



Miguel Ángel Medina-Romero

The Evaluation of Educational Quality in Public Higher Education Institutions in Mexico:

A Case Study with a
Quality Assurance and
Accountability Approach

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The evaluation of educational quality in public higher education institutions in Mexico: a case study with a quality assurance and accountability approach

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ABSTRACT

This document reports the results of the investigation *The Evaluation of Educational Quality in Public Higher Education Institutions in Mexico: A Case Study with a Quality Assurance and Accountability Approach*. The problems and the challenges in the Universidad Michoacana, as Mexico's public institutions of education superior, are many in the matter of educative quality. Consequently, the study's objective consists of determining the main factors that define the educative quality in the Faculty of Law and Social Sciences (FDyCS, by its acronym in Spanish) of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH). The basic foundations of the investigation lead to us towards a study of nonexperimental type; descriptive and correlational; systematic and empirical; cross-sectional; and with a mixed methodologic approach, because in him the methods agree qualitative and quantitative. In addition, the design of the investigation considered a participating, representative and reflective process of all the members of the examined academic center, using the techniques of documentary revision, questionnaire and interview.

The investigation's strategy was developed in three phases: an exploration of the present situation and consensus of the decisions related to the participation of the members of the FDyCS of the UMSNH in the investigation process; the second phase corresponded to the evaluation of the members of the FDyCS, in order to analyze the reality of the academic center on the part of the involved ones in the educative process; and the third stage consisted of the design of a plan of continuous improvement of the educative quality for the FDyCS. The methodology of the investigation evaluated the development of the education superior in the studied academic center, considering the participation of its members (administrative and withdrawn students, professors, managers and workers) to sustain to the processes of evaluation and diagnosis of the present state, like the strategies of proposed continuous improvement of the educative quality. In this way an experience of reflection on the educative process and improvement of the quality of the same occurred; and the materialization of a participating, representative and legitimized process, with an approach of perceived educative quality that considered the points of view of the actors involved in the educative process.

Therefore, teaching, investigation, administration or management and extension and diffusion were identified like the main factors of the educative quality of the sent to FDyCS de la UMSNH. About the present situation of FDyCS, our investigation determined: 1) the FDyCS has a teaching of high average quality in the opinion of the professors, students and withdrawn students; 2) the FDyCS has an investigation activity of high average quality in the opinion of professors and withdrawn students, and an investigation of low average quality in the opinion of the students; 3) the FDyCS has an administration or management of high average quality in the consideration of professors, students and withdrawn students; 4) the FDyCS has an activity of extension and diffusion of high average quality in the opinion of professors, students and withdrawn students; and 5) the quality of the educative services of the FDyCS, in general, was described like educative quality high average.

KEYWORDS: Academic evaluation, Educational quality, Higher Education Institutions, Quality Assurance, Accountability, Mexico.

INTRODUCTION

In the last decade of the 20th century and during the first years of the current one, relevant transformations have been registered worldwide, such as the globalization of the economy, the acceleration of technological changes, the intensification of competition, the progressive demands of the consumers, the speed in the creation and dissemination of knowledge, and the management of excellence in organizations. And these changes have by no means left higher education and its institutional complex on the sidelines.

Thus, the topic of *quality* is currently present in various higher education systems around the world and, recurrently, governments are interested in the remarkable role that quality management systems can play. And it is that quality has appeared in the current scenario as an adequate way out to face the changes that are presented; and, consequently, quality today constitutes an important benchmark and a motor to promote the processes of reforms, innovations and other transformations.

Concern for quality in higher education is not a new issue; however, the modifications that are taking place in the relations between the higher education institutions (HEI) -universities- and the public administrations that aim to improve the effectiveness of the institutions, has made this topic reappear recently in the world of education. superior. This way, there are currently movements on an international scale that advocate quality and institutional improvement, which seek to distinguish that quality is part of a professional academic commitment and seek to make available to decision makers in the educational field a field of action to achieve excellence.

In this sense, in the case of Mexico, Universities are currently immersed in an increasingly complex and dynamic environment. After the significant growth experienced by the HEI system in recent years, there are currently various problems and challenges to which a timely response must be given both from that system as a whole and from the perspective of each IES. The latter, *roughly*, are identified with an increase in the enrollment of Universities, the decrease in their financing, the search for alternative sources to carry out their tasks, the change in the relationship between Universities and the State, in addition to the concern of society and the government for the achievement of educational quality and for the investment made in the latter.

This way, after a stage that was characterized by the objectives of quantity and access, the Universities of Mexico are faced with the imperative of facing the new demands and social needs linked to the guarantee of the quality of educational services. For this reason, there is currently a concern in the mexican HEI to increase the quality of teaching, research and in general that of all the services it provides. The Universities, therefore, have progressively adopted measures of change and adaptation to the new environment and, grouped around the National Association of Universities and Institutions of Higher Education (ANUIES, by its acronym in Spanish), have established policies for their strengthening,

within which They mainly find the institutional evaluation processes introduced by the National Commission for the Evaluation of Higher Education (CONEVA, by its acronym in Spanish), and external evaluations have also been registered¹.

The interest in aspects related to quality in Universities has led to the opening of a line of study in which this work is framed. Although there are different approaches to the concept of quality in Universities, which are not exclusive but to a certain extent become complementary, it is assumed that there is a perspective, that of perceived quality, directly related to quality considered as *aptitude* for user satisfaction, which currently contributes decisively to the characterization of the concept.

The Universities provide educational services such as, basically, those of teaching and research; and it is precisely here where the greatest and most significant changes in contemporary society are currently taking place (Bricall, 2000: 9). It is noted that the educational quality of the HEI (university) can and must be evaluated based on what its users or clients (internal and external) think and, in general, all the actors, agents or participants involved in it and, therefore, in the same way as it is done in any other service. And it is believed that the adoption of a perceived quality approach, which considers the points of view of the actors involved in the educational process (teachers, students, graduates, managers, and administration and service personnel), constitutes a useful contribution to the study of educational quality in the context of Universities.

In short, in order to address the educational quality in the universities of Mexico, and particularly in the Public Higher Education Institutions (IESP, by its acronym in Spanish), based on the consideration of its determining factors and the institutional improvement that it entails, it is proposed in these spaces the present investigation called *The Evaluation of Educational Quality in Public Higher Education Institutions in Mexico: A Case Study with a Quality Assurance and Accountability Approach*.

The problems and challenges at UMSNH, as a Mexican IESP, are diverse in terms of educational quality. Consequently, this case study is aimed at determining what is the knowledge of educational quality in the Faculty of Law and Social Sciences (FDyCS, by its acronym in Spanish) of the UMSNH. Thus, the problem to be solved consists of determining which are the main factors that allow defining the situation of educational quality in the university career of Graduate in Law of the FDyCS of the UMSNH.

Investigating and identifying explanations that make it possible to know the situation of the FDyCS of the UMSNH in terms of quality of the educational service provided by this academic unit (evaluation), will offer the possibility of proposing alternatives that lead to reducing the didactic and administrative deficiencies that are directed by the path of quality improvement and that set the pattern to reach a level of greater consolidation of the academic unit specifically and, in a general way, in the IESP of reference. And with this, a

¹ In the case of Mexico, it is worth considering the external evaluation as the one carried out at the request of the Ministry of Public Education (SEP) by the Organization for Economic Cooperation and Development (OECD) in 1994.

higher level of user satisfaction (students and graduates) could be expected to the extent that these benefits could effectively be transferred to the latter.

In this sense, the general objective of the present investigation lies in distinguishing the main determining factors of the quality of the educational service provided in the school program of Law Degree of the FDyCS of the UMSNH, in order to define the current situation of the same.

The basic foundations of the research are aimed at the arrival of a non-experimental study; descriptive and correlational; systematic and empirical; cross; and whose methodological approach is mixed, because in it the qualitative and quantitative methods converge. In addition, the research design considered the materialization of a participatory, representative and reflective process of all the members of the academic unit of study, using the techniques of documentary review, questionnaire and interview.

As a strategy conceived in the research, it was proposed to develop in three phases or stages: the first stage consisted of an exploration of the current situation and consensus of the main decisions related to the participation of the members of the FDyCS of the UMSNH in the investigative process; The second stage corresponded to the evaluation itself by the members of the FDyCS, with the purpose of analyzing the reality of the academic unit by those involved in the educational process; and the third stage consisted of the design of a plan for the continuous improvement of the quality of the educational service for the FDyCS.

In order to solve the problem raised, fulfill the formulated purpose of the study and materialize the proposed stages of the research strategy, the content of this text has been organized into four parts, and each of them is presented with a division into chapters. In the first part of the work, the foundations of the research are established, that is, the problem to be addressed, the object of study to be understood and the elements of methodological orientation to be used are identified. This part is made up of: *Chapter 1. Statement of the Problem, Objectives and Assumption of the Investigation;* and *Chapter 2. Considerations regarding Higher Education Institutions in Mexico.*

In the first chapter the study problem is exposed; the objectives of the investigation; the justification elements of the work; the theoretical foundations of the factors that affect the object of study; the study variables; the case study; and the elements of the research methodology. The second chapter has been dedicated to the description of the universities of Mexico, through the review of their history, their mission, their different models, their functions and the benefits they generate. This review is carried out at three levels, namely: internationally, at the Latin American level and considering the case of Mexico. Likewise, the conceptual, normative and structural configuration of the higher education system in Mexico is addressed, locating and highlighting the IESP in it. Finally, a characterization of the educational system of Michoacán and its social, political and economic context is presented, a system in which the IES are inserted in Michoacán.

Through the second part of the study, a broad theoretical and referential framework

is articulated that accounts for the review of the literature carried out around the topic of reference to guide the research. This part is made up of: Chapter 3. *Quality in Higher Education Institutions*; and Chapter 4. *Conceptualization of the Fundamental Functions of Public Higher Education Institutions*.

In the third and fourth chapters, the conceptual and theoretical bases of quality in the educational field are described, specifically in higher education. Thus, a journey is made through the contributions made by different authors and from different perspectives around the concept of quality, considering that all of them are valuable, useful and, generally, complement each other. This review of the literature oriented the study towards the conception that quality constitutes a multidimensional concept. In addition, the experiences of educational quality that have been conceived and applied successfully in Universities, in the national and international contexts are described; and, finally, the substantive and adjective functions of the IESP are conceptualized, in the estimation of teaching, research, administration/management and extension and dissemination.

The third part of the investigation contains the methodological scheme under which the work in progress has been adhered to. Thus, this part has been constituted by: Chapter 5. *Methodological Approach and Field Research*; and Chapter 6. *Case Study: Data Processing, Analysis and Interpretation*. In the fifth chapter, the methodology used to carry out the research process is outlined, presenting the description and methodological strategies of each of the phases developed. This methodological scheme considers the establishment, in a consensual manner with the members of the university academic unit under study, the elements to be estimated in determining the quality of higher education taught in the UMSNH Law Degree academic program. In addition, a self-evaluation of the quality of the educational service is built in a consensual manner that makes possible the analysis of the FDyCS in terms of its substantive and procedural functions of teaching, scientific research, administration/management and extension and dissemination; and a self-assessment exercise of educational quality is implemented in the school system of the Law Degree in the FDyCS of the UMSNH, in order to generate a diagnosis of the current state of the concept in question in the academic unit of reference.

In the sixth chapter, a contextual approach to the study is carried out; processing, analysis and interpretation of data derived from field research; and the determination of the functional relationship between the dependent and independent variables of the study.

And from the fourth and last part of the analysis, the results and proposals derived from the materialization of the research are structured and presented. This part is sectioned in: Chapter 7. *Results of the Investigation*; and Chapter 8. *Proposals to Improve Educational Quality in Public Higher Education Institutions in Mexico and in the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo*.

In the seventh chapter an outline of the main findings obtained in the operation of the investigation is presented. This way, a self-evaluation report is integrated, a contrasting

exercise of the derived results, an analysis and interpretation of the latter, a quantitative test of the cardinal assumption of the study and a discussion of the results of the investigation are established. And the eighth section of the chapter is dedicated to configuring, based on the results of the self-evaluation, a plan to improve educational quality for the FDyCS of the UMSNH, as well as to establish a proposal for an evaluation scheme for IESPs in Mexico, with a focus on quality assurance and accountability.

The organization of the content ends with a section on the conclusions of the investigation, in which the intention is not to reiterate the descriptive and analytical aspects developed in the document, but, rather, to identify some elements that are considered relevant in the support. theoretical-methodological of the present exposition, as well as highlighting some useful recommendations and perspective considerations; and, also, a series of annexes is included, from which the methodological strategy implemented in this study is reported.

Finally, we would like to record our recognition and gratitude to the institutions that gave us their support and endorsement for carrying out the research reported in these spaces, in an exercise to disseminate it: the National Polytechnic Institute, through the Postgraduate Studies and Research Section of its Higher School of Commerce and Administration, Santo Tomás Unit; and the Universidad Michoacana de San Nicolás de Hidalgo, through its Faculty of Law and Social Sciences and the Coordination of Scientific Research.

FIRST PART.
RESEARCH FUNDAMENTALS

PROBLEM STATEMENT, OBJECTIVES AND ASSUMPTION OF THE INVESTIGATION

The intention of this chapter section called *Problem Statement, Research Objectives and Assumption*, lies in introducing current research through the exposure of the conventional elements suggested by methodologists to guide the research work. This way, firstly, the study problem is identified and formulated, considering the international, national and local contexts in which the Public Higher Education Institutions (IESP, by its acronym in Spanish) operate, and identifying in a particular way, the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo, the academic unit of the Mexican IESP selected to carry out this examination regarding the determinants of educational quality.

Secondly, the general and particular objectives of this study are established, which have been outlined to seek to answer the questions of this investigation, which have been arranged in the third section of this chapter. Immediately, some reasons are presented for which it was decided to carry out the work reported here and, in a fifth space of this chapter section, in addition, an outline is structured around the factors that theoretically determine the object of study, that is, the educational quality of the academic units of the IESPs in Mexico; and the research variables and their operational definition are determined.

In addition, in these introductory spaces of this document, the main research assumption is configured, a hypothesis that will have to be verified or rejected in light of the results derived from the study. The latter will have to be generated from the application of a methodological scheme that will also be reported here.

In summary, this first chapter shows the bases of the ongoing study, since it establishes the what, why and how of this research: the object of study is addressed; the motive of the inquiry; and the design and methodological procedure of the investigation.

1.1 IDENTIFICATION AND APPROACH OF THE RESEARCH PROBLEM

1.1.1. Background and Context

1.1.1.1. *The International Level*

Since the last part of the 20th century, there have been fundamental transformations at the world level that are still taking place, such as the globalization of the economy, the intensification of competition between countries and companies, the acceleration of changes in technology, the growing consumer demands and the permanent search for excellence in organizations, among others. In particular, the continuous search for organizational excellence has meant that the central ideas around quality have achieved great acceptance among the world business community, for example, and the programs related to it have been adopted, under different names and in various levels of application, by an increasing

number of diverse firms and organizations.

And this issue of quality has not left education systems around the world on the sidelines, and governments show a progressive interest in the fundamental task that quality management schemes oriented to educational services can perform (Newby, 1999). Thus, the interest in the business context for the topics of quality and the growing extension of these concepts to the public sector has recently come to place this issue strongly in the field of higher education institutions (universities) (Peña, 1997: 207).

And it is in such a situation that the United Nations Educational, Scientific and Cultural Organization (UNESCO), through its *World Declaration on Higher Education in the XXI Century: Vision and Action* (1998) points out that quality in universities is the most important benchmark for judging the development of these institutions. And similarly, the Organization for Economic Cooperation and Development (OECD), in 1994, in its program for institutional administration in Higher Education, established a project entitled "Quality Administration, Quality Assessment and the Decision Process". Decisions", in which it adopted the following objectives: 1) to clarify the purposes, methods and intended results of different national education evaluation systems and, 2) to investigate their impact on institutional management and decision-making (OECD, 1994: 1)¹.

1.1.1.2. *The National Plan*

In this general context, the case of Mexico is incorporated, in which universities are immersed in an increasingly complex and dynamic environment, since along with the significant growth in enrollment that has been registered in the system for In the last decades, now there is a concern to achieve a qualitative improvement in higher education².

1 The OECD has conducted institutional case studies on quality and evaluation, under the following framework: the context for quality evaluation (for example, national system considerations, government policies, evaluation requirements, and institutional characteristics); the internal methods of quality assessment that are established within the institutions (for example, external feedback, regular review and monitoring of courses); how quality assessment, both internal and external, affects management and decision-making processes (eg relationship between planning and resources, curriculum development); the impact of external quality requirements on the institution to its structure, curriculum and levels of government; where possible institutions have generated internal case studies (within the overall institutional study) of newly assessed departments or disciplines; the interpretation of quality evaluation results and how the future of a policy, structure and institutional culture are related to it (OECD, 1994: 3).

2 A sample of the above are the activities related to the evaluation of the quality of Universities undertaken in recent times, as can be seen in different agreements and programs, among which the creation, in 1978, of the National System of Permanent Planning of Higher Education (SINAPPES, by its acronym in Spanish) and the National Higher Education Evaluation System (SNEES, by its acronym in Spanish), approved in 1990, which is part of the former (CIEES, 1997: 5). The SNEES finds its antecedent and legal basis in the Educational Modernization Program 1989-1994, according to which evaluation constituted the fundamental strategy to achieve modernization, the latter defined as quality, efficiency, and innovation; and pointed out that one of the main actions in this regard was to promote a national evaluation process of the higher education system to determine its levels of performance, productivity, efficiency and quality, for which he proposed the creation of a national education evaluation commission that must emerge from the heart of CONPES: the National Commission for the Evaluation of Higher Education (CONAEVA, by its acronym in Spanish), whose purposes would be to promote a national evaluation process, through the formulation of criteria and general guidelines, as well as to propose policies and actions tending to improve the current conditions of higher education (*Idem*). Thus, since 1989 the SNEES has been promoted to stimulate, support and carry out the evaluation process, incorporating three processes into said System: a) Institutional evaluation, in charge of higher education institutions; b) Studies on the higher education system as a whole, carried out by the SESIC, SEIT, ANUIES and COSNET; and c) Inter-institutional evaluation of the services, programs and projects in the various functions and areas of higher education, through the peer evaluation

And it is that, in the Mexican case that occupies here, a certain questioning of the functionality and performance of Universities is detected, along with a growth in society's expectations regarding the performance and services of Universities and a greater demand of the different users of the services provided by the latter (Vilalta, 1999: 109). Many universities have found themselves anchored in a functional culture due to the routine imposed by student massification or by considering education as a non-priority activity, since it seems that some Universities have dedicated themselves more to imposing their demands on society, instead of to reflect in their actions that they are really dedicated to meeting the demands of society (Municio, 2000: 14).

Therefore, the adaptation to the current technological demands that require new contents and educational procedures (Solé Parellada & Puiggermanal, 1999: 117-118) together with the empowerment of the new information and communication technologies; the design of a sustainable model of university financing; and the professionalization of university management and the promotion of effective, efficient public university management capable of rendering accounts to society (Oroval, Subirats & Vilalta, 2000: 24-25), are other relevant elements to keep in mind today.

The universities of Mexico are faced with the imperative of facing the new demands and social needs linked to the quality of the university system, after a stage that was characterized by the objectives of quantity and access, as well as the requirement to promote transparent evaluation systems and quality assurance. For this reason, there is currently a concern in the Mexican university to increase the quality of teaching, research and in general that of all the services it provides. The universities, therefore, have progressively adopted measures of change and adaptation to the new environment and, grouped around the National Association of Universities and Institutions of Higher Education (ANUIES, by its acronym in Spanish), have established policies for their strengthening, within which they mainly find institutional evaluation processes introduced by the National Commission for the Evaluation of Higher Education (CONAEVA, by its acronym in Spanish), and external evaluations have also been registered, such as the one carried out at the request of the Ministry of Public Education (SEP, by its acronym in Spanish) by the OECD in 1994.

In line with what has been referred to here, in the National Development Plan 1989-1994 (PND1989-1994) modernization processes were proposed in the various government institutions. In the educational field specifically, the aforementioned plan states that "Modernizing education is not making changes by addition, quantitative or linear; it is not adding more of the same, it is moving to the qualitative, breaking customs and inertia to innovate practices at the service of permanent ends; it is to overcome a frame of rationality

mechanism (CIEES, 1997: 6). And this new culture of evaluation for universities has allowed the existence of academic elements with which to compare and verify if the institution has met the minimum levels of performance, which makes it possible to establish strategies within their development plans to achieve and exceed the minimum levels of academic quality required for a certification of academics or students, the accreditation of study plans or the general evaluation by the peers of the Inter-institutional Committees for the Evaluation of Higher Education (CIEES, by its acronym in Spanish).

already exceeded and adapt to a dynamic world” (Presidency of the Republic, 1989: 17). Likewise, in the National Development Plan 1995-2000 (PND1995-2000) it was pointed out that values and attitudes must be reinforced and the amount of information received must be reduced in favor of quality, a concept that became a premise of change, from education basic to higher (Presidency of the Republic, 1995).

The imperative of quality was taken up again in the National Education Plan 2001-2006 (PNE2001-2006), in which reference was made to the fact that one of the greatest challenges of this type of education was to guarantee the proper functioning of the schools and the good quality of the educational programs they offer, considering that the assurance of good quality was essential to advance in the achievement of educational equity. In the same Plan, the SEP established that one of the challenges to assess good quality was based on four key elements: 1) high levels of student learning, with minimal regional differences; 2) a plant of teachers with the ideal profile and with a commitment towards the students; 3) sufficient infrastructure and facilities, and access to information technologies; and 4) a fairer and higher budget, where the three levels of government and society participate, as well as the greater proportion of the national product applied to education (SEP, 2001: 73).

In the same logic as its immediate predecessors, the current federal public administration, within its government program, has conceived education as “the basis for the progress of nations and the well-being of peoples” (SEP, 2007: 7). And in the first of the sectoral objectives of the Education Sector Program 2007-2012 (PSE2007-2012) contemplates “raise the quality of education so that students improve their level of educational achievement, have the means to have access to greater well-being and contribute to national development” (*Ibidem*: 11), considering that for this “quality improvement criteria must be applied to teacher training, updating study programs and their contents, pedagogical approaches, teaching methods and didactic resources. (...) The evaluation will be a fundamental instrument in the analysis of the quality, relevance and pertinence of the design and operation of public policies in education. [And,] the evaluation must be considered from three dimensions: as an accountability exercise, as an instrument for disseminating results to parents and as support for the design of public policies. The indicators used to evaluate must be pertinent and result in proposals for continuous improvement” (*Idem*). As is evident, the educational quality in general, and the quality of higher education in particular, in light of the PSE2007-2012, are assumed to be closely linked to the quality indicators and the evaluation process.

And also, according to the diagnosis of the quality of higher education prepared by the current Federal Government, the following are recognized as the main problems: 1) low enrollment and dropout of higher education students, which they are related to the lags and inefficiencies in the previous levels, the poverty of the families and the characteristics of higher education institutions³; 2) the concentration of educational demand and the sub-operation of

³ Higher education captures only one in four young people between the ages of 18 and 22, of whom close to 94% carry

many higher education institutions; 3) the non-existence of systematic evaluations of student learning results, of the performance of teachers, directors, supervisors and sector heads, and of teaching and management processes; 4) the lack of links between higher education and the labor market; 5) the delays and inequalities in the educational infrastructure; and 6) insufficient training of teachers for teaching, research, dissemination of knowledge and the use of technologies, linking them with the national objectives of raising the quality of education (*Ibidem*, 178-180).

1.1.1.3. *The State Level*

Since the beginning of this decade, in the state of Michoacán de Ocampo, the problem in the educational field that has had to be overcome has consisted of the lag, the limited coverage of educational services, the deficient educational quality, the low relevance and the absence of innovations.

Specifically, in the case of higher education, the public institutions that offer this educational service are the Universidad Michoacana de San Nicolás de Hidalgo, the Technological Universidad of Morelia, the Higher Technological Institutes, the Normal Schools, the Colegio de Michoacán and the Instituto Nacional Polytechnic, mainly. For the 2006-2007 school year, the Universidad Michoacana served 28,700 students in five areas of knowledge: engineering, sciences and humanities, health sciences, agricultural sciences, and lastly, administrative and social sciences; the Technological Universidad of Morelia attended 513 students, offering 4 technological careers: Industrial Maintenance, Textile Production Processes, Biotechnology and Office automation; higher technological education is taught in 13 institutions and serves 16,490 students; and the Center for Continuing and Distance Education Unit Morelia (CECUM, by its acronym in Spanish) of the National Polytechnic Institute attended a total of 3,375 people in face-to-face and distance academic events (Gobierno del Estado de Michoacán, 2006). These data highlight the vitality of the importance of the Universidad Michoacana in the higher education system in the state.

However, higher education in the State shows a problematic situation that has been clearly identified by the local government: the substantial increase in the demand for higher education experienced in the last decade (enrolment has grown by 85 percent) as a consequence the transfer of the demand for the basic level and the expectations of personal and social development offered by higher level training in a restrictive work environment; the progressive concentration of mass enrollment in the capital city of the State; and the insufficient level of quality of higher education, which accounts for the limitations faced in the face of educational challenges (Gobierno del Estado de Michoacán, 2008).

out undergraduate studies or their equivalents, and approximately 6% carry out postgraduate studies. Specifically, in 2006 higher education in the country reached a coverage of 25%. Meanwhile, for the same year, the United States, Italy, the United Kingdom, Canada, and Japan, recorded coverage, at the same educational level, of 82, 63, 60, 57, and 54%, respectively (Cf. Presidency of the Republic, 2007: 177-178).

1.1.1.4. *The Problem at the Universidad Michoacana de San Nicolás de Hidalgo, as a Public Higher Education Institution*

The Universidad Michoacana de San Nicolás de Hidalgo es a public higher education institution, which offers the student community of the State and the region 4 educational levels: Higher Secondary Education (EMS, by its acronym in Spanish), Technical Level (NT, by its acronym in Spanish), Higher Education (ES, by its acronym in Spanish) and Postgraduate (Specialties, Masters and Doctorates). Its educational offer is distributed in most areas of knowledge and is made up of practical, practical scientific, basic, intermediate or individualized practical programs. And, among its substantive and adjective functions are: teaching, research, university extension, cultural dissemination and administration/management.

In a document called *the Initiative for University Reform* (Universidad Michoacana de San Nicolás de Hidalgo, 2003), the authorities of the Universidad Michoacana conceive a general diagnosis of the institution, from which they reveal the institutional strengths and weaknesses. Such diagnosis points out that from the decade of the 1970s, the Universidad Michoacana experienced spectacular growth in terms of population, teaching staff and resources. However, such growth, in general, was not planned and in some cases it acquired chaotic dimensions. And it is that, lacking a coherent and effective institutional development Plan, and a planning policy supported by an academic strategy, at least until the year 2000, the growth of the University has been more the product of political decisions, group pressures or circumstantial incidents, which is the result of serious research and reflection on the needs of the social context and the objectives and orientations of university activity (*ibidem*: 31).

Derived from the above is the fact that today we are facing a disjointed and fragmented University, without inter-institutional coordination, linkage or integration. Increasingly, the University has become a mere conglomerate and progressively blurs the being of a true university community, alive and acting (*Idem*). In addition, like many public universities in the country, the Universidad Michoacana is daily subordinated to the fluctuations of the educational policies of the federal government, which affects its position as an autonomous institution and its ability to respond to the problems and needs of its environment (*Ibid.*, 32). The University is in a serious situation of decontextualization, isolation and gap with respect to its concrete reality. The understanding of this reality and the ability of the University to integrate into it are reduced to their minimum expressions (*Idem*). In general, the social and cultural contributions of House of Hidalgo to Michoacan society are quite limited, considering the needs and dynamics of the society of reference and the potential and resources available to university students (*Ibid*).

And the most significant and serious deficiency of the Universidad Michoacana has to do with the reduced quality of the results of its substantive functions: low academic

level; graduates with a mediocre preparation; lack of training, updating and institutional responsibility of the academic and administrative staff; scientific research with small results; limited cultural diffusion and without guiding criteria; and total absence of a university extension policy (*Idem*). The university administration tends to become bureaucratized and to overlap the substantive functions of the University. More and more important decisions in university life are made according to purely political criteria, personal convenience, or purely labor criteria. The academic criterion, as a guiding principle of the tasks and actions of the University, is conspicuous by its absence (*Ibid.*, 33).

The Universidad Michoacana is currently facing this problem, as well as a current of dizzying changes in educational policy aimed at achieving higher levels of efficiency and quality of educational service. However, it is noted that this public higher education institution has not reacted with the required speed to the transformations in its environment, so it becomes necessary to combat the institutional lag mentioned here, in order to improve the quality of education to satisfy the demand of the new times.

1.1.1.5. The Problem in the Faculty of Law and Social Sciences, as an Academic Unit of the Universidad Michoacana de San Nicolás de Hidalgo

The Faculty of Law and Social Sciences (FDyCS, by its acronym in Spanish) is an academic unit of higher education, dependent on the Michoacana Universidad de San Nicolás de Hidalgo. Law studies in Michoacán were established more than two hundred years ago, in such a way that the teaching and learning of legal science dates back more than two centuries in the state.

Currently, the FDyCS has a school academic program for a Law Degree; an open academic program for a Law Degree; a distance academic program for a Law Degree; the specialty in Procedural Law; the specialty in Criminal Law; and the Master of Laws. It is the largest academic unit of the Universidad Michoacana, both in physical space, as well as in enrollment of students, teachers and administrative staff. And, as a university dependency, the FDyCS is inherent in the problems that afflict the IESP to which it belongs, that is, the UMSNH.

Specifically, the FDyCS of the Universidad Michoacana presents a problem of institutional lag in the academic, research, administrative, extension, dissemination and regulatory fields, a lag that limits the quality of the educational service. In addition, to date there is a lack of internal and/or external evaluation schemes that allow knowledge of the elements that condition the quality of the service provided in the educational programs of the FDyCS of the UMSNH, in order to determine the current situation of the same.

Thus, the FDyCS must overcome the following specific problems: a frequent teaching practice that is not very relevant and effective; mass enrollment and a consequent deterioration in the academic performance of students; graduates with limited preparation; little development of investigative work; lack of training, updating and institutional

responsibility of the academic and administrative staff; a weak extension policy; a practically null cultural diffusion; the lack of an academically supported planning policy; insufficient legal mechanisms that guarantee the institutionality of university life within the Faculty. These specific problems, without a doubt, generate a deterioration in the quality of the educational service in the Faculty of Law.

In addition, while, on the one hand, a new educational policy that has been recently created with the purpose of achieving greater efficiency in the higher education system is in force, on the other hand, the FDyCS has remained outside the schemes of evaluation that make it possible to know the determining elements of the educational quality of the FDyCS of the UMSNH in order to improve the levels of said quality and thus achieve a greater degree of consolidation of the academic unit specifically and, in a general way, in the public higher education institution of reference.

1.1.1.1.6. The Approach to the Problem in the Faculty of Law and Sciences Social Studies of the Universidad Michoacana de San Nicolás de Hidalgo

In the recognition of the aforementioned problem, and in the consideration that an increasingly competitive world demands concern and action in aspects related to the quality of the services of the academic units of universities, an incipient line of study in which the present investigation is framed. And despite the existence of different approaches to the concept of the quality of universities, which are not exclusive but to a certain extent complementary, it is believed that there is a perspective, that of perceived quality, directly linked to the quality understood as the ability to satisfy the needs of users, which currently contributes decisively to the characterization of the concept.

This perspective will have to be used in this study, since it is considered that university quality can and must be evaluated based on what its clients or users (internal and external) think and, in general, all the agents or participants involved in it. (teachers, students, administration and services staff). The consideration of this approach (perceived quality) must constitute a useful contribution for the study of quality in the Faculty of Law of the Universidad Michoacana.

And it is that the exploration of the literature indicates that, in the context of universities, little has been done at an empirical level so far in terms of measuring the perceived quality of the service, which may be due to the absence of a structure agreed conceptual framework for quality management in education, to the novelty of the subject or to substantial differences in the characteristics of education compared to general service systems (Owlia & Aspinwall, 1996: 162).

Therefore, it is noted that rigorous research is needed on how quality initiatives work in Universities and what their effects are, in order to obtain more conclusive evidence regarding the real effectiveness of the actions that they verify for their improvement. In this situation, focusing specifically on the field of education, this research aims to address

various aspects related to the processes of evaluation and improvement of university quality.

In summary, in the context of the public higher education institutions of Mexico, the problems and challenges in the Faculty of Law and Social Sciences, as an academic unit of the Universidad Michoacana de San Nicolás de Hidalgo, are diverse in terms of quality of the educational service. Consequently, this research is aimed at determining what is the knowledge of educational quality in the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo.

Thus, the problem to be solved consists in determining *which are the main factors that allow defining the situation of educational quality in the university career of Bachelor of Law of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo.*

Investigate and find explanations that make it possible to know the situation of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo in terms of quality of the educational service provided by this academic unit (evaluation), will offer the possibility of proposing alternatives that lead to reduce didactic and administrative deficiencies that lead to the path of quality improvement and that set the tone to reach a level of greater consolidation of the academic unit specifically and, in a general way, in the public higher education institution of reference. And with this, a higher level of user satisfaction (students and graduates) could be expected to the extent that these benefits could effectively be transferred to the latter.

1.2. RESEARCH QUESTIONS

1.2.1. General Question

The general question to which this research project intends to answer is the following: *What are the main factors that allow defining the situation of educational quality in the university career of Law Degree of the Faculty of Law and Social Sciences from the Universidad Michoacana de San Nicolás de Hidalgo?*

1.2.2. Particular Questions

1. What are the main elements or factors that determine the quality of higher education provided at the Faculty of Law and Social Sciences (academic unit) of the Universidad Michoacana de San Nicolás de Hidalgo?, considering the value perception of its members?
2. How do such factors affect the quality of higher education taught at the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo?
3. What is the current state or situation of the quality of the Law Degree school program that is taught at the Faculty of Law and Social Sciences of the Universidad

Michoacana de San Nicolás de Hidalgo, specifically in terms of its substantive and adjective functions? of teaching, scientific research, administration/management and extension and dissemination, according to the assessment of its members?

4. Under what conditions is it possible to improve the educational quality in the school system of the Law Degree of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo?

1.3 RESEARCH OBJECTIVES

1.3.1. General objective

In Mexico, the improvement of educational quality in academic units has become one of the priority objectives of IESPs in recent times. However, in order to carry out improvement actions, it is imperative that the criteria under which educational quality is conceived be determined in advance and, subsequently, based on the latter, analyze and indicate the state of quality in IESPs.

In this vein, the general objective of this research lies in *determining and evaluating the main conditioning factors of the quality of the educational service provided in the school program of the Law Degree of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo*⁴.

Thus, the study will focus on evaluating the development of higher education in the academic unit in question (FDyCS), considering the participation of all its members (students, teachers, managers, administrative workers and graduates) as a fundamental element to support both the processes of evaluation and diagnosis of the current state, such as the strategies of continuous improvement of the educational quality that are proposed.

1.3.2. Specific objectives

The specific objectives of this research are listed below, and they have been formulated keeping due consistency with the general objective of the study, and considering the levels of cognitive domain as a reference (Landshere, G., 1981):

1. Describe the theoretical foundations of quality in the educational field, specifically in higher education.

⁴ According to the *Dictionary of the Royal Spanish Academy* (2010), *to determine* means *to set the terms of something; distinguish, discern; point out, fix something for some effect; take resolution; and make a decision*. On the other hand, the same source points out that *evaluating* expresses *indicating the value of something; and estimate, appreciate, calculate the value of something*. Consequently, the general purpose of this research consists of distinguishing the main independent variables that condition the educational quality in the academic unit of study and, in parallel, to indicate to what extent such variables define the dependent variable, that is, the quality of the service provided in the school program of the Law Degree of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo, in order to define its current situation. In addition, the verbs *determine* and *evaluate* that define the general purpose of this work, are located at the level of *evaluation* of the cognitive domain (Landshere, 1981), and *determine*, in turn, the levels of the cognitive domain of the verbs used in the formulation of the specific or particular objectives of this study.

2. Characterize Higher Education Institutions, considering the international, national and Michoacán contexts.
3. Establish by consensus with the members of the university academic unit under study the elements to be considered in determining the quality of higher education provided in the UMSNH Law Degree academic program.
4. Carry out a consensual self-assessment of the quality of the educational service that makes possible the analysis of the FDyCS in terms of its substantive and procedural functions of teaching, scientific research, administration/management, and extension and dissemination.
5. Apply a self-assessment exercise of educational quality in the school system of the Law Degree in the FDyCS of the UMSNH, in order to generate a diagnosis of the current state of the concept in question in the academic unit of reference.
6. Deduce the functional relationship between the dependent and independent variables of the study.
7. Formulate, based on the results of the self-assessment, a plan to improve the educational quality for the school system of the Law Degree in the FDyCS of the UMSNH.
8. Outline, as a result of the theoretical inquiry, the qualitative criteria used and the empirical exercise implemented, a proposal for self-assessment of the IESP in Mexico, considering quality assurance and the principle of accountability.

1.4 RATIONALE FOR THE STUDY

The theme presented by this research is relevant both from the administration/management perspective in general, and from the academic point of view. Thus, on the one hand, in recent decades, quality has gradually gained importance as a valid strategy for achieving an advantageous competitive position, given the new environmental conditions in which different companies and organizations develop. And this situation has resulted in a remarkable growth in the number of organizations that have managed to implement total quality systems or that have been obtaining quality certifications.

However, in the case of universities, improving the quality of their activities, today, is one of the most important challenges that all agents involved in higher education must face. For this reason, in recent years university education in this country has registered important changes, both in quantitative and qualitative terms, and especially due to the greater demand for quality and efficiency in teaching, research, administration and extension and dissemination. The transformation of the Mexican university has implied a quantitative development that, however, has not always been accompanied by a parallel development of its quality.

Thus, it becomes evident that the current challenge of universities lies in an effort

around the quality of their services. For this reason, numerous initiatives related to evaluation (internal and external) and improvement of the quality of university education in Mexico have recently been undertaken.

Under this referential framework, it is suggested that in this investigation there are several reasons that justify the interest and concern for the quality of the service provided by the IESP, namely:

1. The provision of quality training to a society is currently an economically important objective for higher education systems.
2. The growing international competitiveness requires raising the improvement of productivity and technological development, education being the key factor to face this development.
3. The progressive demands of the business sector on the qualities of university students, together with the unemployment problem prevailing in the country and the region, force us to reflect on the adaptation of the training given in universities with reality.

These reasons justify an investigation on the quality of educational services in the field of higher education, since it is considered that institutional consolidation revolves around improving the quality of teaching. And it is that, the quality of education not only concerns the participants in the educational process (teachers, students, authorities, administrative employees and graduates) and governments, but also the community and the business sector that considers Universities as training centers for high-level professionals and the production of essential knowledge and technology to maintain the pace of economic development.

Finally, universities in general, and universities in particular, have paramount importance for the country and specifically for the development of the humanities, science and technology. Its proper functioning is in the interest of the whole country. Hence, precisely, the concern to develop mechanisms that allow directing decisions to achieve quality higher education so that it can better fulfill its functions and adapt to the demands and changes of the new society.

1.5 THEORETICAL APPROACH AND FOUNDATION OF THE FACTORS THAT AFFECT THE OBJECT OF STUDY

1.5.1 Determination of the Study Variables

From a bibliographic review on the quality of the educational service in Higher Education Institutions, which is fully exposed in the theoretical framework of this study, it has been possible to identify some factors that impact the educational quality service of Universities.

