the phenomena that arise from social

reality, so justify the proposed actions from academia in the conceptual framework ensures quality in the proposals of the Academics of political science and public administration.

Both competences are vital to take firm steps to the indicators that must meet the knowledge societies. It is the work of those who are involved in the educational field to determine through research processes the improvement of the important space of socialization.

The university is the engine of a society, the opportunities for improvement must be exercised with knowledge of the cause and not from the personal positions of decision makers, this is the relevance of this research that seeks to provide an improvement to the educational task.

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