Since the quality of higher education is the object of study of this research, the procedures implemented in it must begin by seeking to investigate which aspects must be considered in order to issue an opinion about the service offered by a higher education institution.

The consultation of the works of institutions and specialists who have investigated educational quality and distinguished causal factors of it, has made it possible to detect some variables that considerably impact the quality of educational service. For this reason, it is inferred that such variables have a generalized character, a situation that justifies proceeding in this work to study their behavior, situation and effects in the specific case that occupies.

Table 1.1 incorporates a synthesis of the referents of educational quality in Universities, followed by the institutions or authors that identify them as elements that impact the quality of the educational service.

In another analytical exercise, based on the data in Table 1.1, an ordering of all the educational quality referents was carried out, obeying a logic of classification of such categories based on the institutional function with which they corresponded. Thus, the referents of the dependent variable were distributed into 5 groups of analytical factors, namely: the teaching function, the research work, the administration/management, the extension or connection, and the cultural diffusion. This exercise gave rise to Table 1.2.

Table 1.1 Theoretical References of Quality in Higher Education Institutions

No.	Referents of Educational Quality	Reviewed Authors
1	Personnel administration.	Certo (1997), Rumbos (1998), Álvarez and Lázaro (1002), Cantón (2002), COPAES (2009), CIEES (1997).
2	Internal environment.	Alvarez and Topete (1997).
3	Academic-administrative management of the program.	Canton (2001), COPAES (2009).
4	Teaching effectiveness.	CUPES (2009).
5	Didactic strategies.	From John (1996); Doménech (1999), Sevillano (1995), Tejada (1997), CIEES (1997).
6	Learning Assessment.	De Juan (1996), COPAES (1009), CIEES (1997).
7	Teacher training.	Schulmeister (1993), Ferreres (1997), García (1998), Rumbos (1998), Villar (1993), COPAES (2009), CIEES (1997).
8	Broadcast formats.	Walls (1993), Basanta (2001).
9	Quality improvement management.	Canton (2001).
10	Management of administrative and financial processes.	CUPES (2009).
11	Inputs or physical resources.	Álvarez and Topete (1997), COPAES (2009), CIEES (1997).
12	Extension interactions.	Walls (1993).
13	Didactic interactions.	Sevillano (1995), Villa (2000), Eckert (1973).
14	Research interactions.	Sancho (2001), Braxton (1996), Vidal and Quintanilla (1999), COPAES (2009).
15	Legal guidelines of the diffusion.	COPAES (2009), CIEES (1997).
16	Regulatory guidelines for administration.	CUPES (2009).
17	Legal framework of the extension.	COPAES (2009), CIEES (1997).
18	Legal framework of the investigation.	COPAES (2009), CIEES (1997).
19	Extension modalities.	COPAES (2009), CIEES (1997).
20	Research modalities.	COPAES (2009), CIEES (1997).
21	Academic Staff Regulations.	Álvarez and Topete (1997), CIEES (1997).
22	Regulations for Employees.	COPAES (2009), CIEES (1997).
23	Regulations for Students.	COPAES (2009), CIEES (1997).
24	Organization of dissemination.	Walls (1993), Basanta (2001).
25	Extension organization.	Walls (1993), Basanta (2001).
26	Research organization.	CUPES (2009).
27	Institutional organization and structure.	Alvarez and Topete (1997), COPAES (2009).
28	Curriculum.	De Juan (1996), Peterssen (1996), Domenech (1999), COPAES (2009).
29	Planning of university education.	De Juan (1996), Mager (1974), Doméchech (1974), COPAES (2009), CIEES (1997), CIEES (1997).
30	Training processes.	Álvarez and Topete (1997), CIEES (1997).
31	Diffusion products.	Alvarez and Topete (1997).
32	Expansion products.	Alvarez and Topete (1997).
33	Relations with the context.	Alvarez and Topete (1997).
34	Results of the investigation.	Santos (1993), Grandal (2002).

Source: Own elaboration based on the theoretical framework of documentary research.

Table 1.2 reveals that the dimensions or categories of educational quality that have been obtained from the corresponding bibliographic analysis are concentrated in 5 factors or general variables, namely: teaching, research, administration/management, extension, and diffusion. These are, then, the explanatory variables adopted for the purposes of this study.

Table 1.2 Classification of Theoretical References of Quality in Institutions of Higher Education according to General Analytical Factors

No.	Referents	Analytical Factor
1	Teaching effectiveness.	Teaching function
2	Didactic strategies.	Teaching function
3	Learning Assessment.	Teaching function
4	Curriculum.	Teaching function
5	Didactic interactions.	Teaching function
6	Planning of university education.	Teaching function
7	Teacher training.	Teaching role
8	Inputs or physical resources.	Teaching role
9	Internal environment.	Teaching role
10	Training Processes.	Teaching role
11	Academic staff regulations.	Teaching role
12	Regulations for students.	Teaching role
13	Legal framework of the investigation.	Research work
14	Research organization.	Research work
15	Research modalities.	Research work
16	Research interactions.	Research work
17	Results of the investigation.	Research work
18	Personnel administration.	Administration/management
19	Management of administrative and financial processes.	Administration/management
20	Academic-administrative management of the program.	Administration/management
21	Quality improvement management.	Administration/management
22	Institutional organization and structure.	Administration/management
23	Regulations for employees.	Administration/management
24	Regulatory guidelines for administration.	Administration/management
25	Legal framework of the extension.	Extension or link
26	Extension organization.	Extension or link
27	Extension modalities.	Extension or link
28	Extension interactions.	Extension or link
29	Expansion products.	Extension or link
30	Relations with the context.	Extension or link
31	Legal guidelines of the diffusion.	Cultural diffusion
32	Organization of dissemination.	Cultural diffusion
33	Broadcast formats.	Cultural diffusion
34	Diffusion products.	Cultural diffusion

Source: Own elaboration based on the theoretical framework of documentary research.

In the same vein, based on a cursory inspection of the elements that affect institutional quality indicated by the specialists, according to Table 1.1, they are personnel administration, didactic strategies, teacher training, inputs or physical resources, the study plan and the planning of university education, the referents that are most frequently considered in the work of specialists. For this reason, and based on the information in Table 1.2, it can be deduced that teaching is the factor that most affects the determination of the quality of service in a higher education program.

1.5.2. Hierarchy of the Study Variables

To determine the relevance between the variables considered in this research, the technique called Analytic Hierarchy Process (AHP) was used, from which it is feasible to evaluate the importance of the problems raised or the causes of them (Market, 1991). Annex 1 of this text includes an explanation of the development and application of this technique, also known as the Saaty Algorithm, aimed at deriving the relative and total relevance of the objectives and variables (dependent and independent) considered in this work.

In the case that occupies here, the different strata in which the objectives and the variables considered were located, as well as the relationships between them, were first considered.

This way, an analysis with three levels was integrated, where the first corresponds to educational quality as the main objective of the study; at the second level, three objectives were located that for the application of this technique were considered the (educational) service, its supply and the academic unit of the IESP. And in the third stratum, the variables considered in the study were positioned.

Solving the matrix system required by Saaty's Theorem, and applying the estimations of importance between the objectives and the variables, the results shown in Table 1.3 were obtained. And, according to this technique, it is clear that the global importance of the variables occurs in the following order: teaching with 47.3%, research with 31.5%, administration/management with 16.7% and extension and dissemination with 4.5%. This represents the importance that must be given to the analysis of educational quality through the variables considered, using a prospective analysis scheme.

Table 1.3 Relative and Total Relevances of the Objectives and the Dependent and Independent Variables

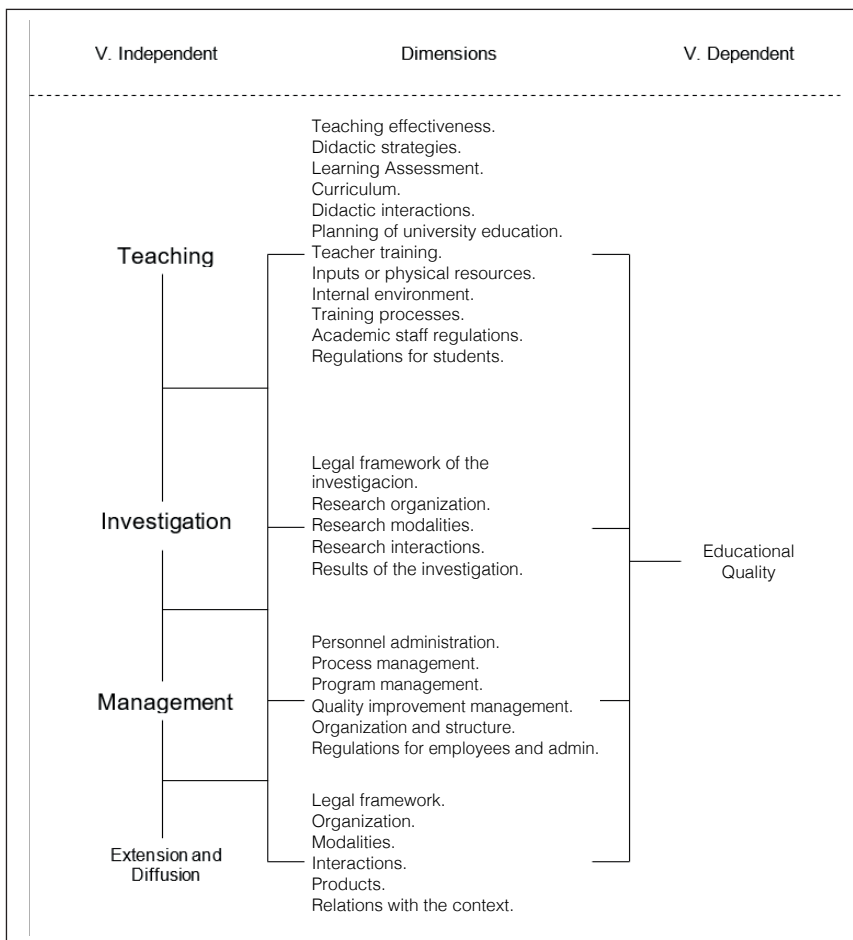
<i>General objective</i>		Educational quality				
<i>Specific objectives</i>		Service	Supply		Academic unit from IESP	<i>Total</i>
		65.1%	22.3%		12.7%	100%
<i>Variables</i>		Teaching	Investigation	Administration/ Management	Extension and Diffusion	<i>Total</i>
<i>Relevance Relative</i>	Service	45.8%	34.8	15.5%	3.9%	100%
	Supply	61%	22.1%	12%	4.9%	100%
	IESP Academic Unit	31.3%	31.3%	31.3%	6.3%	100%
<i>Full Relevance</i>		47.3%	31.5%	16.7%	4.5%	100%

Source: Own elaboration based on the application of the Analytical Hierarchy technique to the data obtained in documentary research. *Vid.* Market, 1991.

1.5.3. Variable Diagram

The diagram below shows the general model, from which the relationship between teaching, research, administration/management, and extension and dissemination as independent variables is described, and the quality of the educational service in Universities as the dependent variable. See Figure 1.1.

Figure 1.1 Diagram of Dependent and Independent Variables



Source: Own elaboration based on the results obtained from the theoretical framework of documentary research.

1.5.4. Operational Definition of Variables

However, in the constitution and explanation of the dependent variable under study, those dimensions and indicators must be determined that, being supported by certain evidence, constitute and explain said variable, even more so, in the case of a variable as

complex as it is. the quality of educational service in universities.

One of the ways to carry out a prior analysis to configure variables is through the Lazarsfeld (1965) model, in which the indicators are estimated as the set of characteristics or traits that are supposed to constitute or allow the description of certain dimensions of a variable. This way, a relationship is established between each indicator and the dimension to which it belongs. Thus, the variables are assumed or analyzed from the *variable-dimension-indicator-item(s) perspective*.

Thus, this scheme is applied in the design and construction of Table 1.4ac, in order to show congruence between the variables and their respective dimensions and indicators that were extracted from the previous description that was made of each of the variables, situation that sets the standard for the operationalization of the concept of educational quality and, likewise, carry out the development of research instruments (Padua, 1996: 38-41).

From the scheme of operationalization of the variables, dimensions and indicators of the study considered in Table 1.4ac, the instrument to collect information on the case study will have to be derived, in a later phase of the investigation, and evaluated to determine the factors that impact the dependent variable under analysis.

Table 1.4a Scheme for the Operationalization of the Study Variables (1/3)

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Teaching	Teaching effectiveness	Admission efficiency, terminal efficiency, degree rate, tutorials.
		Didactic strategies	Presentation, master class, problem solving, teamwork, group work, question/answer, debate, discovery.
		Learning Assessment	Diagnostic, partial, continuous, sporadic, oral, written, scheduled, surprise, question/answer dynamic evaluations, bibliographic works.
		Curriculum	Curricular structure, program contents, objectives, teaching-learning activities, subject programs, incorporation of new information and communication technologies.
		Didactic interactions	Teacher-student, teacher-teacher, teacher-managers, student-student, student-managers relationships.
		University education planning	Goals, objectives, schedules-subjects-school year, entry and exit policies of the career. Initial training, ongoing training, professional development.
		Teacher training	Classrooms, library, information centers, computer lab, tutorial centers, auditorium, workshops, recreation area, sports area, cafeteria, teacher lounge, parking lot; and educational and technological materials.
		Inputs or physical resources	Communication and human relations, organizational climate, shared spaces to think and make decisions.
		Internal environment	Teaching models, teamwork, teaching-research link.
		Training processes	Regulation or statute of the academic staff (entry, promotion and permanence).
Academic staff regulations	Regulations for students that regulate their admission, permanence, promotion and graduation; degree regulations; and social service regulations.		
Regulations for students			

Source: Self made.

Table 1.4b Scheme of Operationalization of the Study Variables (2/3)

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Investigation	<p>Legal framework of the investigation</p> <p>Research organization</p> <p>Research modalities</p> <p>Research interactions</p> <p>Results of the investigation</p>	<p>Regulation of the investigation; research policies.</p> <p>Authorities and organizational units of the investigation; researchers; Investigation groups; lines of investigation; resources allocated to research.</p> <p>Research projects; Work documents; thesis; monographs; theses; books; chapters of books; articles; presentations; conferences.</p> <p>Teaching-research relationship (materials); student participation in research (thesis, research assistants).</p> <p>Research productivity.</p>
	Administration or Management	<p>Personnel administration.</p> <p>Management of administrative and financial processes.</p> <p>Academic-administrative management of the program.</p> <p>Quality improvement management.</p> <p>Institutional organization and structure.</p> <p>Regulations for employees.</p> <p>Regulatory guidelines for administration.</p>	<p>Academic staff management; administrative staff management</p> <p>Communication; coordination and decision making; management and use of financial resources; evaluation and monitoring.</p> <p>executive authorities; academic collegiate bodies for the development of the program; academic institutions.</p> <p>Motivation and satisfaction; performance evaluation; improvement mechanisms.</p> <p>Organization model; mission clarity; distribution of functions; exercise of academic leadership authority.</p> <p>Regulations governing the functions of non-academic support staff for the development of the program.</p> <p>Regulations for authorities; rules for the management and control of institutional finances.</p>

Source: Self made.

Table 1.4c Scheme of Operationalization of the Study Variables (3/3)

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Extension and Diffusion	Legal framework	Regulation of extension or link; dissemination regulation; extension or linkage policy; dissemination policy.
		Organization	Authorities and organizational units of the investigation (organizational chart) extension or linkage program(s); dissemination programme(s); resources assigned to extension and diffusion.
		Formats	Inter-institutional agreements; research stays; academic exchange; inter-institutional collaboration; social service; follow-up of graduates; conferences; conferences; workshops; graduates; editing of periodicals; exhibitions; continuing education courses and programs; sport activities; other cultural activities;
		Interactions	Teaching-extension and diffusion relationship; administration-extension and diffusion relationship.
		Products	Productivity of extension and diffusion; contribution to the environment.
		Relations with the context	Linking with the institutions of the context (families, companies, community, government, other educational and research institutions, national and international), through teaching, research and administration activities.

Source: Self made.

1.6. HYPOTHESIS FORMULATION

A hypothesis is an assumption or anticipated solution to the problem under investigation and, therefore, the researcher's task must be aimed at testing such assumption or hypothesis, based on the use of objective instruments and tools. Now, it is important to be clear that by accepting a hypothesis as true, it is not possible to conclude regarding the veracity of the results obtained, but only evidence in its favor is provided (Bernal, 2006: 137).

In the best of cases, an assumption of this nature can be obtained deductively from the body of a theory, or else, as is the case in the field of social sciences, it can be based on knowledge already acquired in an area of research. But whatever the origin of the hypotheses, they are proposed solutions to certain problems or research questions. However, it must be noted that many hypotheses take the form of relationships between two or more variables .

1.6.1. General Hypothesis

Taking into account the previous considerations, the *general, initial hypothesis* or *working inference* that is proposed for the current research work is the following:

Teaching, scientific research, administration/management and extension and dissemination are the factors that determine to a greater extent the quality of the educational service provided in the university career of Law Degree of the Faculty of Law and Social Sciences (academic unit). from the Universidad Michoacana de San Nicolás de Hidalgo (institution of public higher education).

A brief review of the literature that has been carried out up to now in terms of the involvement and participation of the agents involved, reveals that, in the field of IESP academic services, both the producer of the service (in in this case the academic staff) as the direct client or co-participant of the same (that is, university students). For this reason, in the context of the academic unit of the UMSNH under study, an attempt will be made to find out what the perceptions of students and teachers are, fundamentally, in relation to the quality of the educational service.

The study of the appreciations of these groups on the quality of the higher level teaching service constitutes the starting point of this work and, at the same time, a cardinal objective of it.

1.7 RESEARCH METHODOLOGY

In order to address and solve the study problem posed, and with the purpose of achieving the objectives established in this research, this section considers: the type of study; the method; The research design; and population and sample.

1.7.1. Type of study

The term type of study is linked to the classification of the research in relation to the way in which it is going to be carried out. Thus, the present investigation is descriptive and correlational.

The research is *descriptive* since it contemplates the refinement of the approach to the problem and the collection of information through questionnaires addressed to the main actors of the institution under analysis, thus generating, according to the research approach and contextualization of the problem, the inquiry is at the descriptive level.

And the study is *correlational*, since it contemplates the association of educational quality in the academic units of public higher education institutions with the categories of teaching, research, administration/management, and extension and diffusion, for which the correlational level is transited. of the variables.

1.7.2. The method

The methodological approach selected in this study is of a *mixed type*, since in it the *qualitative and quantitative methods converge*.

In the opinion of some authors, this methodological approach is an effective option due to the object of study. In this regard, Martínez maintains that in this type of research “it is about identifying the deep nature of realities, their dynamic structure, that which gives full reason for their behavior and manifestations” (Martínez, 1999: 173).

At present, the tendency of authors who defend the combination of methodologies is greater every day. In this sense, Molina (1993: 258) includes some of these trends and their main defenders: “(...) methodological plurality” (Dendaluce, 1988; Santos, 1990), “converging network of measures” (Bakeman & Gottman, 1989), “multimodal basis” (Goetz & Lecompte, 1988), “balanced combination of subjective and objective data” (Goetz, *et al.*, 1988), “triangulation” (Cohen & Manion, 1990; Guba, 1983; Walker, 1989; Cook & Reichardt, 1986, etc.), “multi-methods” (Cohen, *et al.*, 1990), “unit of educational research” (Keeves, 1998), “hybrid models” (Shulman, 1989); “expansive mixed method or triangulation design” (Greene, Caracelli & Graham, 1989), triads (Faulker, cited by Walker, 1989), etc.

The same author points out that the reasons why the combination of paradigms and methodologies are defended are aimed at highlighting that: 1. Many of the problems in education can be “better investigated if they are examined from different approaches; 2. They provide internal validity or “credibility. What is known as triangulation: “collect data from a variety of methods and rely on a variety of sources so that the predilections of each researcher are tested as tenaciously as possible” (*Idem*); 3. Taken as a whole, personal documents give much more, since, when they are numerous and assembled, they offer “coherent” images; 4. Although it may seem that some questions or problems require a specific model, the use of parts of other models almost always provides greater depth to the investigation.

Within this combination of methods, in the current investigation it was also decided to use the *case study*, given its richness as a strategy to deepen the understanding of dynamic realities. In the case study, only one object or one case is studied and, consequently, the results obtained hold true only in the singular case.

1.7.3. Design of the investigation

The research design involves: 1) Characterizing the study; 2) give an account of the general procedure of the investigation; and, 3) configure the strategy(ies) and the instrument(s) for collecting and reviewing the information. And the purpose is that, based on the design of the study conceived by the researcher, the questions of the study can be answered ; the achievement of the general and specific objectives of the investigation is carried out; and perform the hypothesis test.

1.7.3.1. Characterization of the Study

Regarding the characterization of the research, this is a *non-experimental study*, since it focuses on observing the phenomena as they originate in their context, to later analyze them. In this sense, the study refers to identifying and examining the main characteristics of the organization of the academic unit of the Public Higher Education Institution under study.

In addition, it is a *systematic and empirical investigation* in which the independent variables are not manipulated because they have already happened. Inferences about relationships between variables are made without direct intervention or influence, and such relationships are observed as they have occurred in their natural context.

And it is a *cross-sectional or transectional design* because data is collected at a single moment and at a single time; and its purpose is to describe variables and analyze their incidence and interrelation in a specific period. Thus, the instruments are applied only once for the purpose of making the necessary inferences and analysis.

1.7.3.2. General Investigation Procedure

In carrying out the research *The Evaluation of Educational Quality in Public Higher Education Institutions in Mexico: A Case Study with a Quality Assurance and Accountability Approach*, the method that serves as a guide for the studies social sciences. And, because of this, the following methodological procedure was implemented:

1. The idea was sought and conceived based on observation, interest in the subject, as well as the review of texts and materials related to the topic.
2. Once the idea was conceived, we proceeded to raise the research problem from conceiving the problematizing situation and formulating the research questions.
3. Subsequently, the general and specific objectives were established, which seek, through the results of the investigation, to provide a solution to the problem that is addressed.
4. After enunciating the objectives, the justification of the investigation is made.
5. The next step consisted of materializing the documentary research:
 - a. Elaboration of the theoretical framework: compilation, review, selection and analysis of the literature and documentary material in general related to the investigation;
 - b. Justification of the factors that affect the object of study: Determination, hierarchy and operational definition of the study variables; and formulation of hypotheses;
 - c. Approach to research methodological criteria: determination of the type of research; characterization of the method; and definition of the research design;

6. Once the documentary research was carried out, the field investigation was undertaken:
 - a. Methodological strategy configuration: consists of the empirical research plan for this study, which is divided into three phases: exploration and consensus; self appraisal; and establishment of the improvement plan. In addition, it includes the questionnaire as an instrument for obtaining information.
 - b. Sample selection: determination of the universe; and specification and extraction of the study sample.
 - c. Data collection: design of the instrument to collect the information; measurement scale; measurement of the confidence and validity of the instrument; pilot test; instrument application; data collection; data processing (information capture, coding and database creation); and derivation of the dependent and independent variables of the study.
7. Qualitative and quantitative analysis of the research: descriptive analysis of the results; selection of statistical tests; Statistical analysis of the results; hypothesis testing; discussion of results; and qualitative and quantitative interpretations in light of the assumptions and results.
8. After carrying out the field research, the results derived from the theoretical framework and the design and application of the methodological strategy and instrument are useful to carry out a solution approach to the problematic situation raised ; and, based on the comparison of the information and results derived from the investigation with the objectives and the theoretical framework, the corresponding conclusions and suggestions are formulated.
9. Finally, the preparation and presentation of the final report of the investigation is carried out.

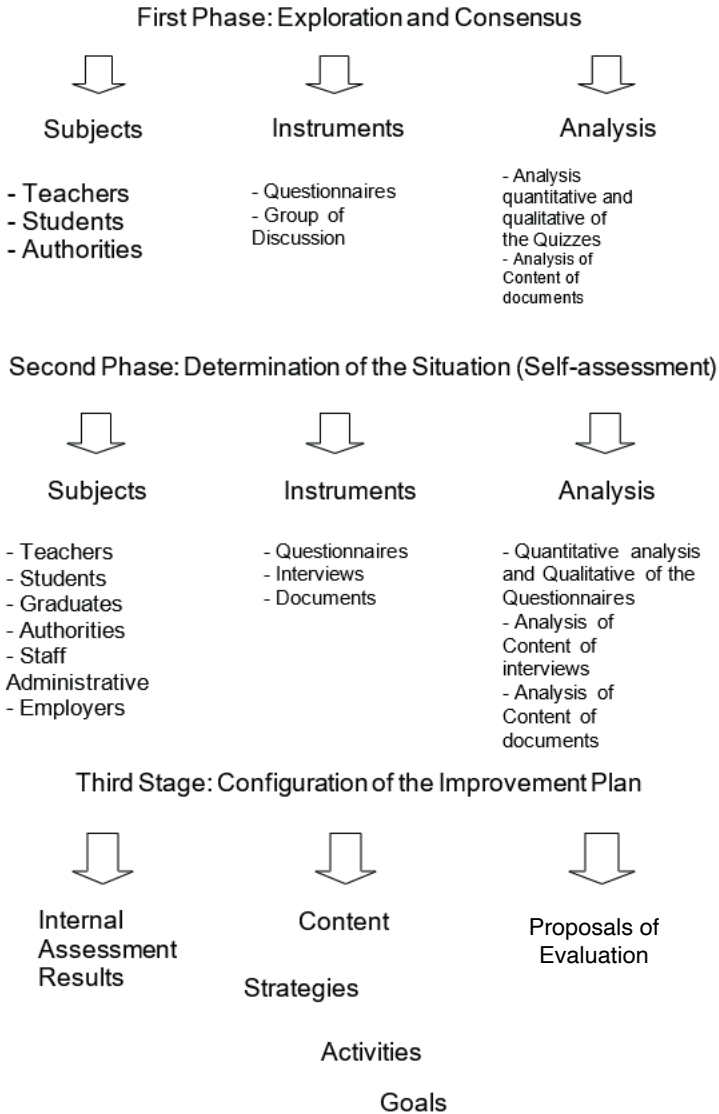
1.7.3.3. Strategy and Instrument of Analysis

As an organizational plan or strategy conceived in the research, it is planned to develop in three fundamental phases or stages (see Figure 1.2). The *first stage* consists of a consultation with the members and main protagonists of the educational process (teachers and students) at the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo on those criteria that in their opinion are the most important for determine the state of educational quality in the academic unit of reference, based on an evaluation process and base a consequent process of continuous improvement of the quality of the educational service.

The materialization of the auscultation is projected through an initial proposal on the functions of the FDyCS of the UMSNH (teaching, research, administration/management, and extension and dissemination) indicating a series of facts and events related to them, to be submitted to consideration of the participants. To do this, an assessment questionnaire applied to teachers and students, and a discussion group with students will be used as

research material and instruments.

Figure 1.2 Phases of the Research Strategy



Source: Self made.

The *second stage* will correspond to the evaluation itself by the members of the FDyCS, in order to analyze the reality of the academic unit by those involved in the educational process. The agents involved in this stage will be: teachers, students, graduates, authorities, administrative staff and some employers.

The collection of information will be carried out through the instrumentation of

questionnaires applied to professors, students and graduates; interviews with teachers, students, authorities, administrative staff and employers; and review of documents, both of internal and external origin, related to teaching at the FDyCS.

The *third stage* refers to the design of the plan for continuous improvement of the quality of the educational service. The fundamental characteristic of this stage is the participation of the members of the academic unit and the link with the self-assessment process carried out in the previous stages.

The plan will be designed and submitted to the consideration of some protagonists of the process (teachers, students, authorities) who will have the opportunity to make their contributions, corrections and/or comments.

1.7.3.4. Delimitation, Population and Sample of the Case Study

In this research, the 2008-2009 school year of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo was considered as the study period. Thus, the spatial delimitation of this work has to do with the city of Morelia, Michoacán, Mexico. And, specifically, this analysis considers as the population under study the groups of individuals (students, teachers, administrative workers, managers and graduates) linked to the educational programs taught at the Faculty of Law and Social Sciences, as an academic unit. from the Michoacan Universidad de San Nicolás de Hidalgo.

The total population that constitutes the Faculty of Law and Social Sciences is structured as follows:

Students:

- Total number of students in the school system of the Bachelor of Laws career, school year 2008-2009: 113 sections or groups; 4956 students.
- Total students of the open and distance system of the Bachelor of Laws career, school year 2008-2009 : 41 sections or groups; 1085 students.
- Total number of students in the Procedural Law Specialty, 2008-2009 school year: 4 sections or groups; 61 students.
- Total number of students in the Criminal Law Specialty, 2008-2009 school year: 4 sections or groups; 56 students.
- Total students of the Master of Laws, 2008-2009 school year: 5 sections or groups; 58 students.

Teachers:

- Total number of full-time professors and researchers, 2008-2009 school year: 62.
- Total part-time professors and researchers, 2008-2009 school year: 11.
- Total hourly teachers, 2008-2009 school year: 259.

Administrative workers:

- Total secretaries, school year 2008-2009: 11.
- Total number of technicians, 2008-2009 school year: 19.
- Total superintendent staff, 2008-2009 school year: 38.

Managers:

- Director (1), Deputy Director (1), Head of the Postgraduate Studies Division (1), Office Secretaries (3), Coordinators (3) and Disciplinary Officers (3), 2008-2009 school year.

Graduates:

- Total number of graduates from the school system of the Law Degree program, from the 2004-2005 school year: 1,006.
- Total number of graduates from the school system of the Law Degree program, from the 2005-2006 school year: 1,013.
- Total number of graduates from the school system of the Law Degree program, from the 2006-2007 school year: 1,076.
- Total number of graduates from the school system of the Law Degree program, from the 2007-2008 school year: 1,107.

However, from this population that the FDyCS represents as an academic unit of study, only one academic program was selected for analysis, namely: the Law Degree of the school system. Thus, the universe of study is the subjects (students, professors, administrators, managers and graduates) linked to the reference academic program.

From the total population of the educational program of the Law School system, a sample was selected, taking into account the criterion of greatest representativeness, using a methodology intentionally, given the difficulty in contacting the entire population. Intentionally, it was decided to consider 55% of the population of the student, teaching, administrative, managerial and graduate sectors. Therefore, in a deliberate attempt to obtain representative data and information, the sample for the study was made up as shown in Table 1.5.

Table 1.5 Population and Research Sample

Subjects	Total population of the FDyCS	Population of Program Selected	Sample	
			No.	%
Students	6216	4956	2726	55
Teachers	332	332	183	55
Administrative	68	68	37	55
Managers	12	11	6	55
Graduates	4202	4202	2311	55

Source: Own elaboration based on data from the Academic Secretariat of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo.

INSTITUTIONAL CONSIDERATIONS OF PUBLIC HIGHER EDUCATION OF MEXICO

After having raised and substantiated the study problem, the motive of the work and the methodological design of the research, this second chapter has the purpose of making a conceptual, historical and functional reference around the universities of Mexico, emphasizing those of public type. This way, a historical overview of universities worldwide is exposed, also addressing their mission, their functions, their benefits and the HEI (university) models available.

In addition, in the consideration of the universities of Latin America, it is particularized in those of Mexico, of which a broad tour of its historical evolution is formulated, from the stage of La Colonia to the contemporary era; and immediately, the higher education system in Mexico is characterized in its generalities, its regulations, its institutional coordination structure and its IES complex.

And, after reviewing the general scheme of IES in Mexico, and of IESP in particular, the research is conducted towards the characterization of the educational system of Michoacán, from the consideration of its social, political and economic context to, finally, arrive at the characterization of the Michoacan universities. Ultimately, the IESP academic unit under study belongs to them: the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo.

2.1 AN OVERVIEW OF HIGHER EDUCATION INSTITUTIONS

In the following spaces, it is intended to briefly outline fundamental aspects of Higher Education Institutions, considering that knowledge of them will allow a more secure appreciation of the current situation and, likewise, address research with greater propriety.

2.1.1. Historical Review of Higher Education Institutions a world level

The beginnings of the Universities are directly linked to those of the universities, and these have their precedents in the so-called General Studies and in the Art *Cholas* of the 12th and 13th centuries. Such schools were groups that brought together those who were organized in fraternities or guilds. Hence, Mayz (1991) points out that the name *universitas* was not applied to a specific modality of knowledge, but to all the members of a guild that met with the purpose of learning and/or teaching knowledge.

It is at that time when the first universities of Bologna (Italy) and Paris (France) were founded. This first university had the function of unifying the private law schools due to the emperor's interest in the elaboration and application of Roman law as a means to legitimize his imperial claims.

Referring to these universities, Mayz (1991) comments that they are developed as an instrument destined to promote the formation of those who, interested in learning the knowledge of their time, could help through their preparation to defend the spiritual and temporal interests of the institutions. of the time.

The common characteristics of the first cities in which a university was founded were its economic importance, a cultural flourishing (flourishing schools of medicine and law), as well as its political position as fief and outpost of the pope who guaranteed his statutes through a cardinal legate. In those places where some of these factors did not appear, the universities took much longer to be founded.

It is important to highlight that since its inception, educational institutions were involved with certain functions or missions that varied according to the particular interests of the people and institutions from which they promoted it. In this sense, Marín and González (2000) point out that it was normal at that time for universities to be promoted by kings or the Church, and rarely by individuals who wanted to create a university for the mere humanistic and scientific interest of knowing and learn.

And, referring to the functions or missions performed by universities in the Middle Ages, Marín *et al.* (2000) highlight the following:

1. Headquarters of teaching, study and knowledge of various subjects such as law, medicine, theology.
2. Serve ecclesiastical and political interests.
3. Strengthen the central powers of the papacy against the demands and aspirations of earthly powers and feudal interests.
4. Serve as recruitment centers for people who could serve as personnel at the service of the Church.
5. Defend the collective interests of scholars and teachers against municipal authorities and citizens through privileges.
6. Providing jurists who could solve legal problems unknown to common law.
7. Prepare civilian employees who could compete with the princely authorities.

At the end of the Middle Ages, academic education, thanks to the universities, became a seal of social distinction. The doctorate was paired with the title of nobility in terms of the deference it demanded, even, Marín *et al.* (2000) that outside the university, academic degrees did not give the right to practice any profession in particular. They also point out that in the fifteenth century, the academic degree was recognized as evidence of qualification, being important when competing for ecclesiastical and secular positions.

The creation of universities caused a change in the social reality of the time, the school becoming part of a new social stratum that modified the structure of society, developing it and making it more complex. Marín *et al.* (2000) summarizing the particularities of medieval

universities, point out that they had three constitutive characteristics: universalism, autonomy, and the spontaneous search for knowledge and truth.

And beginning in the 19th century, technological development and progress materialized in universities and the first fruits of the incorporation of research as a fundamental activity, begun in the last century, were obtained.

2.1.2. The Mission of Higher Education Institutions

From an examination of the purposes of higher education, there are different points of view, which vary according to circumstances and contexts. On this aspect, De Juan (1996) comments on two positions: on the one hand, those who defend the position that the university must not only train specialists or professionals, but also and above all educated men. Among them, the opinions of Ortega y Gasset stand out, who supported a clear division between teaching and research, because it was reserved for a select minority of students and because, on many occasions, teaching and research capacity did not go hand in hand.

Such a position maintains that university education must be economical, in the sense of teaching just what is necessary, given the limited capacity of the individual to learn and the scarce participation of the student in the tasks of university administration.

On the other hand, De Juan (1996) supports the position of other thinkers who maintain that the fundamental mission of universities must be the creation of pure science and research. Among them, the opinions of La Torre and Jaspers stand out, who consider that the university can only provide scientific training, leaving everything else outside its scope.

Along with these two streams of opinions were those who considered that the mission of the university is neither cultural nor scientific, but social, its purpose being to educate and train good citizens for society. Among them he highlighted the position of Cardinal Newman.

From the aforementioned opinions, De Juan (1996) extracts four major missions attributable to universities: teaching, research, cultural and social. And he maintains that universities must assume all these missions without belittling any of them, becoming aware that it is nothing more than a reflection of the society in which it is based.

And with the term mission, particularly when it refers to organizations, including Universities or universities, vision is linked. The latter refers to the explicit definition of what must be done to achieve the vision, and this is the definition of what is expected to be fulfilled as a function within society with the set of activities and resources put into operation in a keep the organization going. In the words of Dávila (2001), vision is the definition of a realistic, credible and attractive future for organizations.

In this sense, it is worth mentioning the approaches of Marín *et al.* (2000) related to the mission of the university, which links it with a new vision. Regarding the mission, it considers that the university is conceived as a collective entity at the service of society that

must educate, train and investigate with autonomy, ethics and responsibility; it must be a critical instrument that helps society to outline and foresee its future for social, productive and economic development; and, furthermore, it must become an expanding network with a flexible, dynamic and versatile organization.

Regarding the vision, the referred authors consider that universities or universities must define a new vision that contemplates the following purposes: allow equal access, improve participation, advance knowledge, have long-term orientations based on their relevance, strengthen cooperation with the world of work and the analysis and forecast of social needs, diversify to improve equal opportunities, develop critical thinking and creativity, and make staff and students the main protagonists of their action.

On the other hand, UNESCO (1998a) addressing the main aspects of higher education has reaffirmed the need to persevere, reinforce and promote its mission and fundamental values, in particular the mission of contributing to sustainable development and the improvement of society. In this sense, he points out that universities must direct their mission to:

1. To train highly qualified graduates and responsible citizens, capable of meeting the needs of all aspects of human activity.
2. Constitute an open space for higher education that promotes lifelong learning, offering an optimal range of options and the possibility of easily entering and leaving the system, as well as opportunities for individual fulfillment and social mobility in order to train citizens who actively participate in the society.
3. Promote, generate and disseminate knowledge through research and provide adequate technical skills to contribute to the cultural, social and economic development of societies, promoting and developing scientific and technological research as well as research in the field of social sciences, humanities and creative arts.
4. Contribute to understanding, interpreting, preserving, reinforcing, promoting and disseminating national, regional and international cultures.
5. Contribute to protect and consolidate the values of society.
6. Contribute to the development and improvement of education at all levels, in particular through the training of teaching staff.

Likewise, UNESCO has referred to the challenges that universities must face in the face of the new times, in response to the question of what is the university we need and, by extension, the higher education that we require for the 21st century? He points out that what is needed is a university that is a center of permanent education for updating and retraining; a university with strong fundamental disciplines, but also with a wide diversification of programs and studies, intermediate diplomas and bridges between courses and subjects so that no one feels trapped and frustrated by their previous choices.

The purpose must be that students leave the university carrying not only their

graduation diplomas but also relevant knowledge for living in society, together with the skills to apply and adapt it to a constantly changing world: "Knowledge has been, is and is they will be the fruit of the free search of unlimited prospecting, of imagination without borders (...) the University must descend into the arena of this overwhelmed and troubled world and say that we still have time to change the current tribulation into hope" (UNESCO, 1998a: 16).

For the above reasons and in light of the changes that are taking place, UNESCO summarizes the challenge of the university in the 21st century as follows:

1. Its modernization, both structural and curricular.
2. The adaptation of teaching to the demands of Latin American societies, assuming new conceptions of learning and the need for priority strategies for the most deprived population strata.
3. Support for the development of a system that offers education throughout life, taking a more leading and active role in providing feedback and transforming the entire educational system to improve its current quality and equity.

Based on the principle of the university's commitment to permanent education, the university that is envisioned would have the following characteristics:

1. It would be a university that maintains close coordination relations with the State, organized civil society and the productive sector; that it forms part of a National Human and Sustainable Development Project and that it contributes, through its prospective vocation, to configure the projects of future society, at the national and regional level.
2. A University that fulfills the definition of being the place where society allows the clearest conscience of the time to flourish, organizing itself as an authentic critical community of students and professors.
3. An institution that forges conscious and responsible citizens, professionals, researchers and technicians trained interdisciplinary, endowed with a humanistic and scientific culture, capable of continuing to educate themselves, adapting their knowledge to transformations and locating pertinent information, critically evaluate, judge and make decisions.
4. A center where they contribute to conserving, defending, increasing and disseminating their own cultural values, thus strengthening national culture and identity, and promoting the "culture of peace" and "ecological culture".
5. A university where teaching, research and extension are integrated into a single great university task, mutually enriching, and applied to the search for solutions to the problems of society and the nation.
6. A university aware of the globalization of knowledge and therefore integrated into the large academic and scientific telematic networks, and which actively participates in the international and regional university world. A university that accepts evaluation

by its peers and that practices systematic self-evaluation of all its activities. In addition, that aware of its social responsibility, without undermining its autonomy, recognize that it is subject to evaluation by society of the efficiency and effectiveness of its performance.

7. A university that knows how to use all the resources of modern educational technology, without allowing the machine to replace the teacher, except for those who deserve to be replaced by it.

8. A university that diversifies its student population and its offer of careers, also incorporating prestigious higher-level careers for their academic identity and for their possibility of allowing passage to long-term careers; to institutionally introduce distance education. A university inserted in the entire educational system, of which it must be the “head” and not a mere “crown” concerned with the levels that precede it, to which it must provide proposals for their qualitative improvement and planning.

9. A university fully incorporated into the post-secondary education subsystem, which must include universities and all other institutions of higher or non-university rank, articulated with each other, so as to offer young people and adults a rich and varied range of educational opportunities, all of which must allow early entry into the world of work and, at the same time, the possible continuation of studies up to the highest levels of academic training.

10. A university built on the basis of flexible academic and administrative structures that promote the reintegration of knowledge and interdisciplinary and transdisciplinary work.

After examining the previous approaches, as a conclusion it can be pointed out that the essential missions of higher education, and in particular of universities, are: to teach, investigate and serve society through the search and transmission of knowledge.

2.1.3. Higher Education Institution or University Models

According to Corredor (1999), several IES or university models can be established, depending on the philosophical current that supports it. The author considers that universities have generally been oriented towards two currents: one based on idealism and the other on pragmatism. However, the selection of these two currents does not indicate the limited influence of others in education, rather the author considers them as determinants and integrators in the process.

Idealism is a philosophical position whose argument is based on the fact that the true being is not what we know through the senses, but what we intuit through contemplative reason. Corredor (1999) points out that the educational purpose of this current is located more in the values of humanity and less in experience and facts.

This approach sees the university as a means to produce ideas and promote progress through training and research. In this sense, De Juan (1996) presents the main conceptions

of those who agree with this approach:

1. Cardinal Newman considers that the purpose of the university is to respond to the aspiration that individuals have for knowledge, its objective is intellectual, dissemination and extension of knowledge in an environment of freedom.
2. Karl Jaspers participates in the idea of autonomy that allows guaranteeing the truth through the relationship between researchers and students; The main functions of the university are research, teaching and training.
3. Ortega y Gasset conceives the university as a center for the transmission and creation of culture and science, as an integral whole; Its teaching is made up of three functions: the transmission of culture, the teaching of professions and scientific research, and the training of new men of science.

These conceptions, as a whole, coincide with the goals or purposes of the university.

For its part, pragmatism is critical thinking that emphasizes empiricism and change.

The postulates of this approach focus on the efficiency of the university and the adaptation of its purposes and structure to the requirements of society and the State. Corredor (1999) points out that the main conceptions adhered to this approach are:

1. The Napoleonic conception, which conceives education as a source of power and the university as a public service of the State.
2. The Marxist-Leninist conception, applied in the former Soviet Union, which conceives the university as a factor of production.
3. The business concept that assimilates the university to a productive social organization. From this point of view, the processes corresponding to the administration of organizations are applied.
4. The utilitarian conception, which conceives the university as an open social system, is oriented to stimulate the functioning of the institution under the same considerations of the system.

In summary, the implicit goals in these approaches are: public service of the State, factor of production, agent of political change, administrative efficiency and professional training.

2.1.4. The Functions of Higher Education Institutions

There is a series of functions that are specific to higher education institutions or universities. Marin *et al.* (2000) point out that the functions of Universities or universities are closely related to the different conceptions of the mission attributed to them. However, it summarizes a series of functions that all Universities must fulfill, namely:

1. Prepare and train qualified professionals and researchers in response to the needs of society.
2. Transmission of the university culture, understood as the transmission of a set

of democratic and universal values that allow the person to act critically before the events that occur in society.

3. Development and transformation of society.
4. Creation, development and innovation of science.

2.1.5. The Benefits of Higher Education

In order to address the benefits provided by higher education, the ideas of Mora (1999) will be followed, who groups such advantages into two basic categories: the benefits that it provides of an individual nature and those of a social nature.

Mora (1999) refers to benefits of an individual nature as those that most directly affect people who acquire higher education, but that obviously have a social effect since, in some way, they are transmitted to the rest of society. He classifies these benefits into three categories:

1. Educational benefits: The beneficial changes that are generated in the capacities, knowledge, values, attitudes, interests, habits, etc. Of students as a result of their time at universities.
2. Fringe benefits: Those acquired by students by receiving credentials that grant them social and economic advantages that, in principle, have nothing to do with their specific training.
3. Existential benefits: Those that university existence produces on those who live it, regardless of changes in intellectual capacities or social advantages.

And, when referring to the benefits of a social nature, the author classifies them into three classes, namely:

1. Contribution to social progress: refers to the contributions produced by social equality in access, adult education, research impact, among others.
2. Contribution to economic growth: refers to the effects produced by the impact of universities on the local and regional environment, the effect of the exploitation of scientific and technological research, the contribution to the training of skilled labor.
3. Contribution to cultural development: refers to all aspects of human thought, political activity, the transmission of ideas, including artistic manifestations.

2.2 INSTITUTIONS OF HIGHER EDUCATION IN LATIN AMERICA

It is considered important to carry out a brief review of higher education in Latin America because it is the context to which Mexico belongs, the final object where the case study is framed.

When referring to higher education in Latin America, Corredor (1999) argues that

universities were born as professional schools in the 16th, 17th and 18th centuries, oriented mainly to law and medicine studies. The first of these was the Universidad de Santo Domingo, created in 1538. He pointed out to the author that the models that inspired the creation of the first universities were those of Salamanca and Alcalá de Henares, the most important in Spain at the time.

For his part, García (1998) agrees when pointing out that Latin America was the region of the world where European universities were first transplanted in the 16th century, but considers that, of the predominant university models, it was the French one that had a great influence in Latin America.

Since then, universities have had a leading role, since the most important reforms in America have been led by students. The author of reference alludes to the reform of Córdoba in 1918, which had a great impact on university life whose prominence was picked up by the student activism of the sixties, fundamentally changes were required in the study plans, an appreciation of quality, greater social openness and greater representativeness and participation of students in university management bodies.

It is imperative to highlight the leading role of education in the production and socialization of knowledge and that Latin American universities have guided this process.

In this situation, Nijad (1997), after analyzing general data and fundamental educational statistics, points out that Latin America is presented as one of the regions where there was an accelerated growth in the demand for higher education and that the demands imposed serious obligations to the university. Politically it implied a transition from elite education to the masses; technologically, the transformation from merely academic institutions to institutes of pure and applied science; and economically, educational institutions adapt to serve the community.

In all countries there are national coordinating bodies for higher education, they represent government coordinating instances or national councils of representatives of the institutions themselves. These were initially created in Mexico in the 50's and from the 70's on in other Latin American countries.

On the other hand, in all countries there are organizations that coordinate statistical information, even with difficulties in responding to the demands of the speed required for the collection of information. This represents an obstacle for any innovative policy that they wish to undertake, since some countries are already working and have managed to define the information gaps.

It must be pointed out that it is necessary for the university to promote regional integration, aware of the globalization of knowledge, which is integrated into the large academic and scientific telematic networks, with full participation in the regional and international university world.

2.3 HIGHER EDUCATION IN MEXICO

While, in general, the public higher education institutions (PHEI, or IESP by its acronym in Spanish) constitute the object of study of this research, it becomes necessary to describe, in this section, describe the general characteristics of the studies of the Higher Education Level, from of its historical background, the problems of the same level and its insertion in the National Educational System, which will make it possible to know those aspects that show the way in which said level has been developed until the moment of closing this investigation.

2.3.1. Historical Background and Evolution of the Institutions of Public Higher Education of Mexico

The higher education institutions (universities) of Mexico recorded their beginnings from Colonial times, a historical period during which the Spanish conquerors founded them in Latin American lands. In New Spain, the Higher Education Centers imparted religious, scholastic and traditional culture, and their The main objective resided in the formation of respectful men of the *new world* and promoters of the existing traditional order (Solana, Cardiel, & Bolaños, 1998: v).

The historical background of the first university in New Spain dates from 1536, when the Colegio de Tlatelolco was created, which was basically oriented to the teaching of Latin among the indigenous people. Thus, when the first printing press arrived in Mexico in 1539, one of the most important impulses for the development of education in Mexico and America was given (*Idem*). Subsequently, the Royal and Pontifical Universidad de Mexico saw the light, which, from the Royal Decree of September 1551, and verifying in it six chairs: Theology, Holy Scriptures, Canons, Laws, Arts, Rhetoric and Grammar.

Other royal foundations also arose at the same time, such as the Engraving School (1778); the College of Noble Arts of San Carlos (1781); the Botanical Garden (1788); the Royal and Literary Universidad de Guadalajara (1791), the latter considered the first secular institution of higher education (OECD, 1997:52); and the Royal Mining Seminary (1792). And, then, the participation of the Jesuits was very vigorous in Mexican education, since they founded a large number of schools in different cities of Mexico, intervening in an outstanding way in higher education through their seminaries founded accordingly.

At the end of the struggle for Independence and the beginning of the latter, the main political and thought currents of the 19th century, the conservative and the liberal, held divergent points of view on education; the former saw in it the condition of economic progress; while the latter, the liberals, attributed to it a requirement of political evolution. However, both groups favored a reform of scientific and literary education and insisted on the development of an individual, energetic, rationalist personality with universal and ecumenical ideals of freedom, equality and progress.

Amid the dissolution of much of the colonial institutional complex, two universities were founded with independence in the states of Yucatán and Chiapas (OECD, 1997). And as part of this progress, the decree of President Valentín Gómez Farías of October 21, 1833 determined the institutions that would replace the old educational establishments such as the Royal and Pontifical Universidad de Mexico and the Colegio Mayor de Santa María de Todos los Santos (UNAM, 1975: 80).

During the period of government of Gómez Farías, education was removed from the hands of the clergy and the educational tasks of the government were organized and coordinated, establishing a General Directorate of Public Instruction for the District and federated territories, which would be made up of the Vice President of the Republic and six government-appointed directors. Subsequently, the decree that founded the establishments of public instruction in the Federal District was promulgated¹.

University and the Colleges of San Ildelfonso, San Juan de Letrán, San Gregorio and the Mining Seminary were reestablished. And again the university opened its doors under the name of National University. Then, the possibility of the university being governed independently of the government was raised, although this was impossible, since the first years of independent life in Mexico were characterized by weak institutional stability (Solana, *et al.*, 1998: 548).

Additionally, in a period of 36 years, in addition to establishing a foreign empire in our country, five constitutions were drafted, two federal and two centralist regimes were established, and two foreign wars were registered, in the last of which Mexico lost more than half of its territory (Gallo, 1994: 188). In those years, specifically in the government of Ignacio Comonfort, the university was once again suppressed; and later it would be restored, during the presidency of Félix Zuloaga (1858-1859) (*Idem*). Despite the short seven years of the university's life, a new brake would appear when the Empire of Maximilian (1864-1867) was registered, being closed again on June 11, 1865, to reopen its doors until 1910 (*Idem*).

Around the year 1867, under the government of Juárez, the so-called Organic Law of Public Instruction in the Federal District emerged, an order that specified the various areas of knowledge that would include studies at each level of instruction. Based on this, professional studies were oriented on bases that at that time were considered scientific. And its importance in the history of higher education in the country was crucial, since it managed to systematize and organize all the professional schools registered at the time, which served as a reference for the founding of the National University in 1910.

This Law, however, would be modified in 1869 and the resulting legislation would serve as the basis for most of the federal entities to transform their educational systems. So, the Preparatory School benefited socio-culturally for having simplified the educational

1 Such establishments were: 1) Establishment of Preparatory Studies; 2) Establishment of Ideological Studies and Humanities. 3) Establishment of Physical and Mathematical Studies; 4) Establishment of Middle Studies; 5) Establishment of Jurisprudence Studies and; 6) Establishment of Sacred Studies.

system and the advantages of secular, positivist and scientific middle or secondary education were confirmed (*Ibidem.*, 556).

During the successive mandates of General Porfirio Díaz, order was imposed in the country and its legal reorganization was registered, highlighting the civil, commercial and criminal code, among others. During the Porfiriato, education reached its most advanced organization, when in 1876 the field of public education was established. And since then, the government would be in charge of the fundamental tasks around education, becoming the governing power of the national educational system, and laying the foundations for primary or basic education.

Regarding the National Preparatory School, it acquired a marked influence from the positivist doctrine. Thus, the scientific and literary institutes were strengthened and increased in the most important populations of the country, becoming the immediate precedents of the universities of the 20th century. And, on September 22, 1910, the Universidad Nacional de México, It would be inaugurated in the framework of the end of the regime of Porfirio Díaz. In addition, in accordance with the Constitutive Law of the Universidad Nacional de México, in its 2nd article, the latter was integrated by the National Preparatory School, Jurisprudence, Medicine, Engineering, Fine Arts and Advanced Studies. In article 3 of the same ordinance, it was specified that the Minister of Public Instruction and Fine Arts, would be the Head of the Universidad Nacional de México; In addition, it conferred the government of the institution on the rector and the University Council (*Idem*)².

After the Díaz regime and the revolutionary movement of the beginning of the 20th century ended, the governments emanating from the aforementioned movement began the construction of a popular education system, established rural education, indigenous education and technical education. And the latter opened up the wide range of specialties that the industrial development of the nation required.

Thus, the thesis of social justice of the Revolution altered the educational system as a whole, going from the development of the individual personality to the equitable and balanced development of the community, which distinguished, for example, the era of socialist education in the government of President Lázaro Cárdenas. And shortly before the end of the armed struggle, some institutions were allowed to become state universities. Thus, there are: the Universidad Michoacana de San Nicolás de Hidalgo (1917) (SEP, UABC and ANUIES, 2002: 9; and Baltazar, 1978: 101); the Universidad de Sinaloa (1918); the Universidad de Yucatán (1922); the Universidad de San Luis Potosí (1923); the Universidad de Guadalajara (1924); Universidad de Nuevo León (1933); the Universidad de Puebla (1937) and the Universidad de Sonora (1942) (OECD, 1997: 52).

In post-revolutionary Mexico, higher education went through different significant

² It is worth mentioning that it was in 1917 when the Secretariat of Public Instruction and Fine Arts was abolished, since contrary to the aspiration to democratize the educational administration, it only covered the Federal District and the territories.

changes, most of them linked to the consolidation of the country project, which the different post-revolutionary governments made effective during their respective mandates. And, in the midst of these events, on September 25, 1921, the Secretariat of Public Education (SEP) was created³, which, in its beginnings, was characterized by its breadth and intensity: opening of schools, publishing of books, and foundation of libraries. ; measures that, as a whole, strengthened a nationalist educational project that also recovered the best traditions of universal culture. Thus, a vigorous effort would begin to reduce the number of Mexicans who could not read and write, first through the National University and later through the Ministry of Education.

After eighteen years of active academic life, in 1929, the National University would receive recognition of its autonomy through the Organic Law of the Universidad Nacional Autónoma de México. The fact would give rise to a progressive process of creation of national and state universities⁴.

In addition, by Decree of October 30, 1935, the National Council of Higher Education and Scientific Research was created, which would be the new instrument of the State to regulate the activity of higher education in Mexico. The Council had the character of a necessary consultative body of the government, and its essential function was to study the conditions and needs of the country in educational and research matters⁵.

Since the 1940s, on various occasions, rectors and directors of higher education institutions met informally in order to exchange information and examine the problem in order to their houses of study, such meetings being called, from 1944, National Assemblies of Guiding. And around 1948, the rectors decided to create a national body that would permanently associate the universities and institutes of higher secondary education in the country, which paid for the National Association of Universities and Institutes of Higher Education of the Mexican Republic to be established in 1950., immediate antecedent of the National Association of Universities and Institutions of Higher Education, (ANUIES).

During the 1950-1970 period, important higher education institutions and entities were present in Mexico, such as the Universidad Nacional Autónoma de México, the National Polytechnic Institute (1937)⁶ and by the National Council of Science and Technology, CONACyT -by its acronym in Spanish- (1970). In 1969, at the initiative of ANUIES, the National Coordinator for Higher Education Planning (CONPES) was created, and in 1971 the SEP gave rise to similar specialized organizations, which led to the signing of an agreement

3 The creation decree dates from that month, although it was promulgated four days later, that is, on September 29 of the same year. And, the following October, José Vasconcelos protested as head of the new dependency (Solana, *et al.*, 1998: 173).

4 In 1933, a reform to the Organic Law emphasized the autonomy and independence of the National University with respect to the Executive Power, but consequently restricting the subsidy it had been receiving from it.

5 This Council had a short life, and sponsored the development of University Centers such as Guadalajara and Morelia, and promoted the unification of study plans, as well as the orientations and methods of the official institutes of higher culture of the States (Gallo, 1994: 573).

6 The National Polytechnic Institute (IPN, by its acronym in Spanish) was founded by President Lázaro Cárdenas, based on a decree of January 1, 1936.

in 1976 between the Directorate of Planning of the SEP and the ANUIES, where the general guidelines were established to capture and process the pertinent institutional information.

For 1977, this way, ANUIES made several contributions to the National Education Plan, proposing sixteen points⁷ that in its consideration must govern the systematization of higher education. Then the bases for the National System of Permanent Planning of Higher Education (SINAPPES, by its acronym in Spanish) were drawn up, giving rise to posterity, the Undersecretariat of Higher Education and Scientific Research (SESIC, by its acronym in Spanish), of the SEP and the ANUIES, joint efforts to prepare the National Higher Education Plan and establish a set of programs to address issues such as academic improvement, legal standardization, scientific research, social service, financing, vocational guidance, university administration, integration of upper secondary education with information systems, and terminal derivations represented by short strokes.

During the 1960s and 1970s, the quantitative expansion of higher education was not accompanied by significant changes to it and its academic model. On the contrary, the expansion took place under traditional modalities and with the absence of desirable quality. Likewise, unregulated growth together with the crisis of the eighties that manifested itself as an absence of identity, trust and finances, led to establishing in Higher Education Institutions (IES, by its acronym in Spanish), conditions that are not very conducive to the necessary and permanent innovation.

Since the second half of the 1980s, the country has gradually moved towards far-reaching economic reforms since it entered the General Agreement on Customs Tariffs and Trade (GATT), today the World Trade Organization (WTO), which led to the adoption of neoliberal policies that gradually affected the political and social fields. And by the 1990s, the country's insertion into the international community was a reality in world markets after entering the North American Free Trade Agreement (NAFTA) and later the Organization for Economic Cooperation and Economic Development (OECD). The impact of these changes undoubtedly had repercussions in all areas of national life. And, consequently, the Universities have been aiming, since then, towards a new redefinition in relation to society and with the educational authorities at the federal and state levels.

7 These points were: 1. Guarantee the cooperative relationship between educational institutions; 2. Respect the autonomy and freedom of teaching and research; 3. Increase the interaction between the higher education system and society; 4. Promote a rational demand for higher education, guiding it according to the needs of the country and vocational interests; 5. Establish the national guidelines for the 1st entry into the higher education system; 6. Expand the coverage of the social demand for higher education with a greater, better and more adequate supply by the system; 7. Improve preparatory and terminal education for upper secondary education; 8. Train human resources in the institutions and for the service of the higher education institutions themselves; 9. Develop the administrative infrastructure of each of the higher education institutions; 10. Strengthen the participation of the State in financial responsibility and in the definition of human resources requirements; 11. Promote normative and information activities in the field of higher education; 12. Establish sufficient conditions to deal with work problems; 13. Increase the productivity of the higher education system; 14. Give meaning and social utility to the established practical activities; 15. Institute rules and procedures to guide and regulate the creation, growth and location of higher education institutions; and, 16. Structuring the higher education-employment relationship (Solana, *et al.*, 1998: 577).

2.3.2. Characterization of the Mexican National Education System and its Social, Political and Economic Context

2.3.2.1. Generalities

It was in the second half of the 20th century, when Mexico experienced an industrialization process that had an impact on its economic and social structure. Then, the urbanization scheme accelerated, for which the Universities have witnessed the appreciation of education as an eminently urban phenomenon, and this has been so due to the record of an unplanned growth of cities and the existing imbalances in the regions (ANUIES, 2000).

From 1900 to the year 2000, the nation underwent a profound change in the settlement patterns of its population⁸. In Mexico today, this problem has accelerated as a result of the economic strategy that the country has adopted in the last decades, from its entry into the GATT -now the WTO- in 1986, and the OECD in 1994. Thus, The nation has joined international markets through its participation in trade agreements with countries in North, Central and South America and Europe⁹, for which there are already eleven free trade agreements negotiated by Mexico, which grants the country secure and preferential access to markets in 32 countries representing approximately 860 million consumers.

Therefore, Mexican society is more urban and modern today. Although, regions of the country that have not benefited from economic growth coexist at the same time. The adaptation of people to the challenges that this new model implies has accentuated the inequality of Mexicans. And on the political issue, the country has experienced an extension of its democratic life, and which forms an essential part of the political transition that the country has experienced since the year 2000. The novelties in this area have consolidated important achievements, as has been the alternation of governments at the state and federal levels; as well as the strengthening of political parties and associations.

In the social field, first-order changes have also been generated, as is the case of the forms of association that were restricted to union and sectoral groups. Now, there are multiple civil society organizing initiatives. And the social barriers have grown and in some cases accentuated by economic policy and the polarization of income between the different social sectors.

Also, within the break with traditional schemes, which Mexican society faces on a daily basis, the transformation of the role of women stands out. In addition, the presence of the youth population demanding employment and greater social participation forces the

8 In 1910, one in every ten inhabitants lived in one of the 33 cities of that time. It is currently estimated that seven out of every ten inhabitants live in one of the 372 urban centers in the country. (Cf. Secretary of Public Education, 2001: 28).

9 Around 1992, the Economic Complementation Agreement with Chile entered into force; in 1994 the North American Free Trade Agreement; in 1995 the free trade agreements with Bolivia, Costa Rica and the so-called "Group of Three" with Colombia, Venezuela and Mexico were launched; in 1998 the Free Trade Agreement with Nicaragua entered into force; in 2000 the free trade agreements with Israel and the European Union entered into force, with the northern triangle made up of El Salvador, Guatemala and Honduras, with the European Free Trade Association, made up of Iceland, Liechtenstein and Switzerland. (Cf. Ministry of Economy, 2008).

different levels of government to create new political strategies to face the challenges of Mexican society in the 21st century.

Undoubtedly, of these solutions, universities have a very important role, since they will train qualified personnel who will lead the economic, political and social development of the country. Therefore, universities are forced to undertake a set of rearrangements and reforms to respond to the demands of Mexican society and the world today.

2.3.2.2. The National Education System in Mexico and the Location of Education Levels

Within government policies, education is appreciated as a fundamental pillar for life and progress in Mexico. Thus, in the National Education Program 2001-2006, the allusion to the topic is expressed as follows: "It is imperative to reconsider the tasks of Mexican education so that it effectively contributes to building the country we want: the nation fully democratic, with a high quality of life, dynamic, proudly faithful to its roots, multi-ethnic, multicultural and with a deep feeling of national unity, to which the National Development Plan 2001-2006 adheres; a country in which extreme social inequalities have been reduced and opportunities for development and coexistence are offered to the entire population based on respect for the law and the real exercise of human rights, in balance with the environment" (SEP, 2001: 16).

In the same vein, for its part, the 2007-2012 Education Sector Program establishes that: "Education is the basis for the progress of nations and the well-being of peoples. [...] [And,] In the knowledge society, the competitiveness of countries depends, to a large extent, on the strength of their educational systems and their ability to generate and apply new knowledge. Mexico must make education, science and technology the mainstays of its development. In them is the solution of the most pressing national problems; the increase in the quality of life of the population depends on them" (SEP, 2007: 7 and 10).

In addition, Article 3 of the Political Constitution of the United Mexican States formulates that education must be provided by the State and must harmoniously develop all the faculties of the human being, and at the same time promote love to the Homeland and the awareness of international solidarity, in independence and in justice. Thus, in section II, it is said that education will be democratic, considering democracy not only as a legal structure and a political regime; if not as a life system founded on the permanent economic, social and cultural improvement of the people.

Therefore, the legal framework of educational policies, and the National Education System (SNE, by its acronym in Spanish) in Mexico define the fields of educational actions in the country, in order to achieve good quality, a necessary condition for development. just and balanced national (*Ibidem.*, 7-8). In order to understand the link of the SNE, in compliance with the constitutional precepts and the current demand, both in qualitative and quantitative terms, it is necessary to review the articulation of the different levels that constitute it.

Thus, the SNE in Mexico is segmented into: basic education, upper secondary education and higher education. Next, reference will be made, from three sections, to these levels of the education system.

2.3.2.2.1 The National Education System in Mexico and Basic Education

Within the SNE is, first of all, Basic Education, an educational level that, in turn, is subdivided into: preschool, primary education and secondary education¹⁰. However, under the premise that inadequate preschool, primary or secondary education limits the opportunity to continue learning or studying, the Federal Government has taken on the task of implementing some programs that respond to these types of problems.

It has been estimated that the intervention of internal and external factors has impacted the quality of education which, in the end, is reflected in the operation of services. The state of Basic Education in Mexico, in recent years, has undergone some changes, such as the fact that the population of age to attend this type of education has stopped growing¹¹.

Similarly, it is estimated that one fifth of the population is of age to attend compulsory basic education (SEP, 2007). This has contributed, on the one hand, to focusing national efforts on improving the quality of education services and differentiated care for vulnerable groups, when the problem of coverage turns out to be not as pressing as in previous times¹². And another of the advances at this level is that education has been federalized¹³.

In the 1990s, a series of subprograms were established aimed at compensating for the lack of educational equity that afflicts the disadvantaged population. However, the Federal Government has recognized that these measures have been insufficient. The need to concentrate the curriculum and the materials for the acquisition of intellectual skills, both basic and fundamental knowledge, which constitute the foundation of all subsequent learning, has been noted, for which the study plans and programs have been renewed, and simultaneously the educational texts¹⁴.

In order to know the state of the situation, it has been required to carry out evaluations and diagnostic investigations. Since the nineties, a National System for the Update of Teachers in Service (SNAMS, by its acronym in Spanish) has been established, through the

10 At the Basic Education level, thinking skills and basic competencies are developed to favor systematic and continuous learning, as well as the attitudes and dispositions that will regulate their lives. The General Education Law establishes 200 mandatory school days (*Cfr.* SEP, 2001: 7).

11 According to estimates from the National Population Council (CONAPO), the population growth rate in 1995 was 1.73%; and in 2000, it was 1.44%. However, the Mexican population will continue to grow in the next half century, only that it will do so at lower rates than the current ones (*Cfr.* ANUIES, 2000).

12 Coverage problems have not been completely eradicated, since there are still weaknesses in getting basic education to geographical areas that are difficult to access, where the majority of the indigenous population is located.

13 Via a National Agreement, in 1992, the federalization of basic and normal education was promulgated. There was a reformulation of content and educational materials of primary, secondary and normal. And it was agreed to create a national system for updating in-service teachers, and a national system for job promotion that associates part of the teacher salary with teaching performance.

14 The Federal Government recognizes that an evident feature of basic education today is the lack of articulation, both curricular and organizational, between the different levels that comprise it (*Cfr.* SEP, 2001: 117).

creation of teacher centers and an offer of update courses; the transformation in the study plans of normal education; the beginning of the generalization of the use of information and communication technologies in the educational sector occurred¹⁵.

And in recent years, the National Educational Evaluation System (SNEE, by its acronym in Spanish) has undoubtedly been one of the key elements for quality improvement. Although, the problem for its optimal functioning has resided in the insufficient use of the instruments and the evaluation system, for which its mechanisms must be clear and systematic in the rendering of accounts. And in order to achieve new and better results from the programs undertaken, and in the future with others, the reorganization and restructuring of the Undersecretariat for Basic and Normal Education has been set as the main program to make it flexible and efficient in the face of new forms of management and evaluation of the internal operation, and thus guarantee the operability of the sectorial subprogram of Basic and Normal Education¹⁶.

2.3.2.2.2. The National Education System in Mexico and Education Upper Middle

In the context of the SNE, Higher Secondary Education (EMS, by its acronym in Spanish) has a fundamental place in the development of the creative participation of the new generations around the economy and work. And it is that the EMS offers graduates of basic education the possibility of continuing their studies and thus enriching their training. However, in recent decades enrollment in this level of education has grown significantly, so

¹⁵ Normal education prepares teaching professionals, and since the eighties its bachelor's degree was officially decreed.

¹⁶ According to the SEP, among the main programs for Basic Education are: With regard to educational justice and equity: The reorientation of the Program to Abate the Gap in Initial and Basic Education (PAREIB) and the Education, Health and Food (PROGRESA) in coordination with the National Council for the Promotion of Education (CONAFE, by its acronym in Spanish), Financial Strengthening Program for Basic Education. Regarding the policy of expansion of educational coverage and diversification of the offer, the following programs and projects have been outlined: Program for the Expansion and Strengthening of the Community Courses Model, Project for the Development of an Educational Model for Multigrade Schools, Education Project Basic for Migrant Boys and Girls, Program for the Educational Development of Minors in a Situation of the Street, and Program to Strengthen Special Education and Educational Integration. In very special attention to our indigenous people, the following programs have been outlined: Program for the Strengthening of Bilingual Intercultural Education Schools, Program for the Training and Professional Development of Bilingual Intercultural Education Teachers and Directors, Program for the Strengthening of Intercultural Education Bilingual, Program for the Development of Innovations in Bilingual Intercultural Education, Program for Gender Equity in Education Services for Indigenous Populations, and the Program for Intercultural Attention to Indigenous Children and Youth who attend Regular Schools (urban and rural). The intercultural education policy for all has outlined the Curriculum Development Program for Intercultural Education in Basic Education, the Training and Updating Program for Teachers in Intercultural Education and Values, the Informal Education Program for the Open Population on the Wealth of Our Country Multicultural. To ensure the quality of the process and educational achievement, the Government has designed the following programs and projects: Curricular, Pedagogical, and Operational Evaluation at the Three Levels of Basic Education, Definition of Educational Achievement Standards, and Graduation Profile of Basic Education, Definition of General Pedagogical Guidelines for Early Childhood Education, Curricular and Pedagogical Renewal of Preschool Education, Comprehensive Reform Program for Secondary Education, and the Program to Strengthen the Telesecundaria Education Service. Regarding the school management transformation policy, the following programs have been outlined: the Quality Schools Program, the Program for the Transformation of School Management in Basic Education and the Program for Updating and Development of School Directors, as well as the Project of Full Time. For the policy of strengthening educational content and production of materials, it has been outlined to carry out two national refresher courses each year to train teachers, directors, state technical teams and librarians, in the promotion of reading. Likewise, programs have been implemented to promote research and educational innovation in Basic Education, promotion of school self-assessment in Basic Education schools, projects for the Dissemination of Rights and Duties of Parents at School, Teacher Update Projects and Managers to Encourage and Take Advantage of Social Participation in Basic Education (*Cf. Idem*).

it is recognized that it is still far from unfolding its full potential¹⁷.

In the 2001-2006 National Education Program, a diagnosis is made that points out two fundamental problems at the EMS level: the first, the absence of its own identity, due to the fact that the modalities of this type of education have been subordinated to the higher education to the detriment of the development of their own potentialities; and the second has to do with the discrepancy between its high level of absorption of high school graduates and its relatively low performance in relation to retention and completion of studies.

Likewise, the EMS holds a strategic position to respond with opportunity and quality to the challenges of the knowledge society and the social and economic growth of Mexico. In the country, EMS currently has two modalities: propaedeutic and bivalent. The first, while offering a general baccalaureate, has a curricular structure that allows access to higher education; and also offers scientific, technical and humanistic knowledge, research methodology and command of language¹⁸.

For its part, the bivalent modality has a component of professional training to exercise a technological specialty of a propaedeutic nature¹⁹. In it, practical activities, professional practices and social service are carried out; and as part of this modality there are two options: the Technological Baccalaureate and the Technical Professional Education. The latter has offered since 1997 the possibility of accessing the undergraduate level. The Technological Baccalaureate plans are organized into two components: a common trunk, and the technological courses related to the different specialties; and also offers enrollment in the school system or the open modality.

17 According to the SEP, for the year 2001, of every 100 young people who finished high school, 93 entered EMS schools (Cf. SEP, 2001: 159); and, for 2007, the Presidency of the Republic asserted that "higher secondary education serves three fifths of the population between 16 and 18 years of age, that is, 58.6%; although enrollment at this educational level has grown notably, its terminal efficiency in 2006 was 60.1%" (Presidency of the Republic, 2007b: 179).

18 It must be noted that the study plans allow differentiating between the preparatory and the basic. In the basic one, mathematics, natural sciences, social sciences, language and communication are taught. In the propaedeutic, physics-mathematics and engineering; biology-sciences; Of the health; social; humanities; and art. Thus, "the institutions where the preparatory baccalaureate can be taken are the baccalaureates of the autonomous universities, the colleges of baccalaureates, both federal and state, state baccalaureates, federal preparatory schools, baccalaureate study centers, art baccalaureates, the military baccalaureates of the Military Schools of Transmissions and Military Schools of War Materials offer basic training that allows future soldiers to continue their professional studies at the Universidad de la Armada and Air Force, the open high school, a non-school modality, which favors the independent or self-directed study, the high school of the Federal District, which began in 1997, and depends on the Institute of Media Education of the Federal District and is financed by the Government of the City, the federalized high schools, which apply the same plan as the federal high schools, but they are private and private baccalaureates that offer preparatory programs through the Recognition of Official Validity of Studies (RVOE, by its acronym in Spanish), which is granted by the federal government, by state governments or by an autonomous and public higher education institution authorized by law to grant recognition to private institutions, the tele-baccalaureate that currently operates in 11 federal entities and the video-baccalaureate (...)" (SEP, 2001: 163-164).

19 Currently, the institutions where the technological baccalaureate can be studied are: the institutions dependent on the Federal Government for Industrial Technological Education, Agricultural Technological Education, and Education in Science and Technology of the Sea, whose programs are aimed at training related to the sectors industry and services, agriculture and forestry and fishing and aquaculture, the Colleges of Scientific and Technological Studies of the States (Recite, by its acronym in Spanish), the Centers for Scientific and Technological Studies of the National Polytechnic Institute, the Centers for Industrial Technical Education, the Schools of Technical Baccalaureate that groups the forms of bivalent upper secondary education with terminal options of a technical nature, taught by different organizations, and the National College of Technical Professional Education (CONALEP, by its acronym in Spanish), which is the main institution of technical professional education (*Idem*).

In the last decade, according to official data, enrollment in the EMS grew by 41%: the General Baccalaureate grew by 36% and the Technological Baccalaureate by 93.3% (Cfr., SEP, 2001: 165). Although, a big problem is the low terminal efficiency, since it is estimated that for the General Baccalaureate it is located at 59% and Technical Professional Education at 44%. These figures suggest that a deficient vocational orientation, a rigidity of the programs and the difficulty to update oneself, or with the interruption of studies for economic reasons, are latent. Given this, and coupled with the problems of access, equity, coverage, quality, management, integration and coordination of the system, the Mexican government has determined that the different systems and modalities integrate a set of common elements into their study plans and programs: the sharing of general capacities, attitudes, values and basic humanistic, technical and scientific knowledge by graduates; making the curriculum more flexible and guaranteeing efficient credit recognition mechanisms so as not to prolong studies unnecessarily; the incorporation into the curriculum of an educational approach centered on learning and the intensive use of information and communication technologies that has labor competency standards²⁰.

In the same vein, the National Development Plan 2007-2012, states that “there are still considerable lags in the national education system. The most important are the lack of opportunities for a large part of the population to access quality education, and advances in information technology” (Presidency of the Republic, 2007a: 176).

From this brief exposition on the current problems in the EMS, it is possible to identify at least three of the most outstanding, in our opinion: the expansion of coverage with equity; the good quality of the EMS; and the integration, coordination and management of the system. Hence, the government has set itself the goal of increasing care coverage among the 16 to 18 age groups from 47% in 2000 to 59% in 2006 (SEP, 2001: 172), adopting some strategies to address the aforementioned problems²¹.

2.3.2.2.3. The National Education System in Mexico and Higher Education

In the case of Mexico, Higher Education (HE), registered in the SNE, includes studies subsequent to those of the EMS; and it is taught both in public and private or private

20 Currently there are management, integration and coordination programs for the system, but in general they have functioned irregularly and have not achieved full consolidation, such is the case of the National Coordination of Higher Secondary Education (CONAEMS, by its acronym in Spanish), and the State Commissions for Planning and Programming of Higher Secondary Education, CEPPEMS, (*Idem*).

21 For example, support has been incorporated into the PROGRESA program so that young people from families enrolled in this program, and who have finished basic education, have access to upper secondary education. It has been established to award scholarships annually, setting the goal for 2006 to reach one million. Achieve that a proportion greater than 50% of public institutions serve the indigenous population, establishing programs with an intercultural approach. To address the quality of EMS, programs and funds are implemented such as the Fund for the Improvement of the Quality of Higher Secondary Education and the National Program for the Training and Updating of Higher Secondary Education Teachers. In order to strengthen the management and coordination bodies of the EMS, the General Coordination of Higher Secondary Education of the SEP is created and it will be observed that CONAEMS and CEPPEMS function effectively. Likewise, the National Advisory Council for Linking Higher Secondary Education was created in order to establish links between schools with the productive and social sectors. In the case of private Higher Secondary Education Institutions, the Recognition of Official Validity of Studies, RVOE (*Idem*).

institutions. In addition, the HE has as its purpose the training of people at the higher technical university or associate professional levels, bachelor's, specialty, master's and doctorate. The activities of higher education institutions (universities) vary according to the type and mission of each one. And, among these activities are: teaching, scientific, humanistic and technological research; technological studies and the extension, preservation and diffusion of culture.

According to the Federal Government, it is recognized that higher education constitutes the pillar of development in Mexico. Thus, in the National Education Program 2001-2006 reference is made to it as follows: "Higher education is a strategic means to increase the human and social capital of the nation, and the individual and collective intelligence of Mexicans; to enrich culture with the contributions of the humanities, arts, sciences and technologies; and to contribute to the increase in competitiveness and employment required in the knowledge-based economy. It is also a factor to boost the growth of the national product, social cohesion and justice, the consolidation of democracy and national identity based on our cultural diversity, as well as to improve the distribution of the population's income" (SEP, 2001 : 183).

In the same logic as its immediate predecessors, the current federal public administration, within its government program, has conceived that the mission of higher education today consists of "(...) strengthening the equity, quality and relevance of this type of teaching to train creative citizens and professionals, as well as scientists and technologists committed to their country, in order to turn higher education into a true motor of development to venture with advantage in the emerging knowledge economy" (Presidency of the Republic, 2007a: 278).

2.3.2.3. The National Education System in Mexico and its Linkage with the Production System

The arrival of the 21st century has required the government, society and Universities to update and redefine their objectives to reconfigure the country we want to have in the future. Starting from the premise that the world community is increasingly interdependent, and that Mexican society is undergoing a process of transition in the economic, political, social and cultural areas, the urgency of a transformation in education in general has been recognized. and the tertiary in the specific.

Among the different edges that this change must address, is its relationship with the productive system, which is also immersed in a challenging world in the face of globalization and global economic interdependence. Thus, the National Development Plan 2007-2012 itself, in its "Equal opportunities" section, contemplates an *educational transformation* that points out that another challenge to be overcome consists of recognizing the lack of link between HE and the labor market and, therefore, hence, the productive system (Presidency of the Republic, 2007a: 178).

So, the relationship between Universities with the social and productive sector must contribute to helping to capture more clearly the real needs of the society they serve, and thus offer solutions to the specific problems of the different sectors and programs to the economic and social development of its environment. Remember that since the mid-1990s, public universities and technological institutes dependent on the SEP, and some private higher education institutions have displayed great activity in linking with the productive sector. Today, most public universities carry out linkage activities with the productive sector through a wide variety of modalities such as the provision of services, such is the case of consultancy (82%), advisory services (84%), and technical assistance (77%), and to a lesser extent, more complex forms have been developed such as technology transfer (35%), contracted basic research (26%), and technology licensing (24%) (Casalet & Casas, 1998).

Precisely as a result of this link between Universities and companies, curricula have been updated and teaching-learning methods have been innovated. Teaching is in the development phase of the “entrepreneurial” programs, considering the stays and professional practices of the students in their workplaces. The Universities have had access to alternative sources of financing, and their graduates enjoy greater acceptance, in addition to the creation of new careers and research fields, in such a situation are the Technological Universities (ANUIES, 2000)²².

The curricular model of the Technological Universities is derived from the theoretical-practical matrix of human capital. It is directly oriented towards productive employment; offering at the end of the studies, two paths: obtain a valid diploma for the job market or continue higher education. However, this has not been achieved even by half of those who enter the system (Rodríguez, 2002: 11-17). And, precisely, the problem with this new university option has been linking the institutes with the university, a situation that is accentuated by the fact that the technological universities are mostly attached to the Federal District (60%). In 2000, the higher education or associate professional school enrollment represented 2.6% of the total number of those enrolled in the higher education school system (SEP, 2007: 186).

The Higher University Technician or Associate Professional studies offer two-year degrees in the areas of production and services, and lead to higher university technician or associated professional degrees. 68% of the enrollment at this level is concentrated in 44 technological universities, and the rest is attended by public institutes and private universities (*Idem*).

For its part, the National Polytechnic Institute (IPN, by its acronym in Spanish), founded in 1937, is the most mature national institution in higher technical education in the country and, therefore, the largest linked to the productive sector of the same. The dependency is defined as a teaching body whose function is to conduct studies that lead to the training of professionals in the careers that, in the especially technical type, Mexico needs. Its categories of instruction range from high school to professional and postgraduate.

²² The Technological Universities are public organisms, decentralized from the state governments. Three levels of government intervene in its creation: federal, state and municipal.

The National Council of Science and Technology (CONACyT, by its acronym in Spanish), created in 1970 during the government of Luis Echeverría Álvarez, has been the government entity in charge of coordinating Mexican scientific research, and optimizing its performance to achieve the development of a technology own. Today it has a great influence on the accreditation of scientists and technologists that Mexico has.

2.3.2.4. The National Education System in Mexico and the Context of internationalization

Definitely, the new international context, marked by globalization and the unprecedented progress of science and technology in the development of nations; the processes of regional market integration and the growing competitiveness of the productive apparatus; and the vigilant attitude of civil society towards institutions that provide public services -among them, educational ones-, make Universities find themselves immersed between challenges and opportunities. Thus, interdependence provides the opportunity to carry out research projects and academic programs at associate, professional, undergraduate or postgraduate levels, by taking advantage of the comparative advantages offered by the international spectrum that ultimately contribute to the strengthening of higher education in the country.

Likewise, the Universities have recognized that in today's world strategic alliances in the cultural and educational field are of the utmost importance, which makes it possible to strengthen exchange and mobility programs for students and teachers, through three modalities: mobility, academic exchange and international cooperation²³. And, within this framework, it is precisely the work that has been carried out recently by the Undersecretary of Higher Education and Scientific Research (SESIC), through the General Directorate of Higher Education (DGES)²⁴.

2.3.3. Configuration of the Higher Education System in Mexico

2.3.3.1. Generalities

In the National Education System, Higher Education constitutes the last structural level; and its offer consists of professional education and specialization. Professional education corresponds to undergraduate and higher technical degrees, and the second to

23 For example, some of these international mobility agreements are the ALFA Program (Latin American Program for Academic Training) in close relationship with the European Union, CONAHEC, which is designed for mobility among North American students, and It also has a linkage program between American and Mexican universities. CONACyT also has a series of agreements between governments, foundations and universities to support international mobility.

24 These dependencies to date have the following international programs: Program for Mobility in Higher Education in North America; United States-Mexico Quality Assurance and Mobility Program; North American Studies Program; Specific Program of Educational Cooperation with the British Council; and Cooperation Program within the Technological and Professional Training Field of French and Mexican Higher Education. It is interesting to note that this exchange has traditionally been carried out with counterpart institutions in North America (ANUIES, 2000). After the United States, Great Britain is the second country preferred by Mexicans to study abroad. According to surveys carried out by ANUIES in recent years, they show that approximately half of the Mexican participants go to US institutions, a third to Europe (Great Britain, France and Spain) and 15% to other countries (*idem*).

postgraduate degrees. The first has the purpose of preparing students in some discipline or specific knowledge for the authorized and professional exercise of a specific activity. And the postgraduate courses grant degrees of specialization in matters of greater delimitation.

Regarding the duration, professional studies consist, depending on the academic plan, between 3 and 6 years. They are attended mainly by students of 18 years of age at the entrance. For their part, postgraduate programs last, depending on the degree of specialization, between 1 and 4 years.

Finally, within the SNE, the Higher Education System (SES) is located, that is, professional education and specialization. Currently, the SES is made up of more than 1,500 public and private or private institutions, offering educational programs for higher university technicians or associated personnel²⁵, undergraduate²⁶, normal education²⁷, and postgraduate²⁸ (SEP, 2001: 186).

2.3.3.2. Regulatory framework

The SNE has its mandate in the national regulatory framework related to education, which is made up of the Political Constitution of the United Mexican States and the General Education Law.

Thus, the third article of the Magna Carta establishes the basic norm in education. And, specifically, in sections V, VI and VII what is related to higher education is outlined: "(...) V. In addition to providing preschool, primary and secondary education, indicated in the first paragraph, the State will promote and attend all the types and modalities of education, including higher education, necessary for the development of the nation, will support scientific and technological research, and will encourage the strengthening and dissemination of our culture. SAW. Individuals may provide education in all its types and modalities. In those established by law, the State will grant and withdraw the recognition of official validity to the studies that are carried out in private schools. VII. Universities and other higher education institutions to which the law grants autonomy will have the power and responsibility to govern themselves; they will carry out their aims of educating, researching and disseminating culture in accordance with the principles of this article, respecting the freedom of academic and research and of free examination and discussion of ideas; they will determine their plans and programs; They will set the terms of entry, promotion and

25 The Associate Professional or University Technician category offers two-year degrees in manufacturing and service areas, leading to university advanced technician degrees. 68% of the enrollment at this level is focused on 44 relatively recent technological universities in the country. Currently, this type of Universidad defers 25 careers. The rest of the enrollment for this grade is taken care of in private institutions (SEP, 2001: 186).

26 Undergraduate studies include courses with a minimum duration of four years. Its enrollment amounts to 1,664,384 students, of which 68.6% are enrolled in public institutions, and 31.4% in individuals (*Ibid*: 186).

27 This degree of higher education offers undergraduate and postgraduate programs for the training of basic and specialized education teachers. 60% of the enrollment is served by public institutions, and 39.9% by private schools (*Idem*).

28 The postgraduate course includes specialty, master's and doctoral studies. Currently, 21.9% of the enrollment is in the specialty, 71.1% in the master's degree and 7% in the doctorate. 59.4% of the enrollment is served by public institutions and 40.6% by individuals (*Ibid*: 187).

permanence of their academic and administrative staff, they will be regulated by section A of article 123 of this Constitution, in the terms and with the modalities established by the Federal Labor Law, according to the characteristics of special work, in such a way that they agree with autonomy, academic and research freedom, and the purposes of the institutions to which this section refers” (Political Constitution of the United Mexican States, 2007: 6-8).

Regarding the General Education Law, it establishes in its first article that “(...) The educational social function of universities and other higher education institutions referred to in section VII of article 3 of the Political Constitution of the United States Mexicans, will be regulated by the laws that govern said institutions” (General Education Law, 2004: 4).

For its part, the Law for the Coordination of Higher Education aims to establish the bases for the financing of higher education between the Federal Government, the states and the municipalities²⁹.

And, in the case of public universities, their laws are organic and issued by the corresponding Congress, from which the institutions generate their internal regulations. Technological institutes also have their internal regulations. The Organic Laws of the autonomous public universities establish the purposes, structure, form of government, methods of administration, general provisions on its operation, rights and duties of students and professors. Public universities approve secondary regulations where the standards for admission of students, professors, promotion, as well as the faculties, terms and limitations of their collegiate bodies are established, as well as the obligations and rights of their executive authorities.

In the same vein, and taking up the General Education Law, it states in its ninth article that: “In addition to providing preschool, primary and secondary education, the State will promote and attend -directly, through its decentralized agencies, through financial support, or by any other means- all types and educational modalities, including higher education, necessary for the development of the nation, will support scientific and technological research, and will encourage the strengthening and dissemination of national culture and universal” (*Ibid.*, 15).

Similarly, the federated states issue their education laws adhering to the guidelines of federal law. Other types of laws regulate complementary aspects of the life of universities; as is the case of labor relations in autonomous public universities. For example, article 123 of the Constitution establishes that they will be governed by what is established in a special section of the Federal Labor Law.

²⁹ For this, said law considers two councils based on advisory bodies of the federal government: the Council of Normal Education and the Council of the National System of Technological Education. The Federal Government assigns resources to public higher education institutions, in accordance with certain conditions such as institutional planning, academic improvement programs, administrative improvement, and the priorities that stand out at the time. In relation to the foregoing, Article 22 of said law establishes that, “(...) The income of public institutions of higher education and the assets owned by them will be exempt from all types of federal taxes” (Law for the Coordination of Higher Education, 2006: 19).

Autonomy is exclusive to public universities and is the result of an Organic Law issued by the Federal Congress (in the case of federal public universities: the Universidad Autónoma de México and the Universidad Autónoma Metropolitana), or by the corresponding State Congress, as is the case of the autonomous universities of the States³⁰.

Finally, according to the General Directorate of Higher Education of the SEP, there are currently 34 autonomous institutions in the country, namely: Universidad Autónoma de Aguascalientes; Universidad Autónoma de Baja California; Universidad Autónoma de Baja California Sur; Universidad Autónoma de Campeche; Universidad Autónoma del Carmen; Universidad Autónoma de Coahuila; Universidad de Colima; Universidad Autónoma de Chiapas; Universidad Autónoma de Chihuahua; Universidad Autónoma de Ciudad Juárez; Universidad Juárez del Estado de Durango; Universidad de Guanajuato; Universidad Autónoma de Guerrero; Universidad Autónoma del Estado de Hidalgo; Universidad de Guadalajara; Universidad Autónoma del Estado de México; Universidad Michoacana de San Nicolás de Hidalgo; Universidad Autónoma del Estado de Morelos; Universidad Autónoma de Nayarit; Universidad Autónoma de Nuevo León; Universidad Autónoma Benito Juárez de Oaxaca; Benemérita Universidad Autónoma de Puebla; Universidad Autónoma de Querétaro; Universidad de Quintana Roo; Universidad Autónoma de San Luis Potosí; Universidad Autónoma de Sinaloa; Instituto Tecnológico de Sonora; Universidad de Sonora; Universidad Juárez Autónoma de Tabasco; Universidad Autónoma de Tamaulipas; Universidad Autónoma de Tlaxcala; Universidad Veracruzana; Universidad Autónoma Yucatán; y Universidad Autónoma de Zacatecas.

2.3.3.3. Institutional Coordination Structure

According to the SEP, there are two levels of coordination in Higher Education, namely: federal and state. The first is characterized by the national scope of its policies and programs; and the state level is distinguished by being directly linked to the government of each of the 31 federal entities and the Federal District.

However, within the federal government there are two sub-secretariats of State that have to do with Higher Education: the Sub-secretariat for Higher Education and Scientific Research (SESI) and the Sub-secretariat for Education and Technological Research (SEIT). The first coordinates and assigns resources to public universities, as well as administers federal subsidies for autonomous public universities, as well as technological universities³¹. In addition, it does not have executive functions, nor does it participate in

³⁰ Each of the states of the Republic has at least one autonomous university. Additionally, there are some autonomous public higher education institutions by decree of the federal Executive Power.

³¹ Among the tasks of the SESI, the following stand out: 1) The coordination of the programs related to the autonomous public universities, the technological universities and the private universities and higher education institutions; the administration of the Integral Program for Institutional Strengthening, PIFI, (whose first planning exercise took place in 2001), of which the Fund for the Modernization of Higher Education, FOMES, is a part; 2) The Investment Fund of State Public Universities with ANUIES, FIUPEA Evaluation; and the Multiple Contributions Fund, FAM; the Support Program for University Development, PROADU; the Program for the Standardization of Administrative Information, PRONAD; and as part of the academic sphere, the Faculty Improvement Program, PROMEP; 3) The publication of national statistics

the elaboration of the *curricula*, but through the Comprehensive Program for Institutional Strengthening (PIFI) it stimulates the fulfillment of certain priorities; and, it does not interfere in the government of the universities, nor does it influence the appointment of its authorities (SEP, 2003)³².

For its part, the SEIT coordinates federal policies for the subsystem of technological institutes. This subsystem has the National Polytechnic Institute and 189 technological institutes, of which 23 were created during the beginning of this decade (Ibarra, 2002). In the Undersecretariat, the central authority has powers to: 1) regulate teaching activities; 2) design the curriculum; 3) designate the directors of the institutions and manage their budgets, and the labor relations of teachers and workers with the National Union of Education Workers (SNTE, by its acronym in Spanish). The public system also includes some professional schools such as the National School of Anthropology and History, the schools of the National Institute of Fine Arts, agricultural higher education institutions, and the professional schools of the Armed Forces.

In addition, it is necessary to point out that, in the field of state governments, there are different administrative units within the secretariats of public education responsible for Higher Education, which can be undersecretaries, or general directorates of Higher Education. Likewise, it must be considered that in each of the States there is a State Commission for the Planning of Higher Education (COEPES, by its acronym in Spanish), whose operation varies between entities.

As for the federal government, state governments and institutions have established policies and mechanisms for two decades in order to improve the SES. The current system, derived from the National System for Permanent Planning of Higher Education (SINAPPES, by its acronym in Spanish), has registered moments of high effectiveness, but also some of reduced productivity. This is due, among other things, to the fact that the National Coordination for the Planning of Higher Education (CONPES, by its acronym in Spanish) has not had a regular operation, and the state instances, fundamental for the development of HE in the states, continue without being consolidated and do not. They have had a proper job.

In addition, within the coordination of the SES, in Mexico there is the decisive participation of non-governmental organizations such as the National Association of Universities and Institutions of Higher Education (ANUIES), which has worked closely with the government in recent years around the design of higher education policies; even more recently, the National Center for Higher Assessment (CENEVAL, by its acronym in Spanish); and finally, the Council for the Accreditation of Higher Education (COPAES, by its acronym in Spanish).

on higher education; 4) The promotion of higher education evaluation policies; 5) The issuance of the professional certificate; 6) Your link with ANUIES; 7) Keep the copyright register; 8) Take charge of designing and executing the Federal Government's policy towards public universities (*Vid.*, SEP, 2003).

32 SESIC currently has among its special programs the PIFI (Comprehensive Institutional Strengthening Program), PROMEP (Teacher Improvement Program), FOMES (Fund for the Modernization of Higher Education), PRONABES (National Program of Scholarships for Higher Education), among others (*Idem*).

Towards the end of the 1980s, a series of commissions made up of federal government officials and rectors or directors of the SES were integrated, and as a result of this strategy the National Commission for the Evaluation of Higher Education (CONAEVA, by its acronym in Spanish) emerged. Since then, the following evaluation schemes have been carried out, namely: 1) self-evaluation by the Universities; 2) the inter-institutional evaluation entrusted to the Inter-institutional Committees for the Evaluation of Higher Education (CIEES, by its acronym in Spanish); and 3) the evaluation of the system and subsystems by the sub-secretariats of the SEP and ANUIES. Add, finally, that since 1993 there has been CENEVAL, and since 2000 with COPAES, an instance endorsed by the SEP to issue official recognition to the accrediting bodies of the academic programs of the Universities of Mexico.

2.3.3.4. Public Higher Education Institutions and Institutions Private or Private Higher Education

In the legal framework of educational matters in Mexico, and specifically the General Education Law, public and private education are included within the national educational system; and also regulates in chapter V, the education provided by individuals³³.

In the country, HE has the public and private or private modality; both constitute the SES, which, as already noted, is made up of more than 1,500 institutions with different profiles and missions (SEP, 2001; 186). The public system comprises almost 70% of the total enrollment, although this proportion is usually variable between the levels of the system (*Idem*).

In addition, educational institutions in Mexico have three options for their study programs to be officially recognized, namely: 1) from the autonomous institutions³⁴; 2) through incorporation³⁵; and 3) by granting the official recognition of validity issued by the federal or state government³⁶.

In recent times, the offer of educational programs in private or private higher education institutions (IESPP, by its acronym in Spanish) has expanded significantly, thereby contributing to the professional training of Mexicans. Today, there are private institutions in all the federal entities of the Republic. In addition, the government has contributed to the improvement of the requirements and procedures for the granting of the Official Validity Recognition (RVOE, by its acronym in Spanish), which is granted by both the federal and state governments and also by public autonomous universities, ceding their incorporation of studies to private institutions.

33 Cf. Articles 10, 54, 55, 56, 57, 58 and 59 of the General Education Law.

34 The respective organic law, issued by the federal or state legislature, grants in advance official recognition to the study programs of the autonomous universities. In addition, the autonomous universities have the power to grant official validity -through the figure of "incorporation"- to the educational programs of the non-autonomous institutions.

35 The autonomous universities assume the responsibility of ensuring that the programs offered by private institutions meet the curriculum they teach, and under the same current standards of the same institution.

36 This is an intermediate option for those already mentioned. They do not have the flexibility of autonomy, but neither do they have the rigidity of incorporation. Private institutions can offer their own curriculum and standards, as long as it has been authorized by the corresponding government agency.

Also, it is worth highlighting the body that represents private institutions is the Federation of Private Mexican Institutions of Higher Education, AC (FIMPES, by its acronym in Spanish).

Returning to, according to data from the Directorate of Higher Education, in Mexico, higher education institutions (universities) are classified as public and private. Within the public ones are the universities, both state (UPE, by its acronym in Spanish) and federal (UPF, by its acronym in Spanish), both enjoy autonomy; there are also the so-called Solidarity Support State Public Universities (UPEAS, by its acronym in Spanish); polytechnic universities and technological universities. Likewise, there are technological institutes, which, similar to universities, exist at the state and federal levels. On the other hand, there are the Army and Navy schools, the normal schools, and others. And, for their part, private Universities have universities, schools, institutes, centers and others.

In the same vein, the ANUIES classifies the SES into six subsystems, namely (*Cf. ANUIES, 2000*): 1) Public Universities (UP)³⁷, 2) Technological Universities (UT)³⁸, 3) Private or Private Universities (UPP)³⁹, 4) Other Public Institutions (OIP)⁴⁰, 5) Technological Institutions (IT)⁴¹, and 6) Normal Education (EN)⁴². There are also other types of Universities, such as the one approved by the ANUIES General Assembly in 1999, based on UNESCO's 1997 International Standard Classification of Education (ISCED, by its acronym in Spanish), and which takes into consideration matters related to the classification of programs and the establishment of desirable minimums, in terms of the level and time of dedication of the academic plant. Based on these criteria, six types of them are proposed, namely (*ANUIES, 1999*): 1) IDUT: higher education institutions, predominantly focused on the transmission of knowledge, and that offer programs exclusively at the higher university technical level or associate professional; 2) IDEL: higher education institutions, whose main activity is focused on the transmission of knowledge, and which offer programs exclusively or mainly

37 There are 45 institutions of this type, whose functions are teaching, research and extension of culture and services. This subsystem is represented by federal and state universities, with most of the public universities being autonomous. In addition, it serves approximately 50% of the country's research, 52% of undergraduate students, and 48% of post-graduate students.

38 They are decentralized public bodies of state governments; and they are present at the federal, state and municipal levels, being created from 1991. Their study programs last two years, training associated professionals. Thus, from 1998 to 1999 there were 36 technological universities in 19 entities, serving 1.1% of enrollment in higher education.

39 There are 976 organisms, not including normal schools; and they are classified, according to their official name, into five groups: a) Universities: 306; b) Institutes: 256; c) Centers: 239; d) Schools: 88; and e) Other institutions: 87. Such universities require the RVOE, the SEP or the state governments, or they may be incorporated into a public educational institution authorized to do so. This subsystem serves 27.6% of enrollment in undergraduate degrees and 36.5% in postgraduate courses.

40 These are 67 institutions not included in the previous two; they serve 1.1% of the undergraduate population, and 7.5% of the postgraduate population.

41 There are 147 institutions that represent 19% of undergraduate enrollment, and 6% of postgraduate students. Of the previous number, 102 are coordinated by the SEP through the Center for Research and Advanced Studies of the IPN, the National Polytechnic Institute (IPN), the Federal and Agricultural Technological Institutes, those of Marine Sciences and a Forest Technological Institute. Of these, 45 are decentralized agencies of state governments. The offer of its programs is 3 years long: 2 of common core and 1 of specialty. Likewise, they favor a rapid entry into the labor market and open up the possibility of continuing with higher education.

42 This level prepares teachers in different types and levels of the National Education System. Their program lasts from 4 to 6 years. There is the possibility of obtaining a degree in preschool, primary education, secondary education, special education and physical education. Of the total number of its schools, 220 are public and 137 private. They represent 11.8% of the population in higher education.

at the undergraduate level; 3) IDLM: higher education institutions, whose main activity is focused on the transmission of knowledge, and which offer programs at the undergraduate and postgraduate level up to the master's level; 4) IDILM: higher education institutions oriented towards the transmission, generation and application of knowledge, and that offer programs at the undergraduate and postgraduate level (predominantly at the master's level; eventually they have a doctoral program); 5) IDILD: higher education institutions oriented towards the transmission, generation and application of knowledge, and that offer programs at the undergraduate and postgraduate level up to the doctoral level; 6) IIDP: higher education institutions, whose main activity is focused on the generation and application of knowledge, and which offer academic programs almost exclusively at the master's and doctoral level.

2.3.3.5. Higher Education and its Elements of Access, Coverage, School Requirements and Duration of Studies

Urbanism continues to be an element highly correlated with access to Higher Education (HE), since 45% of young people between the ages of 19 and 23 who live in urban areas and belong to families with medium or high incomes receive higher education; those who live in poor urban sectors represent 11%, and only 3% of those who live in poor rural areas (SEP, 2001: 189).

Undoubtedly, HE in Mexico has been a remarkable means of social mobility for young people between the ages of 20 and 24. For example, by 1950 it represented 1.3% of the population between the ages mentioned, who had accessed higher education; and in 1998 it was 16.6%; and in 1999, 17.7% (ANUIES, 2000).

The coverage of HE is distributed heterogeneously in the country, differentiating four groups: group I, with a rate higher than 25%⁴³; group II, with rates of 20 to 25% coverage⁴⁴; group III, with rates of 15 and 20%⁴⁵; and, group IV, with rates lower than 15% (*idem*)⁴⁶.

Regarding the requirements to access the HE in Mexico, it is considered necessary to have the official certificate that endorses the completion of the Education Upper Middle (EUM, or EMS by its acronym in Spanish) with the minimum average that each of the universities requests within their entry requirements. Applicants also have to undergo a selection exam⁴⁷. And, also, it must be noted that some Universities that teach baccalaureate

43 This group includes the Federal District, Tamaulipas, Nayarit and Nuevo León.

44 This group is made up of Colima, Chihuahua, Sinaloa and Sonora.

45 Made up of Aguascalientes, Baja California, Campeche, Chihuahua, Durango, Guerrero, Jalisco, Morelos, Puebla, Querétaro, Tabasco, Tlaxcala and Yucatán.

46 Integrated by Baja California Sur, Chiapas, Guanajuato, Hidalgo, State of Mexico, Michoacán, Oaxaca, Quintana Roo, San Luis Potosí, Veracruz and Zacatecas.

47 Some universities design and apply their own exams such as the UABC, UNACH, UGTO, UAC, UACH, UJAT, UAN, UAS, UADY, UAZ, UAM, IPN and UNAM (by its acronym in Spanish). Other universities apply exams designed by external agencies such as the EXANI II of CENEVAL for admission to the undergraduate degree. The universities that apply this exam are: UAA, UABCS, UACAM, UJAT, UANL, UNACAR, UAG, UNICACH, UACJ, UAEH, UAEMEX, UAEM, UANL, UAQRO, UASLP, UAS, UATLAX, UAT, UCOL, UABJO, UJAT, UJED, UOCC, UQRoo, UV by its acronym in Spanish). Some universities even apply the College Board exam such as: BUAP, UAA, UdG, UNACAR, UANL and UAC by its acronym in Spanish). Another applicable exam is the ESCOBA (Basic Knowledge and Skills Exam) of the Universidad Autónoma de Baja California. The institutions that use this exam are UNISON and UG. For medicine, the ANFE is applied at the UACH and UQRoo, and for engineering the ABET, applicable at the UAQRO (by its acronym in Spanish).

courses, allow the so-called automatic or regulated pass to their students of that educational level who obtain the minimum qualification stipulated for admission to higher studies.

However, to obtain a degree in the IES it is necessary to cover the number of credits corresponding to the degree that has been taken, in addition to opting for the modalities that some institutions offer to graduate. Among these, the following stand out: thesis⁴⁸, dissertation⁴⁹, professional experience report⁵⁰, degree seminar⁵¹, general knowledge⁵² exam, postgraduate credits⁵³, high school performance⁵⁴ and social service report⁵⁵. In addition, the duration of the careers lasts between four and six years, depending on the studies that are carried out. The programs of the study plan mark the subjects that must be studied.

2.4 CHARACTERIZATION OF THE EDUCATIONAL SYSTEM OF MICHOACÁN AND ITS SOCIAL, POLITICAL AND ECONOMIC CONTEXT

For the inhabitants of the state of Michoacán, education is one of the priority lines of development because of what it means in the field of training Michoacán for life and work, and because of its role in forging and solidifying historical, artistic, social, civic and cultural values.

According to the official version, “the increase in basic education coverage has maintained a constant growth rate. The preschool priority level has grown from 48.9 percent in 2002 to 76.4 percent in 2007; at the primary level, virtually the entire population is covered; at the secondary level, in the same period, it went from 74.3 to 77.7 percent. As can be seen, the percentage of growth in enrollment in preschool services has been greater than in secondary education, but in either case there is a great deficit in attention to demand” (Government of the State of Michoacán, 2008: 75).

According to data from the National Report on Higher Education in Mexico (2003), from 1993 to 2003 enrollment in upper secondary education had grown by 41%, the

48 Elaboration of a research work, whose significance implies an intellectual effort in the studied career, where a problem is posed, a hypothesis is presented and a proposal is given. It must be evaluated by a director and two synodal.

49 Preparation of a research project that must be extended in the particular approach of the person presenting it without being reduced to bibliographical citations. It is shorter than the thesis because the theoretical framework is generally not included.

50 It consists of the preparation of a written report of the professional activities of the intern during a period, in general, not less than three years, where the knowledge of the specialty is applied. In some universities, in addition to the report, an oral presentation of it must be made. The field of work has to be in order with what was studied.

51 Minimum duration of 150 hours and can be divided into two seminars. To accredit it, the student must have a grade of no less than eight, and a minimum attendance of 80% and present a written work related to the seminar, although it may vary from university to university.

52 It consists of passing an exam, which depending on the institution can be written, theoretical or oral. Some universities prepare their own exam and others apply those of CENEVAL.

53 Obtaining 50% of the credits for courses required to cover a postgraduate program equivalent to a master's degree and the presentation of a research paper. The credits must be related to the programs taken.

54 With a clean academic record and an average of 9.0 to 9.5, depending on the university, the student can graduate without writing a thesis. Some universities require the student a report on the topic they want.

55 Professional activities for a minimum of 700 hours in a work area that allows you to apply the knowledge acquired corresponding to your career and that at the end of the social service you submit a written report based on what you have learned.

general baccalaureate by 36% and the technological baccalaureate by 93.3%; however, a big problem is the low terminal efficiency. The same source estimates that for the general baccalaureate it stands at 59%, and for technical professional education at 44%.

On the other hand, although illiteracy has been significantly reduced in recent years, the entity still remains below the national average in some other indicators. The most serious lags are faced in rural areas and in indigenous towns and, in general, it can be affirmed that the dispersion and geographical obstacles make it difficult for children and young people to access education services, mainly in the towns furthest away from capitals, municipalities and urban development centers.

Today, the main problem facing the State in education has to do with limited budgetary resources. The transfer of federal resources to address educational priorities, instead of increasing as a consequence of the decentralization process, has been reduced⁵⁶.

The current public policy oriented to the Educational System of Michoacán has the purpose of guaranteeing the access, permanence and completion of studies of the population in all types, levels and modalities of public education (*Ibidem*, 76). In addition, the State government has recently promoted the expansion of the offer of the upper secondary level in the modalities of general, bivalent or open high school, meeting the needs of infrastructure and equipment. Consequently, a more agile and effective reorganization and coordination has been undertaken at the upper secondary level to unite and promote the development of the variety of institutions that address the various training fields. This with the idea of enabling the unification of institutional efforts against the priorities of social and economic development of the State (*Idem*).

2.4.1. Institutions of Higher Education in Michoacán

According to 2003 data from the Federal Public Education Ministry, Michoacán is one of the ten states with the highest concentration of higher education in its capital city. The Michoacana Universidad de San Nicolás de Hidalgo concentrates more than 85 percent of its enrollment in the city of Morelia. Report of the Rector of House of Hidalgo, in the same vein, point out that “the University remains the Higher Education Institution with the highest percentage of higher education enrollment in the State, by conserving 54% of registered students” (Universidad Michoacana de San Nicolás de Hidalgo, 2009: 7). Consequently, Michoacán presents a scheme of centralization and concentration of the coverage of services in higher education.

In addition, in the last decade, the entity has registered a substantial growth in the demand for higher education (up to 85%) as a consequence of the transfer of demand from the basic level and the expectations of personal and social development offered by

⁵⁶ In 1992, when the decentralization agreement was signed, of each peso invested in public education, 90 cents came from the Federation and 10 cents from the state administration. Today, of each peso in education, the Federation puts only 69 cents and the State Government thirty-one (Government of the State of Michoacán, 2008: 76).

the training of higher level in a restrictive work environment. Likewise, it is imperative to increase the offer of higher education outside the state capital.

In accordance with the policies of the State government, for the sake of the promotion of Universities in Michoacán, the Secretary of Education in the State maintains a continuous link with all public or private institutions of higher education in the entity, giving particular emphasis to coordination with the UMSNH, promoting, within the scope of attributions and legal status of both institutions, the realization of joint programs of teaching, research, extension, scientific dissemination and cultural activities, by signing the corresponding agreements (Government of the State of Michoacán, 2008: 80). And “in order to serve the broad segment of young people without access to higher education, especially those who live in the interior of the state, seven university campuses will be opened in this four-year period in the regions of Lázaro Cárdenas, Hidalgo, Zitácuaro, Zamora, Uruapan, Apatzingán and Huetamo, in addition to seeking the extension of the Universidad Michoacana in each of the 113 municipalities of the state, with distance education in some cases” (*Ibidem*, 81).

As for public Universities in Michoacán, the Universidad de Ciénega del Estado de Michoacán de Ocampo joins the UMSNH, which to date has an enrollment of 318 students who are studying bachelor’s degrees oriented to the development of agriculture, livestock, commerce, agro-industries and fish farming, highlighting those of Food Genomics, Energy Engineering, Governance and New Citizenship and Nanotechnology Engineering (*Idem*). In the same way, according to government sources, Michoacán currently has a multicultural higher education offer in three modalities: the Normal Indigenous School, the P’urhepecha Higher Technological Institute and the Intercultural Indigenous Universidad de Michoacán, as well as training institutions. of teachers such as the State Normal Education System, the Michoacan Institute of Educational Sciences and the National Pedagogical University, not only to promote the training of education professionals, but also as spaces for research and the elaboration of educational proposals (*Idem*).

In addition, the development of postgraduate studies in the entity has experienced a growth in enrollment of 47.5 percent in the last decade, still insufficient for the training of specialists who decisively promote research and development projects that the construction of substantive responses requires. facing the educational problem and the rest of the priority problems of the Michoacan society (*Idem*).

In terms of science and technology, Michoacán has 68 higher education institutions and 7 research centers as instances with an active role in the formulation of proposals and mechanisms for the promotion of local development (*Ibidem*, 83). The entity also has a register of 790 researchers, 275 of whom are registered in the National Science and Technology Council’s register of Accredited Evaluators belonging to the National System of Scientific and Technological Evaluation, and 390 in the National System of Researchers (*Idem*). And to consolidate the science and technology policy focused on promoting the development of the State, higher technological education is promoted, which is taught

in Michoacán in the nine state technological institutes, in the six federal institutes, in the Technological Universidad de Morelia, in the Research and Development Center of the State of Michoacán and other public and private instances with specialties in the matter, in order to train professionals capable of working in companies, industries or institutions of the public or private sector, as well as in the development of their own company, based on updated knowledge, research and use of technologies; and the State Council of Science and Technology of Michoacán is strengthened as the organism that leads in the State the mechanisms for the articulation and harmonization of the programs of the three levels of government in matters of science and technology.

SECOND PART.

THEORETICAL AND REFERENTIAL FRAMEWORK

QUALITY IN INSTITUTIONS OF HIGHER EDUCATION

In this third chapter called *Quality in Higher Education Institutions*, the conceptual and theoretical bases of quality in the educational field, specifically in higher education, are described. Here is a tour of the contributions made by different authors and from different perspectives around the concept of quality, considering that all of them are valuable, useful and, generally, complement each other.

The content of this chapter section will constitute the foundation through which the dimensions of educational quality that will be addressed in the next chapter will be determined. In addition, terms such as *quality management*, *service quality*, *total quality*, *educational quality*, *continuous improvement* and *quality assurance* are exposed in these spaces, which will be applied in the development of the study.

Also, the situation around the evaluation of the quality of Universities is addressed, through an organized review of international evaluation models, as well as the case of institutional evaluation in Mexico. And, finally, from this theoretical-documentary review, the study was oriented towards the conception that quality constitutes a multidimensional concept and in permanent evolution.

3.1 CONCEPTUALIZATION OF QUALITY

The term *quality*, in Latin means “quality, way of being”. And its meaning in Spanish is “property or set of properties inherent to a thing, which allow it to be appreciated as equal, better or worse than the rest of its kind” (Royal Spanish Academy, 2009).

Garvin (1988) has classified the approaches to the definition of quality into five: 1) transcendent approach, which coincides with the definition of quality as excellence; 2) product-based approach, which defines quality as the differences in the quality of some attribute or characteristic that a product possesses; 3) customer-based approach, similar to the definition of quality in relation to customer expectations; 4) production-based approach, which equates to the definition of conformance to specifications, and 5) value-based approach, which equates to the definition of quality as value.

Of these proposals for definitions of the quality concept, two of them seem to be the further accepted in the literature. In the first place, the one that defines quality as conformity to specifications. This definition can be considered incomplete because: a) the requirements of the products must conform to it that wish the customers and not only to which believe the company, b) the customers they can not know exactly as he good or service HE adjust to the Specifications internal and, by last, c) the factor human, not this contemplated in this definition, is a part essential in the quality (Reeves & Bednar, 1994: 430-431). This vision is tied with the approach traditional of the quality, from an inspection perspective in the production department.

A second definition considers the quality as satisfaction of the needs and expectations

of the customer either user. This approach by yeah only is broad, subjective and presents he inconvenient that can result difficult to discover the needs and expectations of the customers. No however, to difference of the first definition in the that the specifications are designed by the own company and they can No finally meet the needs of the customer, forces to the organization to investigate what requirements demand he consumer, with it that be further easy satisfy him. In this sense, the quality that affected only to the good either service and meant detect the errors for subsequently correct them ha evolved until impregnate to all the activities of the organization, by it that for his achievement is necessary the prevention and the participation of all the members of the same. As consequence of this new conception of the quality that it affects to all the activities of the organization, it has developed the modern approach to quality or total quality.

The different prospects analyzed they can frame in a classification quality further general that distinguishes between quality objective and quality perceived. The *objective quality* HE drift of the measurement and check of the superiority technique either excellence of the products. The *quality subjective* HE base in the evaluations of the people, "it's a high level of abstraction further that a attribute specific of a product" (Zeithaml, 1988: 3). The quality objective is a concept similar to it that garvin (1983) define as product-based quality and production-based quality, while perceived quality is similar to user-based quality.

The interpretation *objective* of the quality HE base in the idea that this is a quality who resides in he object and that, by so much, is independent of the subject that the evaluate. from this perspective the quality of a object it will depend of the amount of characteristics or attributes that he object possess. He major attractive of this interpretation is the apparent ease in his operationalization, already that It allows assess the quality of a object to starting from the measurement quantitative of said characteristics (Garvin, 1984:27). Without however, these interpretations objective of the quality No are exempt of issues both conceptual as of application practice. The issues conceptual HE derive of own definition of quality as concept "objective", since any evaluation carried out for a subject is necessarily subjective (Maynes, 1976). The practical problems, by his part, HE derive of the need of determine that guy of features either attributes are the suitable for measure the quality. This decision it is problematic due to that the various points of view of the different subjects (managers of the company, customers, etc.) they can drive to the determination of different attributes (Zeithaml, 1988: 5).

By his part, the interpretation *subjective* either *situational* you accept the idea of that "the quality resides in the eyes of the subject" (Garvin, 1984: 27). From this perspective, therefore, "what account is the quality such and as it perceive the customers" (Gronroos, 1994: 36). the *quality perceived* is habitually definite in the literature as a judgment global evaluative that makes he customer and that HE reflects his attitude about the excellence either superiority of object with regard to their needs (Bou & Nightgown, 2000: 11).

The adoption of this concept allows characterize it as: to) a judgment evaluative

of attitudinal nature (Parasuraman et al., 1988; Carman, 1990; Cronin & Taylor, 1992); b) formulated by the customer (Steenkamp, 1990; Holbrook, 1994); c) of character overall, though this formed to leave of the characteristics and attributes of the object (Olshavsky, 1985); and d) relative, already that HE determines through of the interaction between the object and the subject that evaluate, it that you concedes a character comparative, staff and situational (Steenkamp, 1990).

3.2 CONSIDERATIONS ON QUALITY APPLIED TO EDUCATION

The meaning attributed to the expression *quality of education* includes several dimensions or approaches, complementary to each other. Toranzos (2000) argues that in the educational field, quality can be considered in several dimensions.

In a first sense, the concept of quality can be understood as *efficiency*: a quality education would be one that achieves that students really learn what they are supposed to learn after certain cycles or levels. This dimension of the concept brings to the fore the learning results actually achieved by the educational action.

A second dimension of the concept of quality refers to what is learned in the system and its *relevance* in individual and social terms. In this sense, a quality education would be one whose contents respond adequately to what the individual needs to develop as a person and to perform adequately in the various spheres of society. This dimension of the concept brings to the fore the purposes attributed to educational action and its concretion in curricular designs and content.

Finally, a third dimension is the one that refers to the quality of the *processes* and means that the system provides to the students for the development of their educational experience. From this perspective, a quality education would be one that offers an adequate physical context for learning, a faculty adequately prepared for the task of teaching, good study and work materials, appropriate teaching strategies, etc. This dimension of the concept brings to the fore the analysis of the means used in educational action.

According to the opinions of Toranzos (2000), the three dimensions of the concept are essential when referring to the quality of education. On the other hand, in the opinion of Navarro (1997), quality education is the one that achieves results that allow progress and modernization. Raising the quality is then finding the necessary means to achieve the ends. And, by measuring the results, the pertinent means are adapted.

According to what was indicated by Arrien (1998), Quality seems to be closely associated with the processes and results of the educational development of the student, a development that is manifested in the relevant learning of the student as a subject, making him/her grow and develop personally and socially through attitudes, skills, values and knowledge that make him a useful and caring citizen.

From a global and integral vision, the quality of education is the result of a set of

processes that lead to its obtaining, so that to improve quality, intermediate or contributing processes must be analyzed, in different degrees of learning and not just your bottom line.

Despite the great mass of literature on quality, the concept of quality still presents some ambiguities and penumbras. Starting from this, Harvey and Green (1993) analyze five different conceptions of quality and their relevance for higher education, such as: exceptional phenomenon, achievement of a purpose, perfection or coherence, value-cost relationship, and transformation (qualitative change).

3.3 QUALITY IN HIGHER EDUCATION INSTITUTIONS

3.3.1. The Educational Service in Higher Education Institutions

The educational service in Higher Education Institutions (IES) comprises five methodologically differentiated areas, namely: teaching, research, extension, dissemination and administration or management. And such dimensions are identified with the most common activities that are carried out in compliance with the substantive and adjective functions of a generic HEI (university).

According to Velázquez and Maldonado (2005: 110-116), teaching is a substantive function that includes instructional and knowledge transmission programs and activities, formally organized by Universities, which are offered as courses and academic tutorials, regardless of whether for them an academic degree is granted or not and that they are non-school studies; They point out that research is a substantive function that integrates the actions, projects and programs of the HEI (university), specifically oriented to the generation of knowledge and its innovative application; and, regarding the extension, they warn that this is a substantive function made up of activities and programs that aim to link the institution with its environment, and extend the benefits of culture to the community, through the dissemination, dissemination and promotion of knowledge scientific, technological, artistic and humanistic.

The same authors address the concepts of academic support, institutional support and administration of the physical plant. By the first concept, Velázquez and Maldonado understand an adjective function that includes actions and programs aimed at improving the quality and efficiency of the substantive functions of the institution (teaching, research and extension), which directly benefit students and academics. Regarding institutional support, they conceive it as an adjectival function intended to ensure the permanent and timely provision of the human, material and financial resources necessary for the operation of the system. This category includes the activities of the central administration and administrative support units of the institution, aimed at planning, organization, direction and control. And the administration of the physical plant is defined by specialists as an adjective function made up of activities and programs for the administration, operation, conservation, maintenance,

expansion and expansion of the physical plant.

It must be noted, first of all, that Velázquez *et al.* (2005) include the field of diffusion in the function of extension; and, secondly, that the adjective functions of academic support, institutional support and administration of the physical plant, finally allude to the field of administration/management, a situation in which such integrated functions can be estimated as administration/management, precisely.

From the foregoing, it can be deduced that the educational service of IHE or universities is not understood solely as the teaching exercised by a professor, but rather the set of activities and services developed by a university that are oriented towards the training of students (Rodríguez, 1995: 99). That is to say, education in the IESP or in the university includes, but is not limited to, the activity carried out by a specific teacher within a classroom (teaching) but rather implies the action of a series of bodies and individuals that, depending on From certain more or less explicit objectives, they make decisions about what is going to be taught, the way to teach it, and the people and means in charge of doing it. And, according to Solé Parellada and Royo (1995: 18), education is an integral process that is aimed at training a person to assimilate and develop knowledge, techniques and values, and to have a level of general understanding. These factors are not related to a single field of activity or topic, but allow the analysis and resolution of a wide range of problems.

3.3.2. The Concept of Educational Quality in the Institutions of Higher Education

It is noted that concern for educational quality in IESP has not always translated into greater precision when defining and characterizing it. A useful frame of reference for its study is the one provided by Westerheidjen (1990), based on the following propositions:

1. University quality is a *relative and multidimensional concept* in relation to the objectives and actors of the university system. Its analysis must be done in the context of the social and political processes in which objectives and actors interact.
2. A single conceptualization of university quality cannot be registered. The only possible level of specification will be the one adopted from the *evaluative approach* from which quality is assessed.

And, as Harvey and Green (1993: 10) point out, quality is a relative concept in two ways. First, the quality depends on the user of the term and the circumstances in which it is used. Thus, in higher education there are various interest groups, such as students, academic and non-academic staff, employers, accreditation agencies or the government, each with differing perspectives on quality. These are not different approaches to the same thing, but rather different perspectives on different things that have the same label or name.

Secondly, there is the relativism of quality in comparative or *benchmarking terms*. On some occasions, quality is seen in absolute terms, as an ideal similar in nature to truth or beauty (Sallis & Hingley, 1991: 3). But from other points of view, quality is judged in terms of

results that must be obtained to exceed certain standards.

However, in other conceptualizations there is no minimum but it depends on the processes that serve to achieve the desired results. And, given that different meanings can be given to quality depending on the perspective of the observer, it is assumed that there are two great perspectives or approaches to quality in the field of Universities or universities. The first, *intrinsic or absolute quality*, refers to compliance or with respect to the epistemological demands of a science or discipline. A second, *extrinsic or relative quality*, which would reflect the relevance or adequacy of the activities carried out by the institution with the needs of the environment in which they are carried out.

From the disaggregation and combination of both perspectives, it is possible to identify various dimensions of educational quality in universities. Different works have described and analyzed these dimensions or approaches to quality, such as Astin (1991), Mora (1999), Harvey *et al.* (1993), Winn and Cameron (1998), Bricall (2000), among others, which are considered below. Firstly, the concept of quality is related to the concept of *excellence* since a university that is distinguished by some of its characteristics, such as its professors, students, facilities, history, fame, etc., is considered quality. This vision is similar to that of *reputation*, a subjective approach that assumes that the quality of an institution can be evaluated through surveys carried out on a group of professors from other institutions.

Another point of view about quality is through the consideration of what is taught in the institution, what is its teaching level, curriculum, pedagogical system or campus climate, that is, quality by *content*. In this sense, there may be students with a tendency to seek more prestigious or recognized studies or curriculum, although not necessarily more interesting in terms of their incorporation into the world of work. This approach presents the difficulty of evaluating the concepts involved in the learning process.

On the other hand, quality can be understood as *compliance with standards*. The accreditation of a university to grant degrees falls within this concept. It ensures that minimum quality standards are met and that the student who has managed to pass the entire curriculum meets or exceeds these minimum requirements.

Quality has also been defined as the *adaptation to an objective* or purpose, that is, the effectiveness in achieving institutional objectives. Quality is measured by the ability of the government team to achieve the goals and objectives that it has defined itself. Each HEI or university must develop strategic planning instruments that allow the units and programs that comprise it to have express objectives, while the evaluation measures the degree of fulfillment of the proposed objectives.

Quality as *availability of resources* is an approach based on objective measures. The resources considered are usually personnel, physical means, financial resources and students. However, although there is a certain correlation between available means and the quality of an institution, it seems evident that the use made of them is more important.

In this sense, the concept of quality has also been related to the *efficiency* and cost

of the university. The increase in the costs of higher education systems in recent decades has increased interest in improving efficiency in the use of economic, human, technical and infrastructure resources.

Quality for *added value* directs its attention to what the institution has contributed to the overall formation of the student, that is, to what the student has learned while at the university. This approach has difficulties in measuring the process given the problem of isolating the effects of the institution from others that are foreign to it.

The dimension of quality through *user satisfaction* reflects the idea that university quality is a function of the level at which the needs and expectations of present and potential users, recipients or clients of the university are satisfied. University institution. This is a fully accepted concept in the business world that still finds resistance in the university.

The dimension of the organization associates quality with the *transformation and change capacity* of the HEI or university. This concept is parallel to that of Total Quality Management, which emphasizes the need for change management in light of the new demands of society, improvement and reengineering of processes, introduction of current technology, adaptation of resources. human rights and new forms of institutional organization.

In summary, quality is a multidimensional and complex concept since, as has been perceived, there are multiple approaches or approaches towards it. The approaches indicated here offer a complete vision about the ways, not exclusive but complementary, of approaching the understanding of the quality in the educational service of universities.

3.3.3. Total Quality in Higher Education Institutions

Several of the initiatives that are carried out in order to analyze and improve university quality tend to start from the assumption that the general approach to quality improvement in the business environment (total quality) is transferable to the activities of universities.

Different studies analyze the introduction of new quality improvement systems in Universities or try to adapt the total quality perspective to this area. Owlia and Aspinwall (1996), in a study on its suitability in the academic institution, conclude that the total quality scheme has applicability in this context according to the opinions of a sample of quality experts members of various IHE or universities. For their part, Lozier and Teeter (1996) collect various experiences of applying total quality and continuous improvement processes from various American universities, reaffirming the benefits of this approach to convert these institutions into excellent organizations. And Schargel (1997) also recognizes the adequacy of the application of the total quality model in public education and describes positive experiences of its implementation.

However, in order to affirm that a higher education institution has fully adopted a total quality approach, it is necessary to define its product, key activities and clients.

Van Vught and Westerheijden (1993) identify the *product* of higher education with the

graduate and its process with the program. On the other hand, for the *European Foundation for Quality Management* (1995: 8), the product of teaching is the acquisition of knowledge or the added value to the knowledge, skills and personal development of the learner.

For their part, Álvarez and Rodríguez (1997: 335) consider that the product would be the learning process of both the student and the teacher. In this sense, total quality implies the need for not only the teacher but also the student to be an active part in the design and creation and continuous improvement of their own learning process.

Regarding the *activities* Institutional factors that affect quality, Barnett (1992: 113) considers that the four activities that influence student learning and educational development are: the quality of the teaching method, the student assessment process, the courses, and the program. of teacher development.

These activities, common to all higher education institutions, constitute elements to be evaluated in a review of institutional performance. Regarding the delimitation of the *client* of the service provided in the universities, it can be affirmed that the students constitute the clients or direct and main users of the same. There is a growing conviction that it is necessary to have the opinion of the direct users of education, the students (Hill, 1995; Owlia & Aspinwall, 1996). However, the student cannot be considered as a mere buyer or as a passive recipient of a product, but it is necessary to consider their participation in the teaching and learning process (Hansen & Jackson, 1996: 212). That is, the student is responsible for their own learning and becomes an active co-producer of an educational service (Álvarez & Rodríguez, 1997: 343).

According to Peña (1997: 217), in the public university education system there are two end customers: students, who increase their human capital by developing their potential and acquiring knowledge; and society as a whole, which finances the system with its taxes and invests in education, hoping to obtain greater wealth and future prosperity as a result. In private universities that are financed with payments or contributions from students, then they become the main clients of the institution.

In addition to students, other customer groups in the field of higher education, which have been defined as users or social participants (NIST, 1995) and as beneficiaries (EFQM, 1995), are the following:

1. Potential employers, who must be provided with high performance personnel prepared for the challenges and demands of the job in a highly changing environment.
2. Families, who generally contribute financial resources and who demand, among others, security and information on student progress and, for example, employment rates.
3. Potential students, who need to know how the programs and services of each institution can meet their needs and expectations, in order to choose the center.
4. Former students, who must be considered so that they value their experience and

wish to contribute to the center in which they were trained, in addition to needing continued education.

5. Society as a whole, with which the university has scientific, cultural and social responsibilities.

It is noteworthy that few authors include teachers as clients, although in reality it is a fundamental internal client, given that, ultimately, the key factor of quality in education is the professional and human category of the teacher. Even each teacher can constitute a client of the teacher who teaches the same students the previous courses (Álvarez, *et al.*, 1997: 341).

Lewis and Smith (1994: 92-93), for their part, establish a broad classification, distinguishing between internal and external customers. They classify the interns into academics (students, teachers, and include programs and departments), and administrative ones (again including students, employees, and units, divisions, or departments). External customers can be direct (employers and other centers and universities) and indirect (the state, the community, accrediting agencies, alumni, and donors).

3.3.4. Dimensions of the Organizational Effectiveness of Institutions of Higher Education

Regarding the organizational effectiveness of Higher Education Institutions, Cameron (1991) considers that the areas or domains of the latter are four, namely: a) An academic area; b) a moral realm; c) an extracurricular environment; and d) an area of external adaptation. In turn, these organizational domains are represented by nine dimensions of effectiveness (Cameron, 1978) that are presented and defined in Table 3.1.

3.3.5. The Need for Continuous Quality Improvement in Institutions of Higher Education

The quality is attributed to the action of the qualitative factors, that is to say, of those elements that cannot be expressed quantitatively, or present serious difficulties to the quantification. And in the context of education in general, such elements are fundamentally related to the processes that determine the so-called internal efficacy of the system or quality of education.

Table 3.1 Organizational Effectiveness of Higher Education Institutions

Dimension	Definition
1. Educational satisfaction of students	The degree of student satisfaction with their educational experiences at the institution.
2. Student academic development	The degree of academic achievement, growth and progress of students in the institution.
3. Student career development	The degree of occupational development of students, and the emphasis on career development and career development opportunities provided by the institution.
4. Student personal development	Student development in non-academic and non-career oriented areas (socially, emotionally and culturally), and emphasis on personal development and in the opportunities provided by the institution. for personal development.
5. Job satisfaction of teachers and administrators	Satisfaction of faculty members and administrators with their jobs and employment at the institution.
6. Professional development and teacher quality	The degree of professional achievement and development of the faculty, and the amount of encouragement toward professional development provided by the institution.
7. Open system character and interaction with the community	The emphasis on interaction, adaptation and service to the external environment.
8. Ability to acquire resources	The ability of the institution to acquire resources from the external environment, such as good students and teachers, financial support, etc.
9. Organizational health	The benevolence, vitality and viability in the internal processes and practices of the institution.

Source: Own elaboration, with data from Cameron (1978).

Carr (1993), in this sense, argues that recently the quality of higher education has been approached as internal effectiveness of university education systems and institutions.

In the opinion of the author in question, this appears as a reaction to the insufficiency of quantitative indicators of efficiency and productivity and is linked to the characteristics, considered qualitative, of the processes and products of the HEI or university.

However, since higher education currently concerns not only the participants in the educational process, that is, professors, students, directors and university managers, and governments and their agencies, but also businessmen and employers who consider Universities as training centers for high-level professionals and for the production of essential knowledge and technology to maintain the pace of economic development, reveal new relationships between the quality of higher education and cost-effectiveness and cost-benefit factors.

The concern about quality, efficiency, productivity and competitiveness, which exists today in Universities, both globally and locally, is the result of internal and external changes that have affected them, mainly in the last two decades. And among the elements that characterize this new environment are: Institutional differentiation, accelerated enrollment growth, resource restriction, among others.

In the case of Mexico, the total financing of public Universities originates from government sources. In addition, public resources allocated to higher education undergo systematic changes, frequently tending towards reduction, partly due to unfavorable economic circumstances for the country, and partly due to competition for resources with other segments of the educational system and society. like an everything.

Regarding this situation, Brünner (1990) argues that quality higher education becomes more and more expensive and the State needs to ensure that the resources it invests in it are used efficiently, in view of relevant objectives for the development of the country and with the guarantee that the social benefits of said investment justify spending them in this sector and not in others, equally pressured by scarcity, such as primary education, health, subsidies for the poorest families, etc. Therefore, the transformations and changes in the environment of higher education have a direct impact on the management, direction and organization systems of Universities.

3.4 THE QUALITY ASSESSMENT OF HIGHER EDUCATION INSTITUTIONS

It can be affirmed that the element of the educational process that has received the most attention in higher or university education is, without a doubt, the evaluation of teaching, given that evaluation has been considered the main instrument for improving its quality.

The evaluation is estimated as a process that causes the understanding of the educational process, provides data, interpretative possibilities and favors institutional reflection that leads to participatory decisions that address educational problems.

According to Villar (1999), evaluation consists of a complex process that requires

coordination and coordinated reflection so that it can attend to the variety of situations that come together in the educational process and provide solutions to the needs that derive from it.

However, frequently the discussions about the relevance or usefulness of the evaluation processes in the field of the educational system are based on a set of meanings that are simultaneously attributed to the evaluation and this is the origin of the consequent disparity of criteria.

According to Castejón, Vera and Carda (1991) the evaluation consists of determining to what extent the proposed objectives have been achieved and the most appropriate means have been used for it. For his part, Toranzos (2000) points out that most definitions of evaluation are framed in a plane that can be called normative. In other words, in the duty to be that defines an ideal model and constitutes the evaluative referent.

The evaluation thus appears only as a probability of determining to what extent the actions carried out conform or not to that normative pattern and not so much as a possibility of defining new norms or recreating the existing ones.

The ways of understanding evaluation are related to different educational currents; its diversity occupies an important place in the educational debate. In this regard, Glazman (2001) points out three clearly defined positions: the first raises evaluation as a process intended to assess the achievement of previously defined objectives. The second position on evaluation emphasizes the scientific nature of data collection that makes it possible to determine the degree to which an activity achieves the desired effect. This position insists on the need to systematize the procedures to obtain information and to assess the results. And, the third position conceives the evaluation as a process of issuance of professional judgments, obtained as a result of the examination of a situation or process.

And another important aspect related to evaluation is its distinction with the measurement process, since measuring is not the same as evaluating. In this sense, Cardona (Cantón, 2001: 287) summarizes the main differences between these processes. Measurement is an absolute value judgment; it is a stagnant moment, not processual; it is subsumed in the evaluation; does not imply evaluation; it constitutes only a means to value; and it is simply a data collection. For its part, evaluation is a judgment of relative value; it is equivalent to a dynamic procedure; it subsumes the measurement, having more extension; to evaluate implies among other things to measure; the evaluation is the same evaluation; and compares data with expected results.

Therefore, evaluation is something more than measurement. Evaluate is to measure, assess and make decisions to improve.

3.4.1. Evaluation: Objectives and Typologies

According to Pérez and Salinas (1998: 161), any university quality evaluation study has a double objective:

1. Allow the university to know the quality of its activities and define strategic action plans to improve its activities.
2. Offer their funders (students and their families, companies and institutions interested in higher education and research, Public Administrations) objective and reliable information on the level of quality achieved by each institution.

Evaluations can be classified, depending on who performs them, under two types: internal and external evaluations. The main difference between them lies in who is the agent that carries out the evaluation. In the first case, the members of the institution themselves, while in the second they are people from a specialized agency or an external commission.

Mixed evaluations are currently frequent in which both perspectives are combined so that the evaluation of an institution is the combined result of a self-evaluation and an external evaluation.

Likewise, the evaluation can be thematic, when it refers to a study program or specific career or to a set of them belonging to the same scientific-teaching field, in one or more Universities or universities, or global, when it includes one or more IES or universities, globally considered, and include all degrees, departments and services that the IES or university provides.

Given that education in Universities encompasses five well-differentiated areas: teaching or teaching, research, extension, dissemination, and administration/management, when evaluating Universities or universities, these areas or types of activities are usually considered by separate, although the existence of complementarity and interdependence between them seems evident.

From another point of view, institutional evaluations can be classified according to the purpose pursued by the evaluation: a) evaluations for the control of the institution by government institutions; b) evaluations to know the real situation of the institution with the aim of improving quality, promoted by the institution itself or by other instances, including government (Mora, 1999).

Another distinction can be made according to the degree of obligation with which the institution must respond to the results of the evaluation. The evaluations can be imperative when the HEI or university has to faithfully follow the evaluation results, which is what tends to happen with a large part of the government evaluations. In other cases, evaluations have the objective of recommending standards, not imposing criteria, which is why they are called standards.

There are also consultative evaluations that aim to understand one's own situation and find solutions that can help improve it, usually requested by the university or carried out

by the university itself (Kogan, 1986).

Table 3.2 summarizes these different types of evaluations for Universities or universities.

Table 3.2 Types of Evaluation in Universities

Body that carries out the evaluation	- Internal evaluation or self-evaluation (from the IES or university itself). - External evaluation (commission of experts).
Project scope	- Thematic evaluation (study program or career). - Global evaluation (of one or several Universities).
Types of activities	- Evaluation of teaching activity. - Evaluation of the research activity. - Evaluation of the extension activity. - Evaluation of the dissemination activity. - Evaluation of the administration/management.
Object or end pursued	- Bureaucratic control. - Quality improvement.
Mandatory	- Imperative. - Normative. - Advisory.

Source: Own elaboration with data from Mora (1999).

And, in addition, in the context of higher education, the practice of evaluation has been carried out through various variants: accreditation, program review, external evaluation and performance indicators.

Accreditation is a process by which an educational program or institution provides information about its activity and achievements to an external committee that independently evaluates such information in order to issue a public judgment or based on explicit standards about the value and quality of the institution or program. According to El Khawas (2001), accreditation places emphasis on *inputs* as a guarantee of the quality of *outputs*, is oriented towards effectiveness, and has a high component of summative evaluation.

For its part, the review of programs constitutes an evaluative approach that covers all the programs of an institution that generally places emphasis on processes as a strategy for constant quality improvement. Its orientation towards improvement and development contrasts with the accreditation approach, aimed at verifying compliance with minimum standards in a professional and/or disciplinary field (Barak & Breier, 1990). The fact that the evaluation initiative corresponds to the institution makes the staff of the program and/or the institution the primary agents of the review. It is, ultimately, the origin of internal evaluation or self-evaluation.

The external evaluation based on external judgments (*peer review*) is a type of evaluation that is located in the context of either the own request of an HEI or university for the analysis of one or all of its academic and service units, or by the imposition of the IES system itself. The origins of this type of evaluation can be found in the program accreditation

committees, in the evaluators of scientific journals and in the advisers of research funds (Rodríguez, 1997: 191).

Performance Indicators deal with objective measures, usually quantitative, of an institution or an entire system of higher education (Ball & Halwachi, 1987). They provide operational information on the functioning of the institutions and on their effectiveness. The use of performance indicators of university institutions has its origin in external evaluations of a governmental nature and for the purpose of distributing funds. The three categories of indicators according to Cave,

Hanney, Henkel, and Kogan, (1997) are the following: a) simple indicators, formulated in absolute terms, are oriented to give an objective description of a situation or process (management statistics); b) performance indicators, which imply a reference point, that is, they are of a relative nature; and c) general indicators, which refer to statistics, opinions or survey results.

3.4.2. Evaluation Models

It must be noted that the quality requirements applied to an education process imply not only identifying and understanding the behavior of the variables that affect this process, but also determining the minimum level of quality necessary to guarantee effective and efficient higher education, and on the other, the continuity and development of the Institution.

The level of quality is a concept that can be measured and evaluated *per se* (normative) or in relative terms: comparison with peers, perception of users and interested parties, etc.

Another relevant issue is defining what is more important, reaching a certain level of quality or evolving in a dynamic context. These relative, intangible and often subjective concepts do not allow for a concrete and/or absolute evaluation, forcing the design of different control mechanisms. The result of this is the creation of “indicators” that allow relating operations, resources and results with respect to activities, events, processes, organizational units and other components of the institution.

Universities or universities can and must have better quality but, in addition, they need to have evidence of this to justify to those who provide them with resources (be they state authorities or their users), that their contributions are being well used.

The evaluation of teaching in higher education institutions must be a valuable instrument that provides evidence to analyze in depth the educational processes, becoming a process that provides information to promote and ensure the highest quality, efficiency, productivity, and relevance of the actions and results of teaching.

Since the 1970s, the use of indicators has been proposed to objectively define the quality, efficiency and productivity of higher education and as a mechanism through which institutions could account for compliance with their educational responsibility (*accountability*).

From the point of view of evaluation, different definitions have been sought for the term “indicator”. Thus, in a study carried out by the OECD (1991), an indicator is defined as “a numerical value used to measure something that is difficult to quantify”. For his part, De Miguel (1991) defines this term as an instrument that is used to measure, compare, monitor and support the progress of results and represent measures on aspects that are not directly measurable.

However, the reality of an educational system is enormously complex, so no particular indicator could cover it in its entirety. Particularly in the field of teaching in Higher Education, complexity refers to what type of evaluation is most appropriate, given the nature of the object of study that constitutes the quality and productivity of said institutions. To attempt this, many indicators are needed, which together cover its multiple dimensions.

It is easy to have information on the number of teachers, the number of students or the number of books in the library, and build indicators such as the number of students per teacher or the number of books per student. However, there is usually not enough information to evaluate more complex aspects, but essential if one wants to have a complete vision of quality, such as the degree to which curricular objectives are effectively achieved, both in the cognitive domain and, with even greater difficulty, in the affective.

The indicators have the attraction of their clarity but their limitation lies in the fact that it is not possible to accurately translate the complexities of the interaction process that occurs in teaching into numerical terms. It is for this reason that only quality and productivity evaluation indicators are proposed for some areas, since in others, due to their strong subjective content, it is not possible to establish indicators, let alone standards.

3.4.2.1. The Internal Evaluation Process

In general, the evaluation process in an educational institution can be used as a diagnosis to introduce the improvement processes, so that it allows to know the state of the matter to decide later the aspects that must be improved. In this sense, the evaluation can be internal and external.

In the self-assessment it is internal evaluative analysis, promoted, controlled, and self-regulated by the institution itself, although it may later have external uses. Escudero (1993) maintains that this modality of evaluation constitutes a central element from which the rest of the actions of the evaluation process are articulated.

The self-assessment processes are presented in various ways depending on the cases and situations. However, there are some aspects that are usually treated in most of them. Escudero (2002) points out some examples, among which the models of Jamieson, Miller and Watts (1988) and Vroeijenstijn (1995) stand out.

And Escudero himself affirms that self-assessment must be considered with three basic objectives, namely:

1. The stimulation of internal quality control, through the analysis of their own weaknesses and strengths.
2. Internal preparation for internal review.
3. The provision of basic information for external analysis.

Finally, some of the benefits of internal evaluation are highlighted by several authors, among them Bauer (1988), Trithschler (1981) (cited in Escudero, 2002), who coincide in pointing out the following advantages for said evaluation:

1. They make it easier to track problems and their possible solutions.
2. They deactivate resistance to external evaluation.
3. They lead to the plurality of values and hierarchies, hindering actions of abuse of power within the institution.
4. It stimulates the members of the institution towards the knowledge of their problems and their potential solutions.
5. They facilitate initiatives from different levels of the institution and not only from its top managers.
6. Greater acceptance by the evaluated than other evaluation procedures.

3.4.3. The Use of Indicators in Higher Education Institutions

There are various types of indicators depending on the aspect that they are trying to analyze or depending on the function that they are used for. The broadest classification is based on the following criteria (Dochy, *et al.*, 1990):

1. According to the functions of higher education: teaching, research, linkage, dissemination and services.
2. According to the object: *input*, *process* and *output indicator*.
3. According to the type of measurement: quantitative indicator, qualitative indicator.

The indicators are one more element in the decision-making process that can be useful to support the assessments that the different agents carry out in the evaluation process. The use of indicators is carried out at four possible levels of decision (Mora, 1999), namely: 1) the processes of institutional improvement, 2) the administrations responsible for the policy of the HEI(s) or university, 3) the students, and 4) companies as employers and as collaborators in joint projects with the HEI or university.

However, there are several limitations of the indicators in the university environment (Pérez & Salinas, 1998:165-166):

1. Excessive attention to identified and measured objectives. There may be an excessive emphasis on the part of educational institutions for those objectives that are reflected in the scheme of measures of activities carried out, at the expense of

those that are not included in it.

2. Setting measures. Even if the objectives could be easily identified, designing measures that clearly quantify those objectives can be difficult. If an index does not fully reflect all dimensions of the objective it is intended to measure, managers may focus their efforts on increasing the index, forgetting the objective associated with it.

3. Static evaluation of a dynamic process. The teaching and research activities carried out by higher education institutions can have relevant effects in the medium and long term. Management indicators offer only a vision of the activities of an organization at a given time.

4. Reliability issues. If in the control of the activity of a public body all the attention is focused on the performance indicators, there may be some incentive on the part of the managers to manipulate data that is under their control. In other words, intentional manipulation of the data may occur in such a way that the behavior reflected in the management indicators does not match the actual behavior of the organization.

5. Strategic behavior. To the extent that the performance of an organization is evaluated taking into account its past performance and the objectives for the coming years are set taking into account the level of its performance at the present time, the organization will have incentives to minimize the achievements of its performance., since said achievements can lead to higher expectations and objectives for the following years. In another sense, the incentive scheme can also generate perverse effects to the extent that the resources obtained depend on meeting certain objectives, such as the number of graduated students.

6. Institutional and socioeconomic context problems. In practice, the results obtained by the evaluated institutions may be highly conditioned by external factors (socioeconomic characteristics, previous knowledge of the students, number of students who have chosen the degree they are studying in first option, etc.), outside the control of the evaluated unit itself. Thus, when analyzing the performance indicators to evaluate the different institutions, these environmental factors must be taken into account. Although the data perfectly reflect reality, the problem of their interpretation remains very complex.

In its application to the teaching function of the university, De Miguel (1991) indicates that it presents some specific characteristics that determine that many of the phenomena of the teaching and learning process are difficult to operationalize, which is why doubts arise about them using indicators. of performance built with objective approaches. Among the specific problems, the following must be noted: a) the difficulty of evaluating the effectiveness of learning; b) the lack of specifications on the quality of the products, c) the interference between processes and products, that is, between the service offered (education) and the product obtained (learning); and d) the lack of standardization of processes.

3.4.4. Research Papers on Institutional Evaluation in the International Scope

Regarding research on institutional evaluation, the work carried out in general has had a *benchmarking orientation* and has been present, for example, in the initial stages of launching evaluation systems, as in the Spanish case (De Miguel, *et al.*, 1991) or as first analyzes for a European harmonization. Comparisons have recently been carried out at a European level on the dynamics of quality assessment in universities (Fave-Bonnet, 1999).

In the North American context, research on institutional evaluation presents a different situation as a consequence of the models adopted. The work of Tan (1991) offers an extensive and complete overview of research on evaluation based on the reputation of institutions and/or programs and on objective indicators referring to the quality of teachers, students, material and financial resources. as well as the results obtained.

In the teaching section, most countries use a similar model based on self-assessment followed by external evaluation. Likewise, these evaluations are carried out separately for teaching, research, services, etc. (Potocki-Malicet, Homelmesland, Estrella & Veiga-Simao, 1999: 311). The relationship between the evaluation and the organizational structure of the institution has also been analyzed, showing that the decentralization of decisions constitutes an investment for the development of a plural, dynamic and context-sensitive evaluation (Hostmark-Tarrou, 1999: 279).

On the other hand, there is some interesting meta-evaluative research such as that carried out by Waugh (1997), who analyzes both the internal and external process in three different faculties of the same Australian university in which the respective deans had made different decisions regarding the organization and composition of internal and external committees. Other works (Weusthof, 1995) also address the results obtained as well as the development of the evaluation process itself. For their part, Coba and Vidal (2000) analyze the current difficulties faced by the evaluation processes in their final phase of incorporation and implementation of the action plans.

Studies on performance indicators have been carried out at both the international (Kells, 1993) and national (Dochy, *et al.*, 1991; Sizer, 1991; and Cave *et al.*, 1997) levels. The British tradition constitutes the main frame of reference, highlighting the aforementioned work by Cave, *et al.* (1997). The work of Trinckez and West (1999: 348) shows that the use of indicators in European countries not only responds to the need for information with which to identify problems or weaknesses, but that they are currently also used for cost reduction, internal redistribution of resources or to attract new resources from the market.

And as for the effects of the evaluation, one of the first works is that of Fredericks *et al.* (1994) who carry out an investigation for the Dutch case from a survey in more than two hundred university careers already evaluated. Westerheijden (1996) extends the research on the Dutch experience to include an in-depth study of eight curricula at seven universities.

3.4.5. Institutional Evaluation in Mexico

3.4.5.1. Background

In her article *The Evaluation of Higher Education in Mexico*, Llarena de Thierry (1994) introduces the context that favors the evaluation mechanism in Mexico by identifying four fundamental elements for its implementation, namely:

1. The variables of the international context.
2. The economic-social situation in Mexico.
3. The situation of Mexican higher education.
4. The planning -evaluation that was created in 1978 with the National System of Permanent Planning of Higher Education.

Based on such antecedents, on January 18, 1979, the National Coordination for the Planning of Higher Education (CONPES) was installed, which was integrated by the General Council of the National Association of Universities and Institutions of Higher Education (ANUIES), officials of the Ministry of Public Education and chaired by the head of the latter. This Coordination instituted the instances and processes of institutional, state and regional planning, and since then it has generated national policies around higher education.

Around 1989, the evaluation became a strategy of the Educational Modernization Program 1989-1994. The program defined the modernization of education as quality, efficiency, coverage and innovation, that is, a dynamic movement towards a qualitative change in educational processes. And it also points to evaluation as the fundamental strategy to achieve modernization (SEP, 1990: 27).

For such purposes, a national evaluation process of the higher education system was established to determine its levels of performance, productivity, efficiency and quality. For this purpose, the National Commission for Higher Education was created, which was to emerge from the heart of CONPES (*Ibidem.*, 30).

The National Commission for Higher Education (CONAEVA), for its part, constituted on November 7, 1989 and contemplated among its purposes those referring to promoting a national evaluation process through the formulation of criteria and general guidelines, as well as proposing policies and actions tending to improve the current conditions of higher education.

Among the premises of evaluation as a strategy for the modernization of higher education, the following stand out for their relevance (*Ibidem.*, 35):

1. The evaluation must not be an end in itself, but it acquires its meaning to the extent that it supports the development of this educational level.
2. Education must be an integral part of the planning processes for academic and support tasks, and not an overlapping process to comply with administrative

requirements.

3. Evaluation must be understood as a permanent process that allows academic quality to be gradually improved, and not as a cutoff from which a complete and objective knowledge of the situation of higher education can be expected. Therefore, it must incorporate a diachronic vision (over time), which allows evaluating progress and achievements, identifying obstacles and promoting academic improvement actions.

4. The evaluation processes that were promoted must have an impact on educational development plans and programs in different areas, from the institutional to the national.

Finally, CONAEVA designed the national strategy to be followed to evaluate higher education; and the premises established to develop their work were: a) include and support the process of evaluation and self-directed change, in which the Universities would have to be the protagonists; and b) promote a national evaluation process of the higher education system.

3.4.5.2. Formats of the Institutional Evaluation in Mexico

In the specific case of Mexico, three types or formats of institutional evaluation can be distinguished, namely:

1. Institutional evaluation or self-evaluation, by the Universities themselves.
2. Inter-institutional evaluation of services, programs and projects in the various functions and areas of higher education through the peer evaluation mechanism.
3. Evaluation of the subsystems and of the higher education system by specialists.

In the following sections, a brief characterization of the institutional evaluation formats in Mexico indicated here will be carried out.

3.4.5.2.1. Institutional Assessment or Self-assessment

The institutional evaluation carried out by the IES themselves (*Ibidem.*, 53 and 54) has the purpose of achieving an evaluative analysis of the organization, operation and results of the academic and administrative processes that they develop. In order to facilitate the evaluation process of Universities, CONAEVA formulated and proposed a series of analysis categories, criteria, indicators and standards that serve as a guide for institutions to carry out their self-evaluation. And likewise, he made the proposal of the basic information that they must have to carry it out.

Frequently the evaluation (and accreditation) process comprises three stages: self-assessment (self-study), external evaluation and the final report (preparation, discussion and dissemination).

Self-assessment entails a fundamental ethical attitude. It is normally carried out by

committees of specialists appointed by the academic unit itself, which carry out their task using guides or protocols previously defined by teams of specialists. These committees coordinate the collection of information, the preparation of performance indicators, their analysis and the preparation of a self-assessment report (or internal evaluation).

In the external evaluation, for its part, a team of specialists from outside the evaluated academic unit reviews the self-evaluation report. It starts with a visit to the academic unit that culminates with the presentation of a final report. This is generally discussed by an independent body, whose decisions influence the allocation of resources, the academic recognition of the evaluated units, or the accreditation of the evaluated programs.

The importance of carrying out self-assessment processes is manifested in the policies recommended by UNESCO as well as by the OECD. The first indicates that the evaluation acquires a broader meaning than just assessing the educational offer and teaching methods, since it must also consider financing, management, general orientation and the achievement of long-term objectives, which will allow providing students with different agents a better knowledge of their action, disseminate the capacity for innovation and publicize successful initiatives and their conditions for implementation (UNESCO, 1996: 177-178). For its part, the OECD in the document "Review of Higher Evaluation Policies" recommends that the evaluation of institutions be carried out through the normality of self-evaluation based on their own indicators that can be grouped into four items that can be evaluated namely: students, study plans and programmes, personnel and financial resources (OECD, 1997: 54).

3.4.5.2.2. Inter-institutional evaluation

The inter-institutional evaluation is part of two simultaneous evaluation processes: the institutional evaluation, in charge of the institutions themselves, and the evaluation of the higher education system, in charge of the SEP and the ANUIES.

The inter-institutional evaluation is aimed at knowing and assessing the operating conditions and the quality of the services, programs and projects, as well as the processes and results of the institutional work. The functions of the inter-institutional evaluation are: diagnostic evaluation in a certain area of knowledge, accreditation and recognition of specific programs. The opinions on projects or programs that solve financial support and advice to institutions for the formulation of programs and projects.

With the purpose of carrying out the inter-institutional evaluation, the Inter-institutional Committees for the Evaluation of Higher Education (CIEES) were created, located in CONAEVA under the auspices of the Undersecretary of Higher Education and ANUIES, also called peer committees. These committees are made up of academics of recognized prestige in the area of their specialty, appointed based on the proposals of the educational institutions; and they have a double character, since they belong to their national academic

institutions and participate within the committees.

At present, nine evaluation committees have been installed, in the following areas of knowledge: natural and exact sciences; agricultural sciences; engineering and technology; Health Sciences; social and administrative sciences; education and humanities; architecture, as well as the committees that evaluate the administrative and dissemination and extension functions (CIEES, 1994).

Each committee has established its own criteria, indicators, norms or minimum standards and its particular way of carrying out the evaluation of the programs or of the function or of the institutions. The development of their reference frameworks and the definition of their own internal evaluation strategies have been one of the main internal tasks.

In this first stage, reference is made to those institutions that request it. Before the visit, a pre-diagnosis is made, product of the information provided by the IES and the analysis of their own self-assessments. The visit to the institution, as well as the interview with professors, students, researchers, authorities and productive sectors of its environment with fundamental elements that allow determining the degree to which the norms, profiles and minimum quality standards previously established by the institutions themselves are met. institutions. At the end of the visit, the Committee prepares a report and issues the necessary recommendations to correct or solve problems that it has detected. The Committee's recommendations are indicative and their implementation depends on each program or institution.

The evaluated institution is requested to analyze the relevance of each of the recommendations and send its comments to the Committee, in order to continue the internal learning process for the evaluation. Due to the importance of the information contained in the reports, they are handled confidentially. The report is delivered in the first instance to the rector or director of the institution, and is made known to CONPES. These are the main users of the results of the inter-agency evaluation. In their time of operation, the CIEES have organized their own work and defined their reference frameworks, as well as have evaluated almost all of the Universities in Mexico in terms of their administration and management. Each committee also has its frame of reference and includes in its evaluations the fundamental characteristics of the evaluation. It is up to each institution to define which recommendations apply to their academic projects and how they apply them.

Currently, the CIEES seek to collaborate closely with professional associations, national associations of schools and faculties, and with organizations that carry out activities related to theirs in order to establish special instances that address the work of program accreditation originally entrusted to the CIEES. be carried out by collegiate bodies in which the committees participate, along with professional associations, school associations, the employer sector and other interested bodies. And, initially, the following councils have been constituted for the sake of teaching accreditation: Engineering (CACEI), Veterinary

Medicine, Accounting and some branches of Medicine; and its form of organization and collegiate participation is being used as a model to establish similar councils in other areas of higher education.

3.4.5.2.3. Accreditation

However, another procedure that allows evaluating the institutional level is accreditation. This is a mechanism to determine the overall level of a higher education institution, a “certification” of the academic quality of a program or academic unit, or a judgment on the consistency between the objectives, resources and management of an academic unit. The accreditation process usually includes self-assessment, external evaluation, and the final report.

Likewise, the accreditation can be institutional or academic. The first examines the overall characteristics and services of the institution. The accreditation of an institution means that it has been evaluated and verified that it has well-defined objectives, appropriate resources, an installed and stable capacity to offer educational services of a certain quality, and that it meets minimum operating criteria (standards). This process does not imply that all programs or academic units are of the same quality, nor that any particular program is accredited. It is generally voluntary, as in the United States (Council of Post-Secondary Accreditation, COPA; or regional associations of higher education institutions, for example Southern Association of Colleges and Schools, SACS).

In Mexico, accreditation is being implemented through the Committees which, at the end of 1999, designed mechanisms that would allow for a reference framework for accreditation. It is necessary to point out that the processes of institutional evaluation and accreditation have been questioned since they intrinsically contain a dimension referred to the exercise of power (internal-external), control and learning. It can be designed to inform a third party or to inform the agents involved, a means of modernization and control or a means of self-learning (clarification and emancipation). In this sense, participation builds confidence in the evaluation process, and it is also obligatory to take care of the choice of evaluators, whether internal or external.

Finally, regarding the above, Angulo points out that “an educational project includes the political principles that make explicit the type of school, the forms of socio-educational relationship and the teaching-learning and organizational dynamics that are desired. For this reason, said project, which requires generalized and public discussion by all those directly involved in the work of the centers, can become a platform for participation and knowledge of civil society, teachers and students in coordination and with the support and advice from other instances” (Angulo, 1992: 23).

3.4.6. Educational Quality Assurance

As a series of preventive processes, based on standards that promote good administrative management and enable things to be done in the best possible way, from the first opportunity, to achieve the satisfaction of internal (teachers, students) and external customers (parents, companies, government entities, society in general), Toranzos (2000) defines a quality assurance system.

Cantón (2001), for his part, points out that quality assurance consists of having and following a set of planned and systematic actions, implemented within the organization's quality system. Said author maintains that the actions must be demonstrable, to provide adequate confidence to all the members involved that the requirements of the quality system are met.

Finally, this way it is possible to guarantee the correct functioning of the system and the achievement of the proposed objectives; establish, document, implement and maintain a quality management system and continually improve its effectiveness. For them, institutions must:

1. Identify the necessary processes for the quality management system and its application throughout the organization.
2. Determine the sequence and interaction of these processes.
3. Determine the criteria and methods required to ensure that the operation and control of the processes are effective.
4. Ensure the availability of resources and information necessary to support the operation and monitoring of processes.
5. Measure, monitor and analyze these processes, and implement the actions necessary to achieve the expected results and continuous improvement of these processes.

CONCEPTUALIZATION OF THE FUNDAMENTAL FUNCTIONS OF INSTITUTIONS OF PUBLIC HIGHER EDUCATION

This chapter continues with the exposition of the theoretical support from the analysis and reference of the theoretical approaches, the investigations and the antecedents in general that allow the configuration of the new knowledge. This in order to establish the concepts and measures that will constitute the arguments and ideas that will support the subject matter under study.

Specifically, it is up to this chapter of the research section to address the educational service provided in Higher Education Institutions through the consideration of the five areas or processes of said service, namely: teaching, research, extension or linkage, diffusion of culture and administration or management. And these dimensions are identified with the most common activities that are carried out in compliance with the substantive and adjective functions of a generic HEI.

The main assumption of the current study, precisely, sustains in its main argument that teaching, scientific research, administration/management and extension and dissemination are the factors that determine to a greater extent the quality of the educational service provided in the academic units of Institutions of Higher Education. That is to say, it is assumed that teaching with positive results, research carried out with professionalism, productive administration, efficient extension and effective dissemination, will have an impact on the generation of a quality educational service in the academic units of Universities.

Based on the above, based on a review of the literature, the foundation and conceptualization of teaching, research, extension or linkage, dissemination of culture and administration or management in the academic units of the Universities will be carried out immediately, fundamental functions that constitute the theoretical independent variables of this research.

4.1 TEACHING IN HIGHER EDUCATION INSTITUTIONS

According to De Juan (1996), university teaching is a set of teachings that is given at the highest level. He points out that teaching at this level (of Universities) has some characteristics that define it as a support process for the search, acquisition and construction of scientific knowledge, as well as an intellectual process that criticizes this knowledge.

The author in question groups the following characteristics:

1. Higher education presupposes mastery of scientific knowledge, methods and techniques that must be transmitted critically. For this reason, it considers that this must be aimed at enabling students to acquire autonomy in their training, develop thinking skills, learn to use language and the necessary documentation, and function in the scientific and professional field of their specialty.

2. The coherent integration of the teaching-learning process with research, hence the need to replace a teaching that is limited to transmitting certainties, with a teaching in which research processes that are enriching for teaching-learning make their appearance. Certainly this requires knowledge of theories and pedagogical strategies that allow the development of this particular type of teaching.

3. It must be taken into account that students have their own assumptions about knowledge, teaching and the disciplines they study and that together with the teachers they are the protagonists of the process, therefore, the elaboration of knowledge must be assumed as a shared process between the students. protagonists.

Venturing around the teaching activity is a somewhat difficult task, since its definition obeys multiple determinants: ideas, values, institutional parameters, organization, methodological traditions, contexts, resources and even implications of a personal and ethical nature. Understanding it leads to a teaching model that can be expressed explicitly or implicitly.

Thus, teaching in Institutions of Higher Education or universities takes the form of activities carried out by the teacher with certain contents to facilitate or guide student learning.

4.1.1. Didactic Strategies

In the context of teaching, after establishing the objectives by the teacher, a series of activities is required that bring the student closer to the contents, that is, that they achieve learning. One of the decisions at this moment is to define the methodological or didactic strategies.

The methodological strategies refer to the set of activities that will allow the student to meet the contents, based on objectives and with a series of means or resources. De Juan (1996), by way of summary, identifies the strategy with the way in which it is taught or the way in which the teaching-learning process is carried out.

From the traditional perspective (teacher-centered teaching) the basic methodological strategy used by the teacher is direct instruction. Doménech (1999) points out that under this strategy the teacher explains or “teaches” in an expository way while the student acts as a passive receiver, taking notes mechanically, without participating in the instructional process.

Clearly, teacher-centered teaching revolves around what the teacher teaches. This methodological strategy promotes the acquisition of knowledge (memorization) and understanding.

From the modern perspective (student-centered teaching) an attempt is made to avoid the traditional expository class using a methodology that contributes to the interaction between teacher-students between student-student, assigning the latter an active role and the teacher a role of mediator between some objectives and contents and the students. In

this case, the interests, motivations, previous knowledge and other personal characteristics of the students constitute the starting point for the decisions that the teacher must make.

Under this conception, the methodological strategies normally used by the teacher are characterized by presenting a variety of techniques and didactic resources in order to provide students with a variety of activities where the teacher's participation is minimal. It is about influencing the levels of application and problem solving / critical thinking.

Sevillano (1995) argues that it is very important that the following variables must be considered when planning and deciding strategies:

1. For what (contents).
2. Who will put it into practice (student characteristics).
3. Where will they be implemented?
4. What means do you have?
5. Relevance, that is, the relationship between actions and purposes.
6. Profitability, which means, means, ends, costs and results.
7. The adequacy of the students.

Similarly, inspired by various authors, De Juan (1996) points out some of the strategies used in university teaching: theoretical teaching, lectures, problem solving and group work. Theoretical teaching refers to those modes of teaching-learning in which the student's encounter with the contents is characterized by:

1. Be aimed at achieving cognitive domain goals.
2. Use of mainly verbal means.
3. To be carried out in an area without major technical complications (classroom).
4. Existence generally, although not exclusively, of a good number of students (medium and large groups).

For its part, the master class is a fundamentally informative strategy in which the teacher addresses a group (medium or large) of students for the presentation of a thematic unit (content). Communication is unidirectional from teacher to student, there is no interaction, therefore feedback is scarce or null, the control of objectives, content and means is exercised by the teacher.

The advantages that, according to this author, are presented in this strategy are:

1. Its economy, since it is an economical and fast strategy to provide information to large groups of students; it consumes less time per session and per student than any other strategy.
2. It allows the transmission of both fundamental and supplementary information in a short time. As well as the diversity of main and supplementary sources.
3. It allows the student to clarify difficult concepts. To do this, the student must be

given the opportunity to ask questions about the topic.

4. It provides security to the student; since he accepts as valid and well-founded knowledge what the teacher transmits to him. In addition, this type of information is what is requested in the exams.

Now, among the disadvantages of this strategy, the author points out the following:

1. It keeps the student in a situation of passivity, acting as receivers of the content issued by the teacher, which is detrimental to learning.

2. Missing classes are frequently overcome by classmates' notes, often without a reduction in their learning being observed, which questions the usefulness of such classes.

3. It is difficult to keep the student's attention awake, due to the unidirectionality of the information and its lack of activity on the part of the students.

4. They are directed exclusively to the objectives of the cognitive field, since they fulfill an informative purpose. Even within this level of mastery (cognitive) it does not facilitate the learning of third level objectives, that is, problem solving.

5. It provides little feedback, the teacher-student relationship is limited and the information goes in only one direction.

6. Its effectiveness depends, to a large extent, on the qualities of the teacher.

Another option is troubleshooting. This has to do with one of the most effective strategies for the development of creativity, currently it is being incorporated with very good results into educational practice, particularly at the higher education level; part of the statement of a problem that the student or group of students must solve.

In life people are continually exposed to the fact of solving problems in all areas. One of the meanings of the term problem is that which defines it as a situation in which something needs to be achieved but it is not known how to do it, because part of the information is unknown.

The objective of this strategy is to stimulate creative thinking and facilitate learning, taking into account the student-teacher relationship. The incorporation of this strategy into university teaching allows the development of higher order capacities in students. It is important to take into account that the problems raised must be solvable and may have more than one solution.

Doménech (1999) distinguishes three components in every problem: the objectives, the situation and the solution method; and considers that the more precisely these three components are defined, the more clearly structured the problem will be.

Referring to this strategy, Tejada (1997) points out that the following phases must be taken into account:

1. Define the problem.

2. Discover desired results.

3. Propose alternatives.
4. Analyze alternatives.
5. Select alternatives.
6. Establish steps for action.
7. Execution.
8. Assessment.

Regarding group work, it can be said that the use of this technique has increased considerably in education. It is a strategy that is very well received by the students and favors, on the one hand, the realization of the tutorials, and on the other, the contact of the professors with the students, especially in the cases in which the volume of students per course is very high.

This strategy promotes critical and logical thinking in students, since they must develop intellectual faculties through the discussion of essays, designs, experimental findings, etc.

This works best if it is complemented by exhibitions or discussions in which the students must display their work. Group dynamics can be used both in theoretical knowledge (group analysis and classes, interactions, etc.) and in practical applications.

Doménech (1999) considers that group techniques are neither good nor bad in themselves, it depends on the utility that is given to them. He points out that they are not an end in themselves but a means to achieve a learning object.

For his part, Tejada (1997) considers that there are several reasons to consider this strategy as an important tool in educational practice, among the most important advantages he points out:

1. They favor rapprochement and cooperation between students.
2. They promote positive feelings in the members of a group and increase their personal security.
3. They stimulate diverse learning and contribute to the achievement of objectives.
4. They facilitate the intellectual and affective development of students.
5. They improve the climate or atmosphere of the class, since it reduces tensions and fosters a pleasant atmosphere for students and teachers.
6. They generate security and relaxation for the teacher by increasing the responsibility of the students.

Sevillano (1995) when referring to this strategy considers that it was Ausubel, Novak and Hanesin who gave the most important impetus for its use, based on these authors he synthesizes the following basic ideas as its main foundation:

1. All real knowledge is discovered by oneself.

2. Meaning is a unique product of creative, non-verbal discovery.
3. Knowledge is the key to transfer.
4. The discovery method constitutes the main method for the transmission of content of the subjects of study.
5. The ability to solve problems is the primary goal of education.
6. Training in the “heuristics of discovery” is more important than training in the subject matter.
7. Every child must be a creative and critical thinker.
8. Exhibition-based teaching is “authoritative.”
9. Discovery organizes learning effectively for further use.
10. Discovery is a unique generator of motivation and self-confidence.
11. Discovery constitutes a primary source of intrinsic motivation.

The strategies are not enough by themselves to obtain the desired success and have an impact on improving the quality of teaching. Its value depends on the use and adaptation to the needs, objectives, goals, etc. The question of strategies is not a minor issue. If a teacher masters the content but does not know the appropriate way to transmit it, he may have limitations to achieve his objective.

The teacher must know the implementation of various strategies since the students and the contents are diverse, in this sense it is convenient to place the strategy in its place, so that it provides the best results.

4.1.2. Learning Assessment

De Juan defines evaluation as “a systematic, continuous and comprehensive process aimed at determining to what extent educational objectives have been achieved” (De Juan, 1996: 101).

It is considered important to comment on the confusion that in some cases arises between evaluation and mediation. Measuring is the action of collecting information and ordering it, taking into account a qualitative aspect while the evaluation goes beyond, it goes further by introducing value judgments on the information obtained.

Because there are many types of evaluation used in education, it is noted that at this time the attention will focus on the evaluation of student learning. From this perspective, the classification proposed by De Juan (1996) will be considered, who points out two criteria: the moment in which it is carried out and the interpretation of the results.

Therefore, the types of evaluation are (De Juan, 1996: 102):

- Considering the evaluated object:

1. Evaluation of the educational system (global).

2. Evaluation of the administration.
 3. Teacher evaluation.
 4. Student evaluation.
 5. Evaluation of procedures.
 6. Evaluation of the facilities.
- Regarding the interpretation of the results:
 1. Normative evaluation.
 2. Evaluation by criteria.
 - Taking into account the functional characteristics:
 1. Diagnostic evaluation.
 2. Formative evaluation.
 3. Summative evaluation.

4.1.3. The study plan

The examination of the study plan is an aspect that requires the attention of the professor in the university teaching-learning process, since it has an important repercussion in the improvement of quality. As a consequence of the accelerated growth of production and given the limitation of only being able to give students a part of the total knowledge; The selection of the subjects and the contents that make up the study plan must be carried out carefully.

The study plans require constant review and updating, it is not convenient to maintain programs developed for ten years or more. In this sense, the world conferences on higher education have declared that annual and even semi-annual plans be carried out.

De Juan (1996), following Peterssen (1996), defines the contents of the teaching-learning process, as those with which the student faces when learning and that leads to the modification of his behavior.

Regarding relevance, De Juan (1996) points out the following areas as determining factors:

1. Contents aimed at the social political formation of students: So that they allow their insertion into these problems from the perspective of their career.
2. Contents aimed at general training: those that seek to provide a vision that goes beyond the scope of the career and transcends the discipline itself.
3. Contents aimed at the basic training of students: they are oriented to procure the basic preparation that defines the knowledge and tasks necessary for the exercise of their career.

4. Contents aimed at methodological and instrumental training: prepare students for the management of and resources that are necessary to explore the field that defines a career.

5. Contents aimed at specific training: aimed at deepening some lines of work, selected for their special importance in the professional field.

Regarding the basic criteria that must be taken into account to establish the relevance of the contents, we will be guided by the recommendations and opinions given by De Juan (1996), who points out that every teacher, when selecting learning contents, must take into account the following aspects:

1. The importance that the content may have depending on how representative it is and its ability to serve as a paradigm.

2. The currency of the content, so that it can be useful at that moment, for its application or as a prerequisite for other subjects.

3. The future importance of the content, since it is useless to subject a student to learning content that they will not later use in their professional practice.

4. The characteristics of the contents such as: Objectivity, validity, structure and significance.

5. The possibility of adaptation to the level of need and understanding of the student.

In the same vein, Doménech (1999) considers that the most important principle of cognitive psychology is that learners build knowledge and that in order to help them, the types of knowledge that exist must be clear, since each type of knowledge is taught and you learn differently. He points out the classification made by M. D. Merriell in which he establishes a distribution into three large blocks: conceptual content, procedural content, and attitudinal content.

This classification is of great pedagogical importance since it allows a clear distinction to be made between the contents according to the use that must be made of them. Thus, there will be contents that will have to be “know” (conceptual), others that will have to be “know how to do” (procedural) and others that imply “being” (attitudinal).

4.1.4. Didactic Interactions

Regarding the didactic interactions, Sevillano presents them as “the set of relationships and communicative processes that are constituted between teachers and students and between them when carrying out the formative processes in formal and non-formal educational situations” (Sevillano, 1995: 144).

How many participate in the process linked to the educational practice establish relationships as a result of their actions, this relationship that is generated is what is called didactic interaction, which arises in the instructional processes among those who participate in the educational practice. The result of this interaction is the resulting social climate and

whose purpose must be aimed at improving the quality of teaching.

The didactic interaction reveals the style of relationships that characterize each classroom and each center, whose participants have to learn to value the processes and results that define the formative life of the classrooms and in the center.

The importance of the didactic interaction covers not only the unidirectional teacher-student relationship, but also includes all the possible relationships that are established inside and outside the classroom and in the educational center as a whole. In this sense, the didactic interaction can cover:

1. The teacher-student relationship.
2. The teacher-teacher relationship.
3. The student-student relationship.
4. The teacher-authority relationship.
5. The student-authority relationship.

Sevillano (1995) highlights the importance of these didactic interactions as he points out that they reveal:

1. The relational quality of the members of the class and the center.
2. The set of actions and ways of working of those.
3. The discourse that the participants construct in the classroom.
4. The keys that characterize the relationship between members.
5. The social climate resulting from the interaction.
6. The set of decisions assumed in the classroom and in the center.
7. The explanation of the teacher's teaching theory.
8. The set of relational styles of teachers and students.
9. The real possibilities of exchange between students and between them and the teacher.

These consequences of the interactive performance in the classroom pose great questions to the teacher, who wants to strengthen his methodological style and learn about the interaction that takes place in the class.

However, for the interaction to provide teachers with an important basis for their professional development, it is necessary for these interactions to be analyzed, to be understood and explained as the relational reality that occurs in the classroom.

The educational institution tends to socialize and train students to improve their thinking and formative action, which allows them to participate actively and critically in society, so that this participation is interactive.

For Sevillano, "the teaching activity is supported by the interactive style of each

teacher and their projection in the classroom. Valuing the interaction is to strengthen this relationship between theory and practical educational teaching in the classroom insofar as it contributes to the professional development of the teacher” (Sevillano, 1995: 144).

From a global theory of interaction, it is the teacher who has to create the most pertinent set of relationships with the method he wishes to apply, although globally he has to question the keys to the relationship and the differential synthesis that he wishes to build in each teaching situation.

In this sense, Villa based on Eckert (1973) refers to the importance and role that the university professor must play “teachers must have a greater sensitivity towards the motivations of their students, greater confidence in their relationships with people, great expectations that authentic and deep learning take place in their classrooms, and a great dedication to promoting human values through teaching” (Villa, 2000: 968).

In the interaction between teachers and students, the motivating presentation of content by the teacher is essential, involving students in its structuring and justification so that it invites them to investigate the reasons for what they learn.

The personal work of each student requires an attitude of trust and support from the teacher, which motivates him to expand the quality and frequency of decisions to increase the range of work and personal activities.

Another important aspect that must be taken into account in the interaction between teachers and students is the collaboration and empathy that must exist between them. Openness and mutual trust are essential for them to advance together and develop innovative processes. The didactic interaction in some cases is accompanied by conflict, since this does not always occur in its ideal sense, but rather it presents itself with conflicting characteristics. In this sense, Sevillano (1995) following the contributions of Fullat considers that in this case this interaction is defined as a tension in permanent increase, motivated by the duty to be and the necessary action of the teacher and the natural doing and being of each student, distant in his personal process from such a duty to be.

This tension can be considered, up to a certain point, natural, since educational action is the possibility of continuous improvement, it supposes a necessary struggle between the options of the teacher and those of the student.

However, this tension must be understood in its development possibilities and in the necessary participation between the protagonists. For the teacher, it must serve to direct his efforts to understand it, value it with his students and colleagues, and proceed in such a way that the maximum guarantees of fruitful work with his students are achieved.

The conflict in relationships can be useful when it is assumed as a space for open reflection, transformation and improvement of educational practice, since communicative action is essential in any process of improvement of the human being.

The attitude of the authorities and teachers must be coherent with the model and style of interaction that they promote with their students and colleagues. The socio-

communicative action articulates and gives meaning to the set of decisions and confluences of the members of the center and the classroom.

In this sense, the model of relations and communications that the teacher must adopt must be closely related to the construction of the innovative methodological system that he is willing to apply.

4.1.5 TEACHING PLANNING

The planning process implies the “a priori” construction of the activities that take place during the teaching-learning period. De Juan (1996) points out that planning is one of the key aspects that contribute to producing quality teaching.

This process begins with the objectives and includes all the elements related to the teaching activity. Planning is based on decision-making, therefore, they must be well defined so that effective results can be obtained.

De Juan (1996), based on Peterssen, suggests that good planning must take into account the following principles:

1. Principle of continuity: once a decision is made, it must be maintained. Teaching activity must be consistent and not arbitrary.
2. Principle of reverence: decisions can be reviewed and in certain circumstances changed by others or even annulled.
3. Principle of precision: That they clearly reflect intentional measures in relation to the teaching activity.
4. Principle of absence of contradiction: all didactic decisions must be made in such a way that they are consistent.
5. Principle of Adequacy: didactic decisions must be made taking into account rational points of view and must be adapted to the real demands of teaching.

When planning the educational process, the first thing to take into account is the establishment of goals or objectives. In this sense, Mager (1974) cited by De Juan (1996) highlights the importance of the objectives in the teaching-learning process, pointing out that when there is a lack of a clear description of the goals to be achieved, it is impossible to effectively evaluate a course and there is a lack of solid foundation for selecting the right teaching material and media.

For his part, Doménech (1999) considers that it is in the formulation of objectives where intentions can be explained and manifest what is wanted and why. It maintains that the intentions or objectives guide the teaching activity.

When referring to learning objectives, it is necessary to distinguish the conception that one has of them. Traditionally, the behaviorist perspective has used the term “operational objectives” (performance objective) to describe a measurable, observable and anticipated

change in student behavior as a result of the educational process. Thus, the learning objectives, such as “the description of the final behavior to the student expected or imagined “a priori” by the teacher, behavior that is supposed to be able to execute at the end of the learning process” (Peterson, 1976; cited by De Juan, 1996: 32).

Expressed this way, the objectives will reflect the final results in terms of transformation of the student’s behavior (change = final behavior-initial behavior). Currently, the orientation of the objectives is directed to the “change of state”, in this sense Doménech (1999) considers that this way the affective-emotional changes not contemplated from the operational objectives can be covered, which he considers as “restrictive”. ”.

This way, the learning objectives express the final state and in the teaching-learning process the increase or gain experienced by the student will be produced. However, the author makes it clear that in order to reach this final state, it must be taken into account that the increase will vary from student to student since students have different personal characteristics.

What has been expressed up to now shows the importance that, for the teaching activity, the adequate approach of learning objectives has, hence it is considered appropriate to address the basic qualities that these must have to represent a positive contribution, since their adequate establishment conditions important decisions of the teaching process such as the selection of content, strategies, media, evaluation, etc.

On this aspect and based on Miller’s approaches, De Juan (1996) proposes the following qualities that learning objectives must meet:

1. Be real and understandable, that is, that the institution acts based on them.
2. Based on the educational needs of students.
3. Be authentically feasible, in the sense that they can be carried out.
4. Be measurable, otherwise it will not be possible to evaluate it.

On the other hand, the same author exposes the position that Guibert (1994) has in this regard, which maintains that the objectives must be relevant, precise, logical, achievable, observable and measurable. As can be seen, the two characterizations do not represent in any case a diversity of criteria, on the contrary, they can be considered complementary when trying to develop well-planned objectives.

And as for the classification of learning objectives, they can be classified in various ways, it is not our intention to delve into their taxonomy; however, it is considered important to point out some important aspects.

Most of the aforementioned authors agree that, based on the nature of what is intended, there are three categories or levels of learning objectives that can serve as a reference for the development of the teaching-learning process, they are: the domain cognitive or intellectual, the effective or socio-affective domain, and the psychomotor or physical domain. Although the authors, for didactic reasons, treat them separately, they are

closely related.

When referring to these domains, De Juan (1996) considers that the cognitive domain is about objectives that directly imply the student's intellectual capacities, such as knowledge or memorization, comprehension, analysis, application capacity, problem solving and critical thinking.

Regarding the affective or socio-affective domain, he indicates that these objectives are related to the personal and social development of the student, therefore he considers that in universities not only must the student be technically trained, but also develop their capacity for teamwork, the responsibility, courage in the face of difficulties and/or failures, who are constructive, good communicators, etc.

In the psychomotor domain, these are objectives that involve the development and coordination of skills related to sensory and motor activities for the manipulation of objects. Another important aspect of the learning objectives that must be taken into account is their degree of concretion, since in the teaching-learning process objectives of different levels of concretion (generality-specificity) can be established.

In this sense, Doménech (1999) presents the objectives, from the most general to the most specific, as follows:

1. Institutional goals, purposes or purposes: those that respond to the ideological conception that the university, degree, or faculty has assumed. They must be adapted to social needs and to the reality of space-time, which is usually dynamic and changing.
2. General objectives of subjects: they must be proposed in a coherent way with the institutional goals, since they are related to the type of knowledge that the students are expected to achieve.
3. Topic or unit learning objectives : they guide the process of a specific topic and arise from the division of a general objective.

4.1.6. Teacher Training

In higher education, teacher training is directly related to the quality of teaching, therefore, it contributes to institutional improvement. Schulmeister (1993) considers that teaching, as in other professions, requires that the people who practice it have an adequate mastery of the science, technique and art of it, that is, they have professional skills.

polyvalent knowledge is necessary that includes different areas: everything related to the educational system, the problems caused by the construction of knowledge, the general pedagogical, the methodological-curricular, the contextual and that of the subjects of the teaching themselves.

García (1998) presents differentiated teacher training in clearly defined stages, among which stand out:

1. Pre-training phase.
2. Initial training phase.
3. initiation phase.
4. Phase of permanent formation.

In the pre-training phase, the author includes the previous teaching experiences that the aspiring teachers have lived. Regarding initial training, he points out that it is the stage of formal preparation in a specific institution; while the definition and permanent training stages refer to professional practice in the early years and in their professional development and improvement of teaching, respectively.

One of the most relevant characteristics in the consideration of teaching as a profession and of the teacher as a professional is the conceptualization of the need that the teacher has to continuously improve, reflect on his performance to know and penetrate the characteristics of his condition as a professional., as well as seek solutions to the difficulties encountered in the exercise of their profession.

In this sense, professional development is oriented towards systematic actions to improve practice, beliefs and knowledge with the purpose of increasing teaching quality.

Rumbos (1998), following the line of Villar (1993), presents four modalities of professional development:

1. Individual improvement process model: its purpose is to identify and solve the individual needs of the teacher produced by the possible contradictions between the organizational structure of the university, its objectives and the teacher himself; and focuses its attention on meeting the needs of teaching, research and services of the university professor.
2. Evaluation model for the improvement of teaching: its objective is to improve the quality of teaching based on evaluation; and focuses its attention on establishing quality criteria or indicators or what it means to be a good university professor.
3. Inquiry model: its objective is to illuminate the implicit theories that teachers have and that determine their action; and it focuses on self-reflection as a principle of professional development, based on the principle that the teacher is an individual who investigates and reflects on his own practice.
4. Organizational model: its purpose is to investigate the implied norms that govern university education through questionnaires, climagrams, etc.; and directs its attention to the context, culture or organizational climate, determined by a department and the influence that this culture exerts on the behavior and relationships between its members.

4.1.7. Inputs or Physical Resources

Among the inputs or physical resources of an academic program of a unit in an HEI,

the physical plant and equipment (classrooms, laboratories, workshops, tutoring centers, libraries, language centers, computer centers, among others) stand out with which This program must count for the sake of the development of the teaching-learning process.

According to the General Framework for the Accreditation Processes of Higher Level Academic Programs of the Council for the Accreditation of Higher Education, AC (COPAES, 2007), and the Reference Framework for the Evaluation of Administration and Management in Institutions of Higher Education of the Inter-institutional Committees of Higher Education (CIEES, 2007), the infrastructure and equipment must be accessible, adequate and updated, always depending on the number of students and academic staff, as well as the needs of the program in question.

The physical complex must operate under programs that involve compliance with construction, safety, hygiene and personnel integrity regulations. In the same way, it must apply preventive maintenance schemes for equipment and facilities to safeguard institutional assets. In addition, the academic unit or the program must have a plan for continuous improvement of the infrastructure and equipment that, in the same way, considers its updating and the demands in perspective.

4.1.8. The Internal Environment

Regarding the internal environment in the academic units of Universities or universities, we can point out communication and human relations, the organizational climate (respect for academic freedom, openness and plurality), shared spaces to think and make decisions, among others, such as the factors that account for this environment (Álvarez & Topete, 1997: 6).

Some indicators of communication and human relations in Universities have to do with: a) broad communication of the mission and goals; b) decision-making consistent with the mission; c) the planning policy consistent with the mission; d) periodic review of the organizational system; and e) adaptation to changes in the organizational structure (*Idem*).

Regarding the climate of openness and plurality in Universities, some relationship elements can be pointed out: a) institutional policies that favor openness; b) skills for solving problems and conflicts; c) satisfaction with the values of the institutional culture; d) the acceptance of controversial issues for discussion; and e) the degree of open communication between the actors of the organization (*Idem*).

Regarding shared spaces for thinking and making decisions, some of the indicators that are useful for analysis are: a) broad representation in decision-making; b) information on decision-making processes; c) the effective communication of decisions to the stakeholders of the organization; d) evidence of equitable procedures in teacher performance evaluation; and e) public information on the situation of the institution (*Idem*).

4.1.9. The Formative Processes

In the formative processes of an academic program in an academic unit dependent on an HEI or university, the educational model, the teaching models and the curricular model in that unit or academic program enter (Álvarez & Topete, 1997: 6).

An educational model constitutes the synthetic vision of theories or pedagogical approaches elaborated by an educational institution in general, and in this case an HEI, through an interdisciplinary, globalizing and coherent work, which includes a minimum agreement around plurality. of philosophical, ideological, pedagogical, psychological and political perspectives under a declaration of principles that govern the identity and way of being the institution. It acts as a guiding and organizational axis for specialists and teachers in the preparation and analysis of study programs; in the systematization of the teaching-learning process, or in the understanding of some part of a study program.

Regarding teaching models, first of all it must be noted that educational practices have been changing from the different elements that intervene in their application, such as the advances that science and technology in general have experienced, and those that have occurred in the educational field, all of them influenced by the dizzying changes experienced by society.

A very brief overview of the different approaches through which the teaching of science has passed, and which is linked to educational practices, gives an account of traditional teaching¹, teaching by discovery², expository teaching³, teaching through cognitive conflict⁴, and teaching from the assumptions and goals of scientific education⁵.

1 Traditional teaching is based above all on the verbal transmission of knowledge where the logic of scientific disciplines prevails over any other educational criteria and in which students have been relegated to a merely reproductive role. In this model, the teacher is a *provider* of knowledge already prepared, ready for consumption, and the student, in the best of cases, is the *consumer* of that finished knowledge, which is presented as facts, given and accepted by the educational communities. and scientific. In such a situation, the student has no choice but to accept said knowledge as something that is part of an unquestionable reality.

2 Teaching by discovery supposes a type of didactic approach that believes that the best way for students to learn science is by doing science and that their experiences must be based on those that allow them to investigate and reconstruct the main scientific discoveries. Therefore, in this model it is argued that the best didactic methodology is the scientific research methodology itself. From this logic, the teacher is the guide of the students in their passage through the research practice, where they must be the information seekers to formulate their own answers in the rediscovery of reality. The criteria for selecting and organizing content continue to be, as in the previous approach, exclusively disciplinary, although here the curriculum is structured around questions rather than answers. Likewise, the teaching practices are aimed at designing scenarios for the discovery of the knowledge to be learned.

3 According to Pozo, for Ausubel the problems generated by traditional teaching are not due so much to its expository approach as to the inadequate handling of the students' learning processes, therefore, to promote understanding, efficiency must be improved. of the exhibitions. For this, not only the logic of the disciplines must be considered, but also the logic of the construction of knowledge by the students. In fact, for Ausubel "learning science consists of *transforming logical meaning into psychological meaning*, that is, getting students to assume scientific meanings as their own" (Pozo, 2001: 107). The role of the student in this approach is active as they have the ability to relate, from the assimilation process, the new information provided by the teacher, with the previous knowledge present in their conceptual structure.

4 Faced with the idea that learning science must be achieved through personal discovery by students or through direct instruction by teachers, models based on cognitive conflict adopt an intermediate position (Pozo, 2001: 108); which starts from the alternative conceptions of the students who, when confronted with conflicting situations, achieve a conceptual change, understood as a substitution for more powerful theories, that is, closer to scientific knowledge. This approach emphasizes the awareness of this conflict and its resolution. It is the teacher's job to use all means, expository or non-expository, to make the student see the relative insufficiency of their own actions and conceptions and thus generate their motivation towards learning.

5 This model assumes a constructivist position regarding the learning of science, since it is conceived that the construction of scientific and school knowledge implies social scenarios clearly differentiated by their goals and the organization

Although there are salvageable elements in each approach, it is this last approach, rooted in the contributions provided by social constructivism, which currently serves as a platform to implement educational models in numerous Universities, seeking to channel educational practice to train professionals committed to his society and time. Thus, the social constructivist approach provides a clear (but not definitive) idea of what the educational act entails, and makes it possible to point out what teaching implies: problematize⁶, generate reflection⁷, promote tolerance⁸, generate purposeful interaction⁹, plan as a foundation¹⁰, seek meaningful application¹¹, communicate effectively¹², start from prior knowledge¹³ and promote intellectual autonomy¹⁴.

And finally, regarding the curricular model or curriculum, COPAES (2007) proposes that an updated curriculum of an academic program must have coherence, consistency, and validity in accordance with the organization and direction of the teaching-learning experiences that have been developed. proposed the program; and it will have to develop, minimally, the following components:

1. A study plan, containing the objectives, contents, and teaching and learning activities, as well as congruence, consistency, articulation, and relevance to the purposes of the academic program.
2. A diagnosis of the social, economic, political and scientific and technological development needs, local, regional and national, as well as the advancement of the

of their activities (Poza, 2001: 109). Therefore, from this approach it is assumed that the goal of education must be for the student to know the existence of various alternatives in the interpretation and understanding of reality and that exposing and contrasting these possibilities will help him not only to better understand the phenomena studied, but above all, the nature of scientific knowledge already developed. The organizing core of this approach is the way existing knowledge in a given domain is presented. It is about deepening and enriching what students can elaborate from the previous knowledge that they are building in their daily and previous school experiences, which must be integrated with more and more information at the same time that they are contrasted with other theoretical perspectives. Although this approach has the student as the main actor in the learning scenario, it does not neglect the important role played by the teacher, since it is the teacher who designs the situations in which this scientific knowledge must be contrasted and reconstructed by the student. student to achieve intellectual autonomy.

6 Situations must be considered that demand and favor, through challenging problems or situations, the use and mobilization of the cognitive competences previously achieved by the students to promote, from them, increasingly rich interpretations, in breadth and depth, of the contents. disciplinary concerned.

7 Situations of dialogue and exchange of views must be promoted around the problems and challenging situations raised. The foregoing promotes one of the activities that most successfully promotes the generation of significant knowledge: the sociocognitive conflict, whose purpose is to question the previous knowledge of the students that is related to the disciplinary contents to be learned, to reorganize the already existing schemes. elaborated, transform them or, even better, expand them.

8 During the didactic situations, the teacher will be responsible for fostering a climate of respect where, through the same dialogue, students can express their opinion freely about the content or ideas discussed in the classroom.

9 The teaching in this model must contemplate concrete activities of cooperative work, discussion and reflection related to the problems that promote the activities for the reconstruction of the contents.

10 School activities must be organized into learning units which are configured by interconnected content. These units will be developed by the teachers, who will be responsible for mastering the content to be taught.

11 The learning units will also contemplate activities that will be carried out by the students in a particular context and with broad objectives, which will allow them to get closer to the social reality in which they operate in a more significant way.

12 Make explicit and clear use of language with the intention of promoting the necessary situation of interaction (between teacher and learners) and negotiation in the expected sense, avoiding ruptures and misunderstandings.

13 Establish constant explicit relationships between what students already know (their prior knowledge) and the new learning content. In short, the teacher will always start from what the student knows.

14 The foregoing makes it possible to promote the autonomous and self-regulated use of the contents by the students as the ultimate goal.

discipline in the world, which was the support for the creation or modification of the study plan.

3. The objectives, which must clearly express the intentions, goals and usefulness of the academic program.
4. The profile for admission to the academic program, which specifies the knowledge, skills and attitudes that applicants must meet to enter, as well as the educational and administrative requirements.
5. The graduation profile, which must indicate the knowledge, skills, attitudes, aptitudes and values that students will have upon completing the studies provided for in the academic program, which must be consistent with their objectives.
6. The curricular structure, which indicates the levels that make it up (epistemological, pedagogical and psychological, among others), the coverage, consistency and adequacy of the organization that governs the study plan, as well as the adequacy of the curricular map (its horizontal and vertical, the obligatory nature, effectiveness and selectivity of the subjects or equivalent, their weighting in terms of credits, and the proportion and location of the theoretical, practical and theoretical-practical hours).
7. The programs of the subjects or equivalent, which guide the teaching-learning process, must contain, at least, the following elements: a) general objective; b) particular objectives of each topic, description of the nature of the matter; c) recommendations for learning activities; d) the learning assessment method and procedure; and, d) the basic bibliography and support.
8. Periodic and collegiate review of the study plan.
9. Monitoring and evaluation of the study plan.

4.1.10. Academic Staff Regulations

Regarding the regulations of the teaching or academic staff, it must be mentioned that said factor refers to the fact that the IES or university in general and the academic unit in particular, have a statute of professors in which they are defined, among others aspects, their duties and rights, and the disciplinary regime, their participation in the governing bodies of the institution, the rank that organizes the teaching career and the academic criteria of connection to the institution. And it is also demanded that said statute be applied, effectively, with transparency and efficiency, in order to contribute to the fulfillment of the institutional mission.

And, both the CIEES (2007) and the COEPES (2007) coincide in pointing out as elements of the academic staff regulations of an academic unit of an HEI or university: a) The regulations or statutes of the academic staff, in which regulate the procedures for admission, promotion and permanence (permanence and interim), as well as the review procedures; and, b) regulatory guidelines that address incentives for academic and research

productivity, scholarships for faculty, the type of contract (full-time, part-time, or hours), the academic level (bachelor's, master's, and doctoral) and functions (teaching and research).

4.1.11. Regulations for Students

Regarding the regulations for students, it must be noted that this factor refers to the fact that the IES or university in general and the academic unit in particular, have a student statute that defines, among other aspects, their obligations and prerogatives, the disciplinary regime, their participation in the governing bodies of the institution, and the academic criteria for admission and permanence in the institution, promotion, transfer, and grade. And it is also demanded that said statute be applied, effectively, with transparency and efficiency, in order to contribute to the fulfillment of the institutional mission.

And, both the CIEES (2007) and the COEPES (2007) coincide in pointing out as elements of the student regulations of an academic unit of an HEI or university: a) the student regulations that regulate their admission, permanence, promotion and graduation; b) the regulation, guidelines or instructive of titling; c) the regulations, guidelines or instructions of the social service; and, d) the regulation of scholarships for students.

4.1.12. The Effectiveness of Teaching

According to the Council for the Accreditation of Higher Education, AC (COPAES), through its General Framework for Accreditation Processes of Higher Level Academic Programs, the effectiveness of teaching an academic program offered by an academic unit dependent on an HEI is directly linked to the philosophical foundations of the program, its social relevance and the implementation of policies, strategies and mechanisms to give adequate attention to students and follow up on their educational development.

Specifically, in assessing the effectiveness of teaching, the following must be considered:

1. That the program selects students based on academic criteria and that their real admission profile is consistent with the graduation profile established in the curriculum.
2. That the program consider the analysis of dropout, failure and low performance in subjects or equivalent, and the corresponding remedial programs.
3. That the program has information on the terminal efficiency and the degree of its students.
4. That the program consider actions aimed at increasing the quality of terminal efficiency and graduation.
5. That the program has institutional mechanisms for individual and group academic tutoring, as well as support services for student learning and personal development.

4.1.13. Synthesis of the Component Elements of Teaching in Higher Education

Teaching in universities or universities constitutes a substantive function. In addition, the teaching practice constitutes, as has been seen in the preceding spaces, an activity composed and determined, among others, by the following elements:

1. The effectiveness of teaching.
2. Didactic strategies.
3. The evaluation of learning.
4. The study plan.
5. Didactic interactions.
6. Planning of university education.
7. Teacher training.
8. Inputs or physical resources.
9. The internal environment.
10. The training processes.
11. The academic staff regulations.
12. Regulations for students.

In the development of the section that ends here, the theoretical foundations were presented to consider these elements as members of the teaching activity.

The quality of education in the academic units of HEI or universities constitutes a relational and multidetermined concept. Among the factors that determine this quality is, precisely, the university teaching activity that has been reviewed in this section. Therefore, this paper argues that improving the quality of university teaching has a direct and positive impact on the quality of the educational service provided by the academic units of Universities or universities. In the following chapter, the methodology to implement around this particular assumption will be exposed and, from now on, an attempt will be made to prove it in the light of empirical evidence.

4.2 RESEARCH IN HIGHER EDUCATION

In the context of higher education, research constitutes a cardinal task in all universities and higher education institutions in general, since it is through it that scientific knowledge is present, precisely in said institutions. According to Velázquez and Maldonado “the generation and application of knowledge is one of the substantive functions of all Universities. It includes all the activities associated with the work carried out by the researchers grouped in collegiate research bodies, the academic bodies” (Velázquez & Maldonado, 2006: 160).

Thus, the Universities are aimed at promoting, coordinating, evaluating and disseminating research in the scientific, humanistic, social and technological fields through various programs that support researchers, encourage research work and generate links with teaching, causing in such a way a social relevance of the investigation, according to the needs of the country, the region, the state or the locality.

4.2.1. Legal Framework of the Investigation

In Mexico, the foundation of scientific research work in HEI or public universities is framed in the internal legislation of said institutions. In other words, the university legal framework constitutes the legal basis for the development and promotion of research within public Universities.

Specifically, in the case of analysis of this thesis, the Organic Law and the University Statute of the Universidad Michoacana de San Nicolás de Hidalgo constitute the legal framework that supports the function of research at House of Hidalgo. Thus, the aforementioned Organic Law provides that:

1. “The Universidad Michoacana de San Nicolás de Hidalgo is a service institution, decentralized from the State, with its own legal personality and patrimony; dedicated to middle-higher and higher education, at its various levels and modalities, scientific research, the dissemination of culture and university extension” (Article 1, Chapter I. Nature and powers);
2. “The University will enjoy autonomy, in accordance with the provisions of this Law, with powers to: (...) III. Determine academic plans and programs, scientific research, dissemination of culture and university extension (...)” (Article 2, Chapter I. Nature and powers);
3. “In the performance of its activities, the University will seek to: I. Maintain that all existing processes in the universe, both natural and social, are known or likely to become known by man, through scientific research carried out with based on experience and its rigorous and verifiable rationalization (Article 3, Chapter II. On the bases for scientific education and research);
4. “(...) The activities carried out by the University will be aimed at stimulating and respecting the free expression of ideas, useful in the search for scientific truth and to promote excellence in teaching, research, artistic creation and the dissemination of information. culture (...) (Article 4, Chapter III. On the purposes); and,
5. “To achieve its goals, the University must: (...) II. Organize, promote and carry out research on the problems of science and society to achieve knowledge of our reality and the rational use of the resources of the State of Michoacan and Mexico, in such a way that it contributes to the solution of the problems that affect our political, economic, social and cultural life (...) (Article 5, Chapter III. Purposes);

Regarding the University Statute of the Universidad Michoacana, it establishes

regarding research, that:

1. "These are purposes of the University: (...) II. Promote and develop scientific research; (...)" Article 1, First Title "Personality and purposes");
2. "(...) that all the phenomena and processes of the Universe are likely to be known through scientific research (...)" (Article 2, First Title "Personality and purposes"); and,
3. "In the investigations carried out by the University, efforts will be made to: I. contribute to the growth of science and technology; and II. Contribute to the solution of the problems that affect Michoacán and the Nation, to raise the economic, cultural and social level of our people. The University Council will issue the rules it deems appropriate to stimulate research work and provide its staff with the means of study and experimentation" (Article 10, Third Title "Functions of the University").

It is evident then that, as suggested by the case of the Universidad Michoacana de San Nicolás de Hidalgo (public IES) in Mexico, university scientific research is a public service that, endowed with material and human resources in a legal and institutional framework, Its mission is to generate, transmit and manage knowledge.

Therefore, what especially and by legal imperative singles out universities or public universities, is that research within them is mandatory. And this uniqueness that lies in the research activity in Universities or public universities compared to other educational centers must also give an exceptional character to the teaching that is taught there.

4.2.2. Research Organization

The organization of the research activity in an HEI or university has to do with the authorities and organizational units of the research, the researchers, the research groups, the research lines, and the resources allocated to this function.

In the case at hand here, that of the Universidad Michoacana de San Nicolás de Hidalgo, the University Statute gives an account of such an organization, and establishes that: "The Scientific Research Council must: I. Promote and coordinate research work; II. Promote the establishment of new research centers; III. Consider the queries formulated by the Public Power and individuals; IV. Promote the exchange of researchers; V. Collaborate with scientific and cultural dissemination programs; VI. Submit to the Rector an annual report of the work carried out; and, VII. Suggest the granting of incentives to researchers" (Article 52, Sixth Title "Of the Scientific Research Council").

Thus, the Scientific Research Council, made up of a coordinator, by the Directors of the Institutes and by a representative of the researchers from each of the research institutes and centers (Article 51, Sixth Title "Of the Scientific Research Council"), is the highest authority on scientific research at the Universidad Michoacana.

According to the General Regulations for Academic Staff of the Universidad

Michoacana, the academic staff of House of Hidalgo is made up of the following categories: a) Teaching, Research, and Academic Technical Assistants; b) Academic Technicians; c) Subject Teachers; and d) Career Academics (Article 4^o). However, it is fundamentally career academics, that is, professors and associate and tenured researchers (Article 5, IV), who carry out the research task at the Universidad Michoacana. Several of these human resources are registered in the National System of Researchers (SNI) under the National Council of Science and Technology (CONACyT) of Mexico.

In addition, mainly in recent times, the logic of carrying out research in isolation and with individual work has been abandoned, and teamwork among researchers has been promoted through research teams, highlighting among them the so-called research bodies. academics. These collegiate bodies encourage and promote lines of generation and application of knowledge in accordance with their interests, their academic profiles and work centers.

The economic resources for research in universities have three origins: internal resources, external resources or mixed resources. The first are those granted by the IES through its internal research programs; the second are those that support research with funds from other institutions (for example CONACyT, private agencies, governments, foundations, etc.); and mixed resources are those that come from funds of the HEI and some other external institution(s).

In accordance with the protocols of most research programs, researchers propose and participate to obtain sponsorship, subjecting their projects and research proposals to guidelines and reviews.

4.2.3. Research Modalities

In teaching practice, the teacher becomes a researcher by reflecting on his own practice, looking for explanations about what, why, for what and how, in order to subsequently make decisions and thus produce the necessary changes in order to improve the quality of teaching. Rumbos (1998) points out some occasions in which they can be carried out:

1. How they structure and organize the contents and activities, both theoretical and practical.
2. What are the components of the teaching-learning process in which students are immersed.
3. How are the teacher's relationships with other colleagues who teach in the same course, or in the same area of knowledge in different courses.
4. How assessment practices are proposed to diagnose, understand or control student learning.

4.2.4. Research Interactions

The analyzes carried out on the links between teaching and research have been considerable, many and varied. Sancho (2001) proposes, among others, three possible perspectives for this connection, based on the contributions of Braxton (1996): a) null, when there is no relationship; b) that of conflict, when the relationship is negative; and c) complementary, when there is similarity between teaching and research.

This author points out some aspects that are latent in these possible connections, and among them she mentions that carrying out research requires spending a significant portion of time, and in some cases the teaching activity usually takes place with large groups that takes up a lot of the teacher's time.

Two other aspects that the aforementioned author refers to and that she considers must be taken into account are the structure of the academic staff, which in many cases is designed to respond to the needs of the teaching activity, and the research achievements that are valued more than educational results.

Table 4.1. Similarities and Differences between Teaching and Research Jobs

<i>Similarities</i>	<i>Differences</i>	
<i>Teaching researcher</i>	<i>Teacher</i>	<i>Investigator</i>
<ul style="list-style-type: none"> - Stay up-to-date with advances in your field of study. Identify the most relevant issues and problems for the present and the future. - Recognize the beliefs and visions of the world that underlie the different contributions from individuals and groups. - Analyze the methodological rigor of the different studies. - Point out the elements of your area of study that favor appropriation of the knowledge to guide the action. - Study the skills and abilities necessary to deepen the area of study. - Plan the action (teacher or researcher). - Put it into practice. - Evaluate the action. Communicate the process and results. 	<ul style="list-style-type: none"> - Most of his performance is private: between him or her and the students. - His plans are accepted without further ado. - Its projects are renewed annually without interruption. 	<ul style="list-style-type: none"> - His performance has public character. Has to account for his work for others experts and their peers. - Your plans are evaluated and must compete for the resources. - Each project involves a process of competition. - The more powerful is the team and greater the responsibility in he is older bureaucracy burden and Management.

Source: Sancho (2001: 49).

Sancho (2001) presents the results of a study carried out by Vidal and Quintanilla (1999) on research in Spanish universities, and among his main remarks he highlights some factors that favor positive relationships between teaching and research:

1. Research activities contribute to updating the study plans, positively affecting the content of the programs.

2. Through research projects, resources can be obtained that can be used in teaching activities.
3. Research is essential for teacher training, so good research groups can provide new technologies and knowledge for training.
4. Finally, the study made it possible to point out that research activity leads to an improvement in the quality of teaching (although not vice versa).

From Table 4.1 it can be noted that the university professor can link research with teaching so that scientific productivity favors teaching and vice versa.

Precisely, Sancho affirms that, if the investigation allows to develop knowledge about a subject or problem, the teacher-researcher is capable of thinking that the knowledge that is transmitted to the students is not different from the one that is developed in the investigation, and will be in best situation to reveal to the student the complexity of knowledge, its provisionality, its potential to explain the world and intervene in it.

The proper link between teaching and research requires that the university professor reflect on the student's way of learning, this reflection will give him the key to understand to what extent his research can feed back into his teaching.

In this sense, Sancho (2001) considers that teachers must have some control over how students learn and over teaching methods and points out that from previous work he has been able to conclude that individuals learn more when:

1. They get involved in issues, problems, activities or tasks that are related to their own interests and concerns.
2. They work in collaborative contexts.
3. They get involved in investigative processes.
4. They reflect on and evaluate their own learning process.
5. They face problematic learning situations.
6. They relate what they learn to the experiences of everyday life.
7. They explore unfamiliar topics and areas.
8. They find relationships between topics, disciplines and areas of personal and social interest.
9. They discover that they can understand and communicate both things, events and phenomena and aspects of them in the best and most complex way possible.

These findings allow you to reinforce the importance of considering learning research and its implications for designing and implementing better university teaching and learning environments.

4.2.5. Results of the investigation

The results of the research work have to do with the productivity of the researchers' work. What is the work of the researchers and how does the latter impact the HEI and society in general?

The resolution of specific problems, the advancement of knowledge, the generation of scientific and academic articles, the publication of texts, among others, are the material results of research in Universities or universities. Research results must also support teaching work in the context of higher education.

4.2.6. Synthesis of the Component Elements of Research in higher education

In the same frame of mind, research is considered an essential element that favors the quality and improvement of teaching. The university teacher must be a practitioner who explores and inquires about the meaning of his activity, so that this inquiry facilitates the understanding of reality and allows him to generate the improvement of teaching.

In this sense, Santos (1993) proposes a clear relationship between the research, teaching and improvement aspects. The research that the teacher or groups of teachers carry out must be focused on the practice in which they are immersed, which will allow the improvement of teaching to arise almost inevitably, because it is a research that facilitates the acquisition of ideas and that generates a commitment to action.

The improvement of the teaching quality will derive from this research, since the teacher does not investigate fundamentally to produce an accumulation of knowledge but to transform reality; the teacher's pedagogical discourse, his attitudes towards the students and the activity, his very ways of acting will be modified in light of what he has discovered in the inquiry.

Although not all university professors are creators of knowledge, in principle, all of them must have a concern for the search for knowledge and an appreciation for excellence. In the opinion of Grandal (2002) it is impossible to be a good university professor without research.

The author of reference considers that in a university that does not have research; the student will not have a love of seeking knowledge, of keeping up to date, and of wanting to bring his profession to the highest standard. It is not what the professor produces as research; Their work may not have a global or national impact, but it conveys the effort to do things well and with quality.

The division between teaching and research affects pedagogical practice, since there is no research on it, it becomes an unthinking and routine deployment of means and techniques, an even more serious matter, university professors do not have pedagogical knowledge, which leads to another point of reflection: to teach a subject it is not enough to master the discipline.

Finally, it must be noted that based on the purposes of this inquiry, it is considered that some of the most relevant component elements of the research work in Universities or universities are, among others: the legal framework of the research, the research organization, research modalities, research interactions and research outcomes.

4.3 EXTENSION AND DISSEMINATION IN HIGHER EDUCATION INSTITUTIONS

4.3.1. Extension in Higher Education

In the university context, the extension has represented the way to bring the university to the field and vice versa. After the Industrial Revolution, both European and North American universities had to make structural changes to accommodate the innovations of the moment; they specialized in high-level scientific research and cultural humanistic creativity.

This is how the cycle of research-teaching-extension in universities began. In this sense, it is important to highlight that in 1980 the American Society for the Extension of University Teaching was created. The context of extension in universities has been changing considerably.

Paredes (1993) summarizes the most significant conceptions that have intervened in this evolution, warning about the concept of extension adopted at the I Conference on University Extension and Cultural Diffusion of 1957: "By its nature, university extension is the function and guiding mission of the contemporary University, understood as an exercise of the university vocation. Due to its content and procedure, the university extension is based on the set of studies and philosophical and technical activities, through which the problems, data and cultural values that exist in all the social, national and universal environment are auscultated, explored and collected. social groups. Due to its purposes, the university extension must propose, as fundamental purposes, to project culture dynamically and in a coordinated manner and guide the entire town with the university. In addition to these purposes, university extension must seek to stimulate social development, raise the spiritual, moral, intellectual and technical level of the nation, impartially and objectively proposing to public opinion, fundamental solutions to problems of general interest" (Walls, 1993: 23).

The author in question considers that given this meaning, university extension is limited to the simple dissemination and projection to the community of its knowledge and culture, through scientific and cultural acts, without relating it to teaching and research activities. Thus, based on the conclusions of the II Latin American Conference on University Extension and Cultural Diffusion, Paredes presents a concept of university extension as a social mission: "(...) it is the interaction between the university and the other components of the social body, through which assumes and fulfills its commitment to participate in the social process of creating culture and the liberation and radical transformation of the national community" (Paredes, 1993: 24).

And in addition to this social conception of extension, the author proposes a broader vision, based on Elberg's propositions, which defines extension in Universities as: "A process of cultural, artistic, scientific, technical and action diffusion social, by which the university delivers part of its humanistic and scientific wealth to the community and receives, through permanent contact with economic and social reality, a whole range of stimuli to guide its research and teaching programs" (Paredes, 1993: 26).

The concern to find the most appropriate conception of extension continues in the minds of different researchers. And this is how Basanta (2001) considers the urgent need to link education with society, if a harmonious development of both is sought. In the same way, it states that education, closely linked to society, must train human resources based on national or regional priorities and the authentic vocation of its applicants.

4.3.2. The Diffusion of Culture in the University

Cultural diffusion constitutes a substantive function in every HEI or university. In addition, it includes the set of activities aimed at disseminating, through different means of information, the products and services resulting from the substantive function of investigation. And, therefore, it must have a direct impact with the community that the HEI serves.

The diffusion, however, is inserted in the set of tasks of the extension. Therefore, extension includes diffusion.

For the purposes of this research work, the functions of extension and diffusion are presented through the conjunction. This is because in the case study here, that of the Universidad Michoacana, activities are carried out that have to do with extension but are considered dissemination.

4.3.3. Extension and Diffusion in Higher Education

Therefore, for the purposes of this analysis, it is assumed that the composite function or joint functions of extension and diffusion have to do with the activities that aim to deliver to the environment of the institution (companies, organizations, and the community) the final product of their activities. substantive processes of teaching and research.

Through extension and diffusion, professionals graduated from the different academic programs of an HEI are incorporated into the surrounding firms via a job bank, for example; the knowledge generated by the researchers is disseminated and promoted through extension actions; consulting and specialized advisory requirements, coming from the institution's environment, are identified and channeled to the corresponding academic bodies for their attention, etc. (Velazquez & Maldonado, 2005).

4.3.4. Legal Foundation of Extension and Diffusion

In the case of Mexico, the legal foundation of the extension and diffusion for any IES, is framed in the legal and regulatory provisions that determine its location, regime and relations. These grant extension and dissemination activities the same priority as teaching and research, and assign an important responsibility and taxes within the Universities.

Specifically, in the case of analysis of this thesis, that of a public IES, the Organic Law and the University Statute of the Universidad Michoacana de San Nicolás de Hidalgo constitute the legal foundation that supports the functions of extension and dissemination in the House of Hidalgo. And such foundations are, in parallel, the frame of reference and commitment of the University with itself and with the community which it houses.

This is how the aforementioned Organic Law provides that:

1. "The Universidad Michoacana de San Nicolás de Hidalgo is a service institution, decentralized from the State, with its own legal personality and patrimony; dedicated to middle-higher and higher education, at its various levels and modalities, scientific research, the dissemination of culture and university extension" (Article 1, Chapter I "Of Nature and Attributions").
2. "The University will enjoy autonomy, in accordance with the provisions of this Law, with powers to: (...) III. Determine academic plans and programs, scientific research, dissemination of culture and university extension (...)" (Article 2, Chapter I "On Nature and Attributions").
3. "The University's essential purpose is to serve the people, contributing with its daily work to the formation of qualified men in science, technology and culture, who qualitatively raise social values and customs. The activities carried out by the University will be aimed at stimulating and respecting the free expression of ideas, useful in the search for scientific truth and to promote excellence in teaching, research, artistic creation and the dissemination of culture; combat ignorance and its effects, servitude, fanaticism and prejudice; create, protect and increase the assets and values of the cultural heritage of Michoacán, Mexico and universal, making them accessible to the community; encourage in their internal life and in their projection towards society, democratic practices, as a way of coexistence and social improvement; promote the improvement of social and economic conditions that lead to the equitable distribution of the nation's material and cultural goods, and encourage innovation and tradition to be integrated in productive harmony to achieve a solid and authentic cultural and technological independence" (Article 3, Chapter III "About the Purposes").
4. "To achieve its goals, the University must: I. Train professionals, technicians, university professors, researchers, and artists according to planning based on the independent development of the nation, fostering in its students, teachers, and workers a deep-rooted awareness of nationality that urges them to achieve and defend our full political, economic and cultural independence, in addition to instilling in them a pure spirit of justice and solidarity with all the peoples who fight

for their freedom and independence; (...) III. Create, rescue, preserve, increase and disseminate culture, as well as publicize our cultural values and incorporate those of a universal nature to ours; and, IV. Establish permanent linkage programs with our people, in order to jointly find the satisfaction of their needs” (Article 5, Chapter III “About the Purposes”).

The previous articles give an account of the extension and diffusion of culture as substantive functions of the University formalized in its legal framework.

The University Statute of the Nicolaita University, for its part, in its Third Title “Functions of the University”, establishes that:

1. “The educational function will have the purpose of: I. Providing a scientific concept about the universe and the laws of social development, promoting the understanding of our problems and the exploitation of national resources for the good of the people, defending our political independence and ensuring the continuity and growth of our culture, seeking the development of the student’s personality, as well as their awareness of social duty (...)” (Article 11).

2. “Since culture must not be the privilege of any social sector, the University will seek to disseminate it as widely as possible” (Article 12).

Therefore, this university legal basis strengthens the activity of the diffusion of culture specifically as a means to achieve the goals of House of Hidalgo. And, the referred legal framework, in general, formally assigns to the extension and diffusion of culture, the same category as to research and teaching, which is indicative of the need for its programmatic articulation so that Universities reach fully its purposes.

4.3.5. Extension and Diffusion Organization Scheme

The organization of extension and dissemination activities in an HEI or university has to do with the authorities and organizational units around the extension, linking and dissemination of culture.

In the case that occupies here, the Organizational Chart of the Universidad Michoacana de San Nicolás de Hidalgo gives¹⁵ an account of such organization, and it contains the Secretariat of Cultural Diffusion and University Extension, as well as the Department of Liaison and Development, dependent on the latter. of the Academic Secretary. The Department of Physical Education, Radio Nicolaita, the University Publishing House, the University Theaters and Auditoriums, and the University Bookstore are subordinate to the Secretariat for Cultural Diffusion and University Extension.

In addition, the reference organization chart also includes the Social Service Department, the Center for Educational Communication, the Center for Psychology and Psychometrics, and the Center for Didactics, all these units subordinate to the Academic Secretariat. However, all these organizational units keep their direct link with extension and dissemination tasks as a distinctive feature.

¹⁵ Approved by the H. University Council on January 25, 1983, and rearranged according to the Organic Law of 1986.

4.3.6. Extension and Diffusion Objectives

Taking into account the contributions made by Paredes (1993) on extension (which includes dissemination) in Universities, it can be assumed that these activities must have as fundamental objectives:

1. The promotion of the integral development of the geographical area of influence of the IES or university, especially of the agricultural and livestock sector.
2. Provide advice to public and private organizations.
3. Collaborate with public and private organizations in the design and development of plans, programs and projects for regional development.
4. Promote the stimulation and consolidation of talent, the creative and reasoning capacity of the population, in order to guarantee their active participation in the regional development process.
5. Disseminate and promote in the community the results of the technologies obtained during the investigation.
6. Stimulate the rational and productive use of human and material resources in the region.
7. Promote the revaluation of the place where it is located, with a view to rescuing and creating confidence, motivation and commitment to work for its integrated development, in order to break dependency and raise the prestige and standard of living.
8. Collaborate with the preservation and enrichment of the cultural heritage of the country and especially of the region, with a view to consolidating the fundamental values and the creative and reasoning capacity of man.

4.3.7. Formats of Extension and Diffusion and their Relations with the Context

In order to indicate the modalities that university extension activities can assume, what is related to their internal and external linkage will be taken into account, following the contributions of Basanta (2001) and Paredes (1993). Both authors present the extension work in two senses: internally or intramural and externally or extramural.

The extension activities in the internal sense come to be those that are carried out within the university, with the purpose of integrating the resources that allow the global participation of the HEI or university in the cooperation projects. And with these activities the following objectives are pursued:

1. Contribute to the training of the future professional, enabling them to view the culture in its entirety.
2. Contribute to obtain changes in students' attitudes towards their reality, motivating them based on the interests of the vast majority.

3. Allow and stimulate the rational use of the infrastructure, avoiding duplication of tasks and dispersion of effort.
4. Stimulate community participation.
5. Be integrated with the global planning of the institution.
6. Promote activities for the improvement, updating and improvement that promote the professional improvement of the personnel who work in the institution.
7. Plan and manage a set of collective subjects, tending to provide the student with complementary training.

External extension activities are those designed to stimulate the full development of educational capabilities. They operate at two levels: national and international. The national level allows the linking of the university with public and private institutions, in order to turn their participation into a defined and comprehensive contribution of work, offers scientific, humanistic and technical service resources.

For its part, the international level allows for links with other countries, relating this way to the technical, scientific, educational and cultural progress that other nations have achieved and disseminating those produced in the institution in this area. And with them it is intended to achieve:

1. Open permanent communication channels with reality and project onto them their scientific and technological contribution, their thinking and creations, seeking a dialogue with the people and their organizations.
2. Contribute to the decision-making of broad citizen sectors.
3. Contribute with their academic contribution to the progress of social and economic change in society.
4. Promote inter-institutional coordination criteria as a means for the best use of resources.
5. Promote and maintain cooperation with public and private institutions involved in national development.
6. Develop extension activities, with special emphasis on marginal areas.
7. Promote sports, defense, dissemination and updating of national values.
8. Raise the standard of living of families.
9. Help organize regional scientific and technical information and/or disseminate information in extra-university settings.
10. Promote actions that make it possible to obtain additional own resources to strengthen and expand other university activities.

Likewise, the modalities of university extension are governed by four pre-established criteria so that they allow their coherent development with the institutional and societal

reality. These criteria are proposed by Paredes (1993) as: nature of the extension, recipient, modality and economic purpose.

The aforementioned author maintains that university extension activities must reflect the interaction and correlation between these criteria so that they are feasible and develop in the most positive sense for the institution.

4.3.8. Interactions of Extension and Dissemination with Teaching and Research

The extension and diffusion in the IES or universities has among its objectives the projection of said institutions in the environment, which allows the IES or university-community interaction, forming an educational process that links teaching and research to the knowledge of social needs. economic, technical and cultural.

There is no doubt that the IES or university must meet the aspirations of the society to which it is due and that, because it is the institution of the highest educational level, the highest responsibility in the discernment of knowledge is inherent to it. Therefore, extension and diffusion must promote, at the same time, the solution of community problems in the area of influence of the HEI or university and, at the same time, provide technical advice, stimulate and consolidate talent and capacity. creator and reasoner of the population, in order to guarantee their active participation in the process of development of society.

This is how Basanta (2001) considers that teaching, research, extension (and dissemination) activities synthesize the common denominator of the set of actions that characterize the university system. This trilogy is exercised by Universities or universities from different perspectives, but in any case, always taking into account their interrelationship.

Teaching activities must attend to training; those of investigation to the discovery; and those of extension and diffusion must generate the link between the IES or university and the community, so that they merge the essence of the generation of knowledge.

If in teaching, the curricula are not enriched with the contributions of the field of research and extension, the educational activity would be transformed into repeated and lacking current responses. In this case, the IES or university would be responsible for annulling the progression of knowledge that by its nature must be generated within it.

On the other hand, if university students are not trained in the field of research, the creative responses that society demands from Universities or universities would be null. Therefore, teaching, research, extension and dissemination activities must complement each other in order to adequately fulfill its mission.

4.4 THE ADMINISTRATION/MANAGEMENT IN THE INSTITUTIONS OF HIGHER EDUCATION

It must be noted that the functions of teaching, research, extension and dissemination are specific to the work of the university professor, and all are called to carry them out to a greater or lesser extent, weight and quality, since they are constitutive of their professional performance. Together with these substantive functions is the administration/management, which is essential for the proper functioning of the HEI or university and the fulfillment of its professional responsibility.

In the business field, Certo defines management as “the process of leading the organization to the effective and timely achievement of its objectives and its mission” (Certo, 1997: 24). And in the classical administrative theory, it includes the phases of planning, organization, direction, relations and control of the life of an institution.

In the case of university education, management or administration represents the administrative work that is linked to teaching, research, extension and dissemination. It is the bureaucratic apparatus of education.

Rumbos (1998) considers that working in a university institution requires the professor to participate in its proper functioning and in the demands that the institution itself imposes on them, which may refer to:

1. Management and administration in the preparation of study plans, schedules, economic issues, etc.
2. Interdepartmental and interuniversity relations (exchange of professors, projects, etc.).
3. Cooperation with the administration.

For their part, Álvarez and Lázaro (2002) maintain that, from the management function, the university professor must face tasks such as the search for financing to develop research projects, attendance at meetings, organization of conferences and congresses, participation in selection commissions, management of teaching and administrative units, relations with the business world, etc.

Thus, the need for management of an academic unit leads to the attribution of management functions.

4.4.1. Personnel Administration

The management or administration of personnel attends to the regulations that address the entry of personnel into the HEI or university. Next, the case of academic staff in their administration/management in the context of an HEI is exposed.

4.4.1.1. Faculty Management

Higher education is a public service entrusted to Universities or universities. The recipients of this service are the students and the co-responsibility for its provision is assumed by the teaching staff. Thus, the teacher is the basic element on which higher education rests.

With regard to academic staff, management has a triple aspect:

1. Academic management, which deals with the teaching and research aspects most directly inherent to the teaching staff.
2. Economic management, which focuses on the processing of resources, provision of funds and means that serve as a contribution to the development of activities.
3. Administrative management, which consists of monitoring the incidents of the processes and the operation of the academic unit.

4.4.2. Management of Administrative and Financial Processes

The manager, head or person in charge of the academic unit of the HEI or university is responsible for the management or administration of said unit. And they converge on him as the visible head and on the unit council (Technical Councils), the highest authority to enforce the assigned activities. However, every professor, as a member of the academic unit, has an important part in the management and is responsible for everything.

Regarding the management of financial resources, budget limitations are always barriers that academic units must overcome. And such limitations are linked to multiple factors, most of which are beyond those units.

Finally, in accordance with the General Framework for the Accreditation Processes of Higher Level Academic Programs of the Council for the Accreditation of Higher Education, AC in Mexico, an educational program or institution must show in its operation an administrative and financial management linked to the following features (COPAES, 2007):

1. Those responsible intervene in the academic program using adequate systems for academic administration and management that effectively support the academic processes of the program.
2. There are sufficient and trained non-academic personnel in relation to enrollment, academic personnel and, in general, the needs of the program.
3. There is a financial base that supports the fulfillment of activities.
4. The administration of the resources is developed as required by the execution of the academic program in question.
5. Proper use of financial resources is demonstrated and a transparent accounting of its exercise is made.

4.4.3. Academic-Administrative Management of the Program

According to the Council for the Accreditation of Higher Education, AC, through its General Framework for the Accreditation Processes of Higher Level Academic Programs, the academic-administrative management of an educational program must show evidence in its operation that it has the executive authorities and the appropriate academic collegiate bodies for the development of the program, supported by the corresponding institutional regulations (COPAES, 2007). The latter must exercise their participation in decision-making around the processes of examination and approval of academic work policies, and management of the educational process, in accordance with the responsibilities established by the legal framework.

4.4.4. Institutional Organization and Structure

The organization of the activities tending to the administrative or management task in an HEI or university has to do with the authorities and organizational units around the administration.

In the case that occupies here, the Organizational Chart of the Michoacana Universidad de San Nicolás de Hidalgo gives¹⁶ an account of such organization, and it contains the Administrative Secretariat and the Treasury, both dependent on the Rector's Office. The Administrative Secretariat is in charge of the Departments of University Heritage and School Control, General Services, the Purchasing, Accounting and Personnel Departments, the General Archive and the University Computing Commission.

For its part, the General Treasury of the University, through its Income and Expenditure Directorates, is in charge of collecting and distributing the financial resources required by the academic units of the University. And, each university dependency, likewise, has an Administrative Secretariat at the Dependency or academic unit level for the proper management and administration of said units.

4.4.5. Regulatory Guidelines for Administration

The HEI that offers an educational program through one of its academic units, must operate with an approved, current and generally observed regulatory framework that regulates its operation, which must involve the inclusion of at least the following regulations (COPAES, 2007):

1. Regulations on work personnel (academics and workers in general), which regulate the procedures for entry, promotion and permanence, as well as the review procedures.
2. Regulations for students in order that their admission, permanence, promotion and

¹⁶ Approved by the H. University Council in the Tasting of January 25, 1983, and rearranged according to the Organic Law of 1986.

admission are regulated.

3. Regulations, normative guidelines or instructions for titling.
4. Regulations, normative or instructive guidelines for the fulfillment of the social service.
5. Regulations of the research function and its link with teaching and extension and dissemination.
6. Regulation of scholarships and incentives for teachers and students, if applicable.
7. Standards, guidelines or regulations for the management of institutional finances.
8. Normative guidelines that govern the functions of non-academic staff to support the development of the functions of the educational program or academic unit.
9. Code of ethics and rules of coexistence for teachers, support staff and students.
10. The study plan and programs must be registered with the corresponding government authorities (Secretary of Public Education or Secretary of Education in the State).

4.4.6. Quality Improvement Management

Quality management in higher education promotes positive changes within Universities or universities. Hence, Cantón (2001) points out four basic components for administration/management: a) Direction and leadership; b) development of academic processes; c) performance of work teams; and, d) behavior of individual actors.

As for the first component, planning for quality implies activities of direction, co-responsibility, participation and leadership that try to clarify, reaffirm and communicate the mission of the university; as well as develop strategies and policies to improve the quality of work teams and educational processes. Regarding the second, the development of quality academic processes presupposes an environment in which academic plurality and freedom coexist, as well as the encouragement of innovation and creativity.

In relation to the third, the performance of quality groups assumes reciprocity in obtaining benefits, which implies conscious and voluntary collaboration to achieve the mission. And, regarding the fourth aspect, the promotion of quality in individuals is to empower individual actors to commit them to the institutional mission, providing them with appropriate information to change and improve the way in which they carry out their work.

A precondition for the implementation of the quality of higher education is its evaluation, which is generally understood as a systematic analysis and evaluation of at least four elements: the state or situation of programs, departments, units, the institutions themselves, as well as the fulfillment of their basic functions; its internal and external relations; the processes within the units, that is, the behavior of the actors within; and the results their programs or products achieve.

THIRD PART.
INVESTIGATION METHODOLOGY

METHODOLOGICAL APPROACH AND FIELD RESEARCH

This chapter addresses the description of the methodological process followed in the present investigation, which is carried out in the consideration of the case of the Faculty of Law and Social Sciences as an academic unit dependent on the Universidad Michoacana de San Nicolás de Hidalgo, as Institution of Higher Education.

The objective proposed in this chapter space is to indicate, describe and analyze the path followed in the research to carry out its general purpose: to distinguish the main conditioning factors of the quality of the educational service provided in the school program. Law Degree from the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo, in order to define its current situation. This under the consideration of a participatory and reflective process of the members of the academic unit in question.

approaches or possible perspectives to approach a research work is presented, making special reference to the dichotomy between the qualitative and the quantitative approach, to then, in a justified way, point out the approach assumed in the present study.

Starting from the selected approach, it gives a more specific account of the research design indicated, in a general way, in previous spaces of the work in progress. Thus, it will try to address the methodological strategy and the main decisions that are followed in the investigation, pointing out the reasons that motivated it and the consequences of its adoption.

Likewise, the fundamental characteristics of each of the research phases will be described, indicating the subjects involved, whether it is a population or a sample. The process of obtaining data will also be deepened, describing the different instruments used and linked to each of the objectives and the participating subjects.

Finally, regarding the examination of the data, both the assumed modality of analysis and the due justification are presented.

5.1 RESEARCH PERSPECTIVES

The intention of including this point in this section is to locate the main trends that have governed in the field of research, since the issue of research perspectives or paradigms has been of great interest to specialists, who around said topic have devoted a large number of publications for several years (for example: Khun, 1980; Ibáñez, 1992; Goetz & Lecompte, 1988; Taylor & Bodgan, 1992).

According to Khun (1980), paradigms are universally recognized scientific realities that, for a certain time, provide problem models and solutions to a scientific community. The author considers that the paradigm can refer to a theoretical scheme or to a way of perception and understanding of the world that a group of scientists has adopted.

Each scientific community participates in the same paradigm, thus constituting an

intellectual community whose members share a language, values, norms and goals. In this regard, Pérez Serrano emphasizes: “According to the concept of paradigm that a certain scientific community has, the research carried out will have peculiar characteristics” (Pérez Serrano, 1994: 17).

The term paradigm supposes a way of analyzing the different conceptions, customs and traditions. This allows us to consider that there are different sets of assumptions, commitments, methods and theories.

There is a coincidence among some authors in pointing out three fundamental paradigms in research: the positivist, the interpretative and the critical paradigm. These vary in terms of the purpose of the investigation, perspective from which the investigated reality is considered, relationship between subject-object, nature or type of knowledge that it contributes.

However, others such as Taylor and Bogdan (1992), Bruyn (1972), and Duverger (1974) consider that, in the social sciences, two main theoretical perspectives have prevailed: positivism and phenomenology.

5.1.1. The Positivist Research Approach

This theoretical perspective is also called a quantitative, empirical-analytical, or rationalist paradigm, and is based on positivism. It has been a major intellectual current in Western thought since the second half of the 19th century. Its origin is recognized in the field of social sciences, its main exponent being Augusto Comte (1798-1857).

Positivism seeks the facts or causes of social phenomena regardless of the subjective states of individuals. From this perspective, Biddle and Anderson (1986), Pérez Gómez (1989), and Pérez Ferra and Ruíz Carrascosa (1996) mention that the main assumptions that define the positivist research approach are:

1. The world has its own existence regardless of who studies it.
2. The world is governed by laws that make it possible to predict and control natural phenomena, and these laws can be discovered objectively and value-free by researchers.
3. In reality there is a unique order that tends to the indefinite progress of society. Everything that happens responds to that natural order that must be discovered, known and accepted. Thus, the human being is not the builder of social reality, he proposes a kind of social immobility, of a social order, discarding the problematization.
4. The knowledge obtained is considered free and factual, it is based on experience and is valid for all times and places, regardless of who discovers it.
5. It uses the hypothetical-deductive way as a valid methodological logic for all sciences.
6. He defends a certain degree of order and uniformity in nature.

5.1.2. The Interpretive Perspective

Regarding the interpretive perspective, the Protestant theologians of the seventeenth century, who coined the term hermeneutics, are considered as its initiators; however, it is a more recent period when it begins to be implemented as a research model.

In the context of this approach there are a variety of sources and positions: Phenomenology, Historicism and Symbolic Interactionism. The most significant postulates of this perspective are presented by Hamilton in Pérez Gómez (1989), and Pérez Ferra and Ruíz Carrascosa (1996) in the following terms:

1. Science is not something abstract and isolated from the world, but depends on the social context, without which it is difficult to understand human behavior. The rules and the social order, together with the past history of individuals, constitute the basis of their actions, which in turn structure, in a certain way, their interpretation of reality.
2. Human behavior is more complex and differentiated than in other living beings. From the phenomenological perspective, the capture of the internal and deep relationships of the actions are the basis of any attempt at explanation. The interest in the intentionality of the actions is, in short, the most peculiar note of this paradigm.
3. The theories are relative, depending on the fact that each society acts with its own values and these change over time. From this relativism, universal validity, objectivity and scientificity are questioned.

5.1.3. The Critical Approach

The origins of the critical paradigm lie in the German tradition of the Frankfurt school.

This paradigm, which is posed as an alternative to the dominant theoretical models, as Carr and Kemmis (1988) point out, tries to make the interpretive approach go beyond its traditional desire to produce uncritical descriptions of individual self-understandings, so that it is possible to expose, explain, and eliminate the causes of distorted self-understandings.

Carr *et al.* (1988), Pérez Gómez (1989) and Pérez Ferra (1996), highlight the following as the main characteristics of this approach:

1. Neither science nor the procedures used are aseptic, pure and objective. Knowledge is always constituted by interests that stem from the natural needs of the human species, configuring itself with historical and social conditions.
2. The type of explanation of reality that science offers is neither objective nor neutral, it responds to a certain human interest that it serves.
3. Ideological criticism is offered as a methodological proposal, since through it man can free himself from the dictates and limitations of established social life.

From this approach, reality is dynamic and evolutionary, the purpose of science must not only be to explain and understand social reality, but to contribute to its change. Research will be the means that allows individuals to analyze reality, for this reason science

and research are not privileges of a social class, but rather a legitimate means of learning in any social class.

The theoretical-practical relationship is interpreted from a dialectical position. The action is the theoretical basis, this in turn, is not abstracted from reality but constitutes part of the action, for this reason they are presented as inseparable.

Since each paradigm approaches different types of problems and seeks different kinds of answers, their investigations require different methods and methodologies to deal with them. Thus, it is taken into account that the method means, according to its etymology, the path that is followed to reach an end; and research methods are a procedure or set of procedures, that is, a series of successive steps that serve to achieve the research goals. And the analytical and critical study of research methods is called methodology, so the methodology is the theory of the method. Thus, the methods require techniques, which represent auxiliary means that concur to the same purpose.

Following the conceptions raised by Taylor and Bogdan (1992), the two basic conceptions of reality are based on subjectivism or objectivism. In the quantitative conception, the objective of the research is focused on establishing causal relationships that suppose an explanation of the phenomenon, while in the qualitative conception what interests is the interpretation.

The two conceptions lead to different methodologies. However, the dichotomy between the two approaches presents attempts to overcome it by different authors, among them Taylor *et al.* (1992). The authors do not deny the possibility that positivists can use qualitative methods to approach their investigations or that phenomenological ones do not use some quantitative aspects, rather it is the perspective that guides their investigations.

5.2 APPROACH ASSUMED IN THE RESEARCH PROCESS

In the present investigation, the selected study methodology is of a mixed type, since it will combine both qualitative and quantitative methods.

In the opinion of some authors, this option is an adequate resource due to the object of study. Thus, Martínez maintains that in this type of research “it is about identifying the deep nature of realities, their dynamic structure, that which gives full reason for their behavior and manifestations” (Martínez, 1999: 173).

At present, the tendency of authors who defend the combination of methodologies is greater every day. In this sense, Molina (1993: 258) includes some of these trends and their main defenders: “(...) methodological plurality” (Dendaluze, 1988; Santos, 1990), “converging network of measures” (Bakeman & Gottman, 1989), “multimodal basis” (Goetz & Lecompte, 1988), “balanced combination of objective and subjective data” (Goetz, *et al.*, 1988), “triangulation” (Cohen & Manion, 1990; Guba, 1983; Walker, 1989; Cook & Reichardt, 1986), “multi-methods” (Cohen, *et al.*, 1990), “unit of educational research” (Keeves 1987,

cited by Husen, 1988), “hybrid models” (Shulman, 1989); “expansive mixed method or triangulation design” (Greene, Caracelli & Graham, 1989), triads (Faulker, cited by Walker, 1989), etc.”.

The aforementioned author concludes by pointing out that the reasons for defending the combination of paradigms and methodologies are aimed at highlighting that:

1. Many of the problems in education can be better investigated if they are examined from different perspectives.
2. They provide internal validity or credibility. What is known as triangulation, that is, collecting data from a variety of methods and relying on a variety of sources so that each researcher’s predilections are tested as tenaciously as possible.
3. Taken as a whole, personal documents give much more, since when they are numerous and assembled they offer “coherent” images.
4. Although it may seem that some questions or problems require a specific model, the use of parts of other models almost always provides greater depth to the investigation.

Within this combination of methods, in the research carried out here it was decided to use the case study, given its richness as a strategy to deepen the understanding of dynamic realities.

In the case study, only one object or one case is studied. Consequently, the results obtained will hold true only in this singular case. Despite this, case studies are occasionally done and the typical reason for this is that the object is so complicated that the researcher must focus all his energies on the study of the singular object to reveal its multiple attributes and complex relationships with other objects. the context.

5.3 FIELD RESEARCH

5.3.1. Generalities

In section 6. *Research Methodology*, of the first chapter, in the first part (*Fundamentals of Research*) of this study, the type of research, the method, the research design were indicated, in order to address and solve the study problem raised, and with the purpose of achieving the established objectives.

Regarding the type of research, it was noted that the present study is descriptive and correlational. And regarding the methodological approach for this research, a mixed type (qualitative and quantitative methods) was chosen. The first sections of this chapter were devoted to justifying precisely such a methodological choice.

And regarding the research design, in Chapter 1 the study was characterized, indicating the general research procedure, and the strategies and instruments for collecting and examining information were structured. Specifically, regarding the general procedure

of the study, a methodological dynamic was defined, which is partially taken up here in the stages of the field inquiry:

10. Once the documentary research was carried out, the field investigation was undertaken:

d. Configuration of methodological strategy: It consists of the empirical research plan for this study, which was divided into three phases: exploration and consensus; self appraisal; and establishment of the improvement plan. In addition, it included the questionnaire as an instrument for obtaining information.

e. Sample selection: Determination of the universe; and specification and extraction of the study sample.

f. Data collection: Design of the instrument to collect the information; measurement scale; measurement of the confidence and validity of the instrument; pilot test ; instrument application; data collection; data processing (information capture, coding and database creation); and derivation of the dependent and independent variables of the study.

11. Qualitative and quantitative analysis of the research: descriptive analysis of the results; selection of statistical tests; Statistical analysis of the results; hypothesis testing; discussion of results; and qualitative and quantitative interpretations in light of the assumptions and results.

And as for the organizational plan or strategy conceived in the investigation, it was proposed to develop in three fundamental phases or stages, as will be explained in the following sections. Before, however, the measurement elements in the data collection instruments in the investigation will be exposed, which will be used in the different stages of the same.

5.3.2. Measurement in Collection Instruments of Data in Research

In this section, the measurement aspect will be examined, in order to establish the bases that deal with the configuration and application of specific instruments for measuring the independent variables that influence the quality of the educational service in the academic units of the Universities, and carry out out the processing of the information provided by the questionnaires, one of the instruments to be used to obtain the data.

In a broad sense, measurement is related to assigning numerical values to objects or events with rules (Atevens, 1951: 443). A numerical value is a symbol of the form 1, 2, 3,, or I, II, III,... It has no quantitative meaning unless such meaning is given to it; it is a simple symbol of a special kind. A rule is a guide, a method, a command that says what to do. In the measurement, a rule could specify, adapting a note from Kerlinger to this study: assigning the numerical values 1 to 4 to an academic unit of an HEI according to the quality of its educational service. If the educational quality is excellent, it must be assigned the number

4. If its educational quality is deficient, it must be assigned the number 1. And the academic units of the Universities between those limits will have to be assigned numbers between the limits (Kerlinger, F. 1997: 445).

Once the operationalization of the variables has been defined, as was done in Chapter 1 of this study (see Table 1.4), what is conducive to gathering the data that will be used to quantify it so that they can be expressed and analyzed mathematically (Weiers, 1986: 143).

In order to manage variables adequately, it is necessary to know the level of measurement at which they can be manipulated. There are four levels of measurement, namely: 1) nominal or classificatory, 2) ordinal, 3) interval, and 4) reason (Rojas Soriano, 2002). Each of these represents a different type of number assignment rule or measurement "scale". When going from the weakest type (nominal) to the strongest (reason) two things happen: First, the numerical requirements of belonging to a scale become more rigorous; second, the permissible modes of data expression and analysis are being liberalized, that is, more statistical operational varieties are admitted.

The nominal scale is the most primitive type of the four, and its mathematical weaknesses are such that it is not even a measuring scale at all. Fundamentally, the scale consists of categories that are collectively exhaustive - each individual or object must belong to one of them - and mutually exclusive (the categories do not overlap). To the extent that numbers are assigned to individuals or phenomena; its objective is only to identify the category to which each of them belongs. The numbers lack mathematical value and are not essential in the nominal scale of measurement (Weiers, 1986: 144).

At the ordinal level of the measurement, it is possible to distinguish between different categories and to be able to affirm whether a category has the attribute being measured to a greater, lesser or equal degree (Padua, 1996: 154). The numbers assigned to objects or concepts are limited to representing the order in which they are arranged.

The interval scale is one step more powerful than the two previous scales, due to its ability to specify "how much more and how much less", it uses a constant unit of measurement that allows describing the distance between various measurements (Weiers, 1986: 146- 147). But that unit is arbitrary, and the interval scale lacks an absolute zero point, at which none of the features being measured are present.

The ratio scale is the form of measurement that uses absolute zero values and that allows establishing differences between any pair of objects to a maximum of precision (Rojas Soriano, 2002). This type of scale falls outside the scope of the social sciences, because it constitutes the measurement of lengths, weights and masses.

In general, data from a higher-level scale (interval) allow the use of more powerful methods of statistical analysis -frequency, correlation, cluster, variance and discriminatory analysis- which, in turn, allow a smaller size of the sample in the data collection phase. In addition, the use of these techniques makes it possible to draw more conclusive conclusions

and recommendations at the end of the data analysis.

From a statistical point of view, it is not efficient to collect data from a higher level (interval scale) and then proceed to analyze them using a method that has a lower order scale (nominal or ordinal) as the limit of applicability; doing so means that we are losing valuable information that could be better used.

To obtain scientific accuracy, it is necessary to “measure” in a certain way the facts and statements that are presented. Measurement, according to Ander-Egg, “substantially consists of a quantitative observation, attributing a number to certain characteristics or traits of the observed event or phenomenon” (Ander-Egg, 1994: 111).

Thus, given the above, in the present investigation the interval measurement scale will be applied to know the attitude of the academic unit of the HEI under study towards educational quality. The measurement of attitude can be carried out with different scales, namely:

1. Stouffer scale.
2. Likert-type scale.
3. Thuston scale.
4. Guttman scalogram.
5. Pairwise Comparison Method.
6. Osgood scales.
7. Bogardus Social Distance Scales.

In this investigation, the Likert scale will be used. This scale presents a number of negative and positive statements about an attitude object. When individuals respond (in the context of a questionnaire) to the points on this scale, they indicate their reaction by assigning a number to each of the proposed options (Padua, J. 1996: 163):

- They totally agree: 4
- They generally agree: 3
- They disagree in general: 2
- They strongly disagree: 1

The Likert-type scale, according to Kerlinger, is a set of attitude items considered to be of approximately equal “attitudinal value”, and each of which, the subjects respond with varying degrees of agreement or disagreement -intensity- (Kerlinger, 1997: 514).

Item scores are added to provide an individual’s attitude score. The original scale has been extended to the application in questions and observations. Sometimes the number of categories in this type of scale is shortened or increased, but the category number must always be the same for all the items (*reactive*) and in each scale the items are considered to have equal weight (Hernández, Fernández & Baptist, 2007: 263).

In the present investigation, in its first two phases, the instrument of the questionnaire will be used, as has been pointed out. In the design of the questionnaires, the situation of indecision will not be handled because it is unlikely that this will happen. In addition, the reactions of the individual(s) to be studied will not be considered as agreement or disagreement, but in such a way that it allows obtaining the answers to the questions (the *items*) raised. Therefore, the measurement scale will be integrated with the following assigned values: 4, 3, 2, 1, which correspond to: always, frequently, sometimes and never, respectively.

In the following sections the general parts of this study are detailed, and within them the data collection instruments are addressed, among which will be considered, among others, the questionnaires. These will be designed based on the measurement criteria that have been pointed out here, applying the interval measurement scale, specifically the Likert-type scale.

5.3.3. Investigation Phases

The path to follow in this research presents three fundamental aspects, namely: exploration and consensus, self-assessment and the design of the continuous improvement plan.

As noted in advance, the ongoing study began with a review of the bibliography on the subject of reference, as well as the exploration of experiences of the type carried out successfully in other Universities, to demarcate the main theoretical lines that support the current work and thus have the bases to carry out the process.

Subsequently, the actions related to each of the aforementioned aspects were delimited, which led to separating the investigation into three phases or stages to materialize it in the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo.

The first of these consists of consulting and agreeing with the members of the academic unit of the HEI on the decisions related to the process of evaluating the quality of the educational service, so that they act as the main protagonists of said process. This phase has been called *exploration and consensus*.

The motive for the second stage, called *self-assessment*, consists in determining the current situation of the Law Degree school program of the Faculty of Law and Social Sciences based on the assessment of its members. And finally, from the third phase of *quality improvement*, an attempt will be made to design and prepare a quality improvement plan, based on the results obtained and verification with a group of key informants.

In the immediately following spaces, the main methodological aspects of each of the phases or stages that have been briefly referred to here will be explained and detailed.

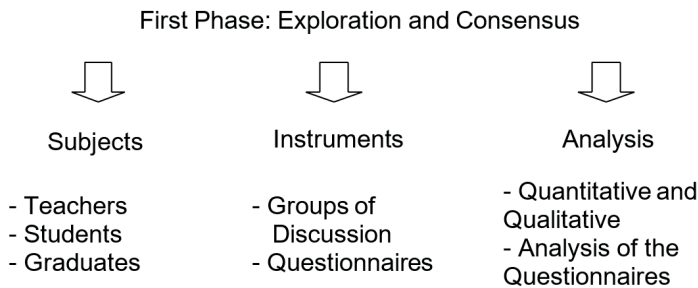
5.3.3.1 First Stage: Exploration and Consensus

5.3.3.1.1 Description of the Stage

The first stage or phase of the investigation has been called exploration and consensus (see Figure 5.1). The objectives that are expected to materialize through it are:

1. Sensitize the members of the Faculty of Law and Social Sciences of the Universidad Michoacana about their participation and leadership in the self-assessment process and the design of improvement proposals.
2. Consult the main protagonists of the educational process (teachers, students and graduates) and members of the Faculty regarding those criteria that, in their opinion, are the most important to carry out the evaluation and base the process of continuous improvement of the quality of teaching.

Figure 5.1 First Phase of the Research Strategy



Source: Self made.

It is difficult to delimit the beginning of this first phase, since it includes everything from the initial (informal) consultations for the selection of the problem under study, to the application of each of the steps that make up the consultation to select the criteria to be applied. use.

The procedure to be followed in this first phase will be similar for teachers, students and graduates. First, they will be consulted through a proposed list regarding the elements that affect, from their perspective, the educational quality in the unit and academic program under study. From the consideration of the selected elements, 3 questionnaires will be built (one for teachers, one for students and one for graduates) that will contain questions that allude to the elements selected in the previous phase. The questionnaire proposals will be arranged in three groups for their analysis and, finally, 3 final questionnaires will emerge from the three discussion groups, which will constitute the fundamental instrument of investigation of this work.

5.3.3.1.2. Methodological strategies

5.3.3.1.2.1. The Participating Subjects: Population and Sample

The determination of the subjects with whom the study will be carried out is one of the essential actions in any investigation. For this, it was necessary to define the scope of this first phase from the definition of the population and a specific sample to be studied.

This research considers as the study population the groups of individuals (teachers, students and graduates) linked to the educational programs taught at the Faculty of Law and Social Sciences, as an academic unit of the Universidad Michoacana de San Nicolás de Hidalgo, and in consideration of the 2008-2009 school year.

The total population of students and professors that make up the Faculty of Law and Social Sciences is structured as follows:

Teachers:

- Total number of full-time professors and researchers, 2008-2009 school year: 62.
- Total part-time professors and researchers, 2008-2009 school year: 11.
- Total hourly teachers, 2008-2009 school year: 259.

Students:

- Total number of students in the school system of the Bachelor of Laws career, school year 2008-2009: 113 sections or groups; 4,956 students.
- Total students of the open and distance system of the Bachelor of Laws career, school year 2008-2009: 41 sections or groups; 1,085 students.
- Total number of students in the Procedural Law Specialty, 2008-2009 school year: 4 sections or groups; 61 students.
- Total number of students in the Criminal Law Specialty, 2008-2009 school year: 4 sections or groups; 56 students.
- Total students of the Master of Laws, 2008-2009 school year: 5 sections or groups; 58 students.

Graduates:

- Total number of graduates from the school system of the Law Degree program, from the 2004-2005 school year: 1,006.
- Total number of graduates from the school system of the Law Degree program, from the 2005-2006 school year: 1,013.
- Total number of graduates from the school system of the Law Degree program, from the 2006-2007 school year: 1,076.
- Total number of graduates from the school system of the Law Degree program, from the 2007-2008 school year: 1,107.

However, from this population belonging to the FDyCS as an academic unit of study, only one academic program was selected for analysis, namely: The Law Degree of the school system. Thus, the universe of study is the subjects (teachers, students, and graduates) associated with the academic program of reference.

Given the difficulty in contacting and considering the entire population under study, taking into account the criterion of greatest representativeness, the corresponding samples were selected from the total population of the educational program of the Law School system. Through the use of the formula proposed by Devore (2001), the sample sizes for the professors, students and graduates sectors were determined, considering 22.5% of the teaching staff, 1.8% of the students and 2.2% of the graduates, in a deliberate exercise in obtaining representative data and information (see Table A.6 *Determining Study Sample Size*, in Annex 2).

Thus, the population and samples for the study were structured as shown in Table 5.1.

Table 5.1 Population and Samples for the Study

Subjects	Total population of the FDyCS	Population of Program Selected	Samples	
			No.	%
Teachers	332	332	75	22.5
Students	6216	4956	94	1.8
Graduates	4202	4202	94	2.2

Source: Own elaboration based on data from the Academic Secretariat of the Faculty of Law and Social Sciences (FDyCS) of the Michoacana Universidad de San Nicolás de Hidalgo.

5.3.3.1.2.2. Data Collection Instruments

In this phase of exploration and consensus, the discussion group and the criteria assessment questionnaire will be used as techniques and instruments for obtaining information.

The preparations for this first phase involve the making of a preliminary list (*check list*) of indicators of educational quality of the academic units of Universities, which have emerged from the theoretical-documentary research in this work. In addition, it is imperative to prepare a bank of questions containing all the previously mentioned indicators.

Subsequently, the planning of the discussion groups becomes strategic through considering the number of groups, the agenda, the selection of the participants, as well as the invitation and confirmation of the latter. The purpose of using the discussion groups is to reflect on and deepen the assessment of the quality of the educational service among the main actors involved.

Thus, the work is proposed with three discussion groups in two times or two sessions.

It is planned that the first discussion group is made up of a large number of professors, who will have to be selected intentionally and trying to cover the largest representation in terms of levels of the academic program under study.

In the first meeting with this group: 1) The activity to be carried out will be introduced; 2) the Preliminary List of Indicators will be presented for resolution by each one of the members, who will have to select the elements that, according to their experience, have the greatest importance in determining educational quality; 3) deliver the resolved Preliminary List of Indicators for processing; and, 4) they will be summoned for a new meeting. And in the second work session with the teachers: 1) the proposal for a *Questionnaire for Teachers* will be presented, arising from the consideration of the items on the *check list* most frequently selected by the teachers in the first meeting, as well as the questions related to these elements and contained in the pre-made item bank; 2) the questionnaire proposal will be analyzed, discussed and modified (if applicable); and, 3) the definitive version of the Questionnaire for Teachers will be approved and legitimized, which will have to be applied to that sector in the corresponding academic unit.

As can be seen, the agenda of the two work sessions of the discussion group of teachers will be the assessment of the units of analysis and the criteria presented (in the questionnaire), hoping to obtain specific contributions to the process as a result of the meetings in question. research.

Regarding the way to contact the professors, it is planned to do so in all cases in person, giving them a written summons in which the meeting protocol will be addressed (day, time, place, reason and justification, order of day, dynamics and duration). It is scheduled that the majority of the professors who will be summoned attend the meetings, and that, especially, from the second session an orderly and enriching debate is derived. From the results of the meeting, the *Questionnaire for Teachers* will emerge, whose content, validated by the teachers participating in the discussion groups, will give an account of the final assessment of the criteria and units of analysis presented in said instrument.

second discussion group is planned, that of students, who will be intentionally selected and trying to cover the largest representation in terms of levels of the academic program under study. Thus, it is proposed to work with this discussion group in two times or two sessions.

In the first meeting with the students: 1) the preliminaries of the activity to be carried out will be established; 2) the Preliminary List of Indicators will be presented for its resolution by each one of the members, who will have to select the elements that, according to their experience, have the greatest importance in determining educational quality; 3) deliver the resolved Preliminary List of Indicators for processing; and, 4) they will be summoned to a new meeting. And in the second student work session: 1) The *Student Questionnaire* proposal will be presented, arising from the consideration of the *check list elements* most frequently selected by the students in the first meeting, as well as the items related to these

elements. and contained in the bank of items pre-elaborated; 2) the questionnaire proposal will be analyzed, discussed and modified (if applicable); and, 3) the definitive version of the Questionnaire for Students will be approved and legitimized, which will have to be applied to that sector in the corresponding academic unit.

Therefore, the agenda of the two work sessions of the student discussion group will be the assessment of the units of analysis and the criteria presented (in the questionnaire), hoping to obtain specific contributions to the process as a product of the meetings in question. research.

The way to contact the students will be in the same way as it is planned to do with the teachers. And from the results of the meeting with students, the *Student Questionnaire* will emerge, whose content, validated by the students participating in the discussion groups, will give an account of the final assessment of the criteria and units of analysis presented in said instrument.

Thirdly, a discussion group of graduates is expected to be held, who will be selected with the highest representation criteria applied in the two previous sectors; and work with this discussion group in two times or two sessions is proposed. The programming and protocol of the meetings, the form of contact, as well as the recording of the results of the sessions, will be totally similar to the mechanism that has been described and will be followed in the meetings of teachers and students.

Using a methodology intentionally and considering the representativeness factor, the criteria for selecting the professors who will form the first discussion group have to do with the following attributes: a) in the sample there are two professors per grade of the program academic; b) all are full-time or part-time teachers; d) all teachers are academy coordinators; e) all teachers have at least 5 years of teaching experience; f) among them are members of the H. Technical Council; g) among them there are researchers; and, h) among them there are professionals recognized by professional associations and colleges.

On the other hand, the criteria considered to select the students that will integrate the second discussion group are related to: a) in the sample there are two students per grade of the academic program; b) all the selected students are group leaders; c) all students have an academic performance between 8.0 and 10.0; and, d) among these students are members of the H. Technical Council of the Faculty of Law and Social Sciences, the H. Student Council and scholarship holders and ex-scholarship holders of internal and external research projects.

In addition, the characteristics of the graduates selected for the integration of the respective discussion group were: a) six graduates were incorporated into the sample; b) five of the former students were UMSNH scholarship holders; c) six of the graduates had an academic performance between 9.0 and 10.0, during their studies; d) two alumni graduated in the 2007/08 school year and two in 2006/07; and e) two of the former students are now

professors at UMSNH¹.

In short, the product resulting from the first phase of research (exploration and consensus) is made up of the Questionnaire for Teachers, the Questionnaire for Students and the Questionnaire for Graduates. The criteria to form the categories contained in these instruments have emerged from the review of the theoretical framework, from consultations on other experiences on quality assessment and fundamentally from reflection shared with the members of the academic unit under study (teachers, students and graduates). In each of the items of the three questionnaires, the assessment of the target audience (teachers, students and graduates) will be requested in relation to the importance given to the evaluation of the educational service and the improvement of its quality in the Faculty of Law and Social Sciences of the UMSNH. The response options will represent a continuous descending order from 4 to 1, from greater to lesser importance given to the criterion (see Annexes 23, 24 and 25).

Finally, the samples for the discussion groups were integrated as revealed in Table 5.2.

Table 5.2 Population and Sample for Discussion Groups

Subjects	Total population of the FDyCS	Population of Program Selected	Sample	
			No.	%
Teachers	332	332	10	3.0
Students	6216	4956	10	0.2
Graduates	4202	4202	10	0.2

Source: Own elaboration based on data from the Academic Secretariat of the Faculty of Law and Social Sciences (FDyCS) of the Michoacan Universidad de San Nicolás de Hidalgo.

5.3.3.1.2.3. Information Processing and Data Analysis

The preparation of the Questionnaires for Professors, for Students and for Graduates, arose from the six meetings registered by three discussion groups, as previously referred to. In these sessions, the head of this investigation led the work, always assisted by a technical team that, through previously conceived logistics, collected the information from the actors expressed, first, in the check lists (see Annexes 12, 13 and 14).

These data were entered into a computer, using a commonly used electronic package, to concentrate the opinions of the professors (10), students (10) and graduates (10) participating in the work sessions. The frequencies in the choices of indicators from the *List of Factors Associated with Educational Quality* were identified and thus a quartet of frequency schemes could be structured in the selection of indicators for the variables teaching, research, administration/management and extension and dissemination (see Annexes 7-14).

¹ These two teachers were not considered in the discussion groups of teachers, since they only did so in the discussion group of graduates, adopting that status precisely, and abstracting from their current teaching performance.

Based on this processed information, and using the pre-elaborated and electronically stored item bank (container of 155 items, that is, one for each of the elements of the 30 indicators), the elements with the greatest mention in the checks were related thematically. *list* with the corresponding items. Thus, four correspondence schemes dissent-indicators-item of the study variables were established for the situations of teachers, students and graduates (see Annexes 15-22).

Therefore, in the coincidence between the elements with the highest mention in the *check lists* with the items in the item bank, the preliminary proposals for the Teacher Questionnaire, Student Questionnaire and Graduate Questionnaire were given (see Annexes 23, 24 and 25), which were presented to the actors in the second session of the discussion groups. These proposals, with corrections, additions and minor changes, were approved in their content and promoted to be applied, with legitimacy, recognition and agreement of the participating sectors, in the next phase of the investigation. Among the corrections and additions that were proposed to the preliminary questionnaire proposals, the following stood out: 1) the change in the order of the items in the questionnaires to achieve accurate results ; and 2) add at the beginning of the questionnaires, some identification data of the respondent. Such contributions were incorporated, and gave rise to the data collection instruments in their final version (see Annexes 26, 27 and 28).

5.3.3.2. Second Stage: The Self-Assessment Process

5.3.3.2.1. Stage Description

As previously pointed out, the second phase of this study corresponds to the self-assessment process itself. It will be considered that this stage represents a fundamental aspect of the ongoing research since, precisely on the internal evaluation process, the subsequent design of the proposal for continuous improvement of the quality of higher education formulated in this study will be based.

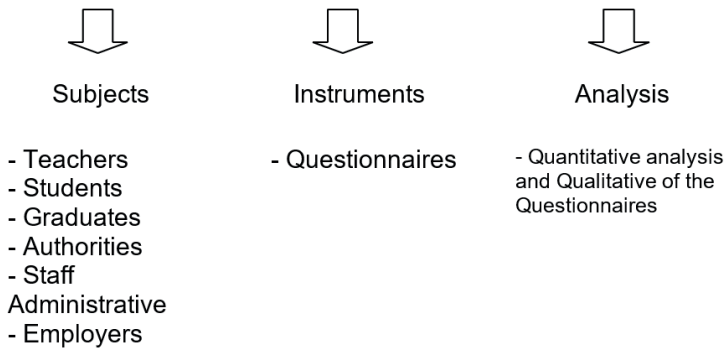
The purpose pursued in this phase is to obtain a diagnosis of the reality of the educational service provided in the school system of the Law Degree program of the Faculty of Law and Social Sciences of the Universidad Michoacana, with the participation of those involved in the process. itself (see Figure 5.2).

And in order to achieve this general purpose, the following specific objectives have been outlined for the second stage of this study:

1. Describe the general context of the Faculty of Law and Social Sciences of the Michoacana University.
2. Prepare the necessary analysis instruments to know the reality of educational quality in the academic unit under study.
3. Know the self-assessment of teachers, students and graduates on the quality of educational service in the Faculty.

Figure 5.2 Second Phase of the Research Strategy

Second Phase: Determination of the Situation (Self-assessment)



Source: Self made.

5.3.3.2.2. Methodological strategies

5.3.3.2.2.1. The Participating Subjects: Population and Sample

The professional segments that make up the community to be studied in this phase have been considered as “participating subjects”, and are the people who, from different perspectives, are linked to the Faculty of Law and Social Sciences of the Universidad Michoacana, and have some kind of relationship with the teaching of the Bachelor of Laws career.

Regarding the selection of the subjects, the ideal would be to involve all those involved with the academic program in question. However, in this case it is highly complicated and difficult given the diversity of subjects and their location in the geographical and temporal scope.

In this sense, the population under study is defined as the total population that constitutes the Faculty of Law and Social Sciences:

Students:

- Total number of students in the school system of the Bachelor of Laws career, school year 2008-2009: 113 sections or groups; 4956 students.
- Total students of the open and distance system of the Bachelor of Laws career, school year 2008-2009: 41 sections or groups; 1085 students.
- Total number of students in the Law Specialty, 2008-2009 school year: 4 sections or groups; 61 students.
- Total number of students in the Criminal Law Specialty, 2008-2009 school year: 4 sections or groups; 56 students.

- Total students of the Master of Laws, 2008-2009 school year: 5 sections or groups; 58 students.

Teachers:

- Total number of full-time professors and researchers, 2008-2009 school year: 62.
- Total part-time professors and researchers, 2008-2009 school year: 11.
- Total hourly teachers, 2008-2009 school year: 259.

Administrative workers:

- Total number of secretaries, 2008-2009 school year: 11.
- Total number of technicians, 2008-2009 school year: 19.
- Total superintendent staff, 2008-2009 school year: 38.

Authorities or Directors:

- Director (1), Deputy Director (1), Head of the Postgraduate Studies Division (1), Office Secretaries (3), Coordinators (3) and Disciplinary Officers (3), 2008-2009 school year.

Graduates:

- Total number of graduates from the school system of the Law Degree program, from the 2004-2005 school year: 1,006.
- Total number of graduates from the school system of the Law Degree program, from the 2005-2006 school year: 1,013.
- Total number of graduates from the school system of the Law Degree program, from the 2006-2007 school year: 1,076.
- Total number of graduates from the school system of the Law Degree program, from the 2007-2008 school year: 1,107.

Taking into account the link between the population of the State (Michoacán) and the municipality (Morelia) with the Faculty of Law and Social Sciences, it is distributed in two segments: internal subjects and external subjects. Internal participating subjects are considered teachers, students, authorities and administrative staff. Among the external participating subjects are the graduates of the school system of the Law Degree and employers.

In addition, it is considered important to describe some particularities of the subjects participating in this phase of the inquiry:

1. The students. This group includes all students who are enrolled in the Faculty of Law and Social Sciences through the school, open and distance systems of the Law Degree program; in addition, the students of the Specialty in Procedural Law, the students of the Specialty in Criminal Law and the students of the Master's Degree in Law.
2. The teachers. This group is made up of the teaching and research staff attached

to the Faculty of Law and Social Sciences and who actively participate in the Law Degree program, in its school, open and distance versions, as well as in the postgraduate through the programs of the Specialty in Procedural Law, the Specialty in Criminal Law and the Master's Degree in Law.

3. authorities or managers. This group includes those in charge of governing the destinations of the Faculty of Law and Social Sciences of the Michoacana University.

4. The administrative staff. This sector includes secretaries, academic technicians, and administration personnel who support the Law Degree academic programs (in their school, open, and distance systems), the Specialty in Procedural Law, the Specialty in Criminal Law and the Master of Laws.

5. The graduates. They are the students who, having completed their studies at the Faculty of Law and Social Sciences, undergraduate or postgraduate, have obtained their respective titles, Specialty diplomas or degrees that accredit them as graduates, specialists or teachers.

6. Employers. They are the owners or representatives of companies that have or have hired professionals graduated from the Faculty of Law and Social Sciences.

However, from the population of the FDyCS, as an academic unit of study, only one academic program was selected for analysis, namely: The Law Degree of the school system. Thus, the universe of study is the subjects linked to the academic program of reference, that is, students, professors, administrators, managers and graduates.

And in this second stage, like the first, given the difficulty in contacting and considering the entire population under study, the sectors of teachers, students, and graduates were deliberately chosen first, disregarding managers, administrators, and employers. In addition, taking into account the criterion of greater representativeness, from the total population of the educational program of the Law School system, the corresponding samples were selected through the use of the formula proposed by Devore (2001) (see Table A. 1 *Determination of the Sample Size of the Study*, in Annex I). Therefore, the sample sizes for the faculty, student, and graduate sectors were determined, considering 22.5% of the faculty, 1.8% of the student body, and 2.2% of the graduates, in a deliberate exercise of obtaining data and representative information (see Table 5.3).

Table 5.3 Population and Specific Samples

Subjects	Total population of the FDyCS	Population of Program Selected	Samples	
			No.	%
Teachers	332	332	75	22.5
Students	6216	4956	94	1.8
Graduates	4202	4202	94	2.2

Source: Table 5.1.

For the purposes of the present investigation, it is considered useful to select purposive sampling, since this type of sampling according to Goetz and Lecompte (1988) is characterized by a deliberate effort to obtain “representative” samples by including groups in the sample. supposedly typical.

Therefore, the selection of the sample of the participating subjects was constituted as follows:

- For the application of the Teacher Questionnaires:
 - 75 professors were chosen from the 332 existing in the Faculty, which represent 22.5% of the total population and of the population of the academic program under study.
- For the application of the Student Questionnaires:
 - 94 students were chosen from the 4956 that constitute the academic program in question, which account for 1.8% of the study population.
- For the application of the Alumni Questionnaires:
 - Graduates: 94 graduates were selected from among the 4,202 that make up the total population of graduates of the Law Degree school program in the immediately preceding school year (2007-2008).

5.3.3.2.2.2. The Data Collection Instrument

To carry out the data collection, the questionnaire will be considered in the selection of the instrument, which will be applied to professors, students and graduates of the FDyCS of the UMSNH. Starting from this, the selected instrument and its corresponding application strategies will be described below, exposing the reasons for its choice, the direct participants and their process of elaboration, application and treatment of the information produced.

5.3.3.2.2.2.1. Questionnaire

The questionnaire constitutes the data reception instrument considered in the design of this study, and which is projected to be applied to the subjects involved in the research (professors, students and graduates). The tool that represents the questionnaire, in accordance with what has been revealed by different specialists (Rodríguez, 1999; Sierra Bravo, 1999 and Santos Guerra, 1988) accounts for an information gathering technique that involves an interrogation in which the established items of beforehand they are always raised in the same order and are formulated with the same terms to the corresponding recipients.

In the case that occupies here, the choice of the instrument in question is considered important, since its application can offer a panoramic vision of the context that is studied and,

at the same time, will allow obtaining the opinion of a considerable volume of informants. However, although the selection of this tool has a series of advantages, it also brings with it some drawbacks, as noted below.

Thus, according to Rodríguez (1999), some of the main advantages of using the questionnaire as an instrument for receiving information in the research activity are:

1. Contrary to what happens in the interview, the questionnaire can cover a greater number of individuals from a study population.
2. Because it is anonymous, the answers to the questionnaire can be developed more freely.
3. As there is no direct relationship between the interviewer and the respondent, there is less risk of distortion of the responses provided by the latter.

Likewise, the disadvantages that can be pointed out regarding the use of the questionnaire in research, according to the same author, are:

1. There is a risk that many of the items in the questionnaire will not be resolved.
2. The construction of the items can affect the response provided, since they carry with them a series of assumptions, beliefs or game models already conceived by the researcher.
3. As there is no direct interviewer-respondent relationship, there is a greater risk that the questionnaires will not be returned with the requested responses.

Starting from the aforementioned advantages as incentives for the use of the questionnaire as a tool to gather information in this research, and mainly estimating the expanded perspective of the object of study, it is necessary to base the design, preparation and instrumentation of the questionnaires from the following considerations:

1. The questionnaire will be used as an instrument for data collection.
2. For the construction of the items of the questionnaires, the reflection with the members of the academic program under examination will be taken into account, in accordance with the theoretical reference schemes.
3. The application of the questionnaires must be carried out as closely as possible to the participating subjects.

Therefore, the questionnaire in its different versions (for teachers, students and graduates) will be built taking into account the characteristics of the participating subjects, in order to detect their opinions on the main aspects related to the educational service provided to through the School Law Degree program at the Faculty of Law and Social Sciences of the Universidad Michoacana (see Annexes 26, 27 and 28).

5.3.3.2.2.1.1. The Questionnaire for Teachers

In accordance with the fundamentals indicated regarding the methodological strategy

of the questionnaire, a questionnaire format addressed to teachers will be designed and elaborated (see Annex 26), which will contain in its structure a series of items that will be divided into two general segments.

The first part will deal with the registration of the identification data of the subjects (the teachers), maintaining their confidentiality, but delimiting data of interest for the investigation, in terms of age, sex, marital status, seniority, condition, rank, etc. And the second part will have the purpose of knowing the opinion of the teachers on specific aspects related to the educational service provided. In each of the 51 items of the questionnaire, the evaluation of the professors is requested in relation to the importance granted for the evaluation of the educational service provided in the FDyCS of the UMSNH and the improvement of its quality. The response options represent a continuous order from 4 to 1, from highest to lowest importance given to the criterion (see Annex 26).

5.3.3.2.2.1.2. The Questionnaire for Students

Also, considering the aforementioned foundations on the methodological strategy of the questionnaire, we proceeded to design and elaborate a questionnaire format addressed to students (see Annex 27), which contains in its structure a series of items that were divided into two general segments.

The first part deals with the registration of the identification data of the subjects (the students), maintaining their confidentiality, but delimiting data of interest for the investigation, in terms of age, sex, marital status, career, semester, bachelor's degree, form of income. And the second section pursues the objective of knowing the opinion of the students on specific aspects related to the educational service provided through the school program of Law Degree at the Faculty of Law and Social Sciences of the Universidad Michoacana. For this, 45 items were raised, through which the assessment of the teachers was requested in relation to the importance granted for the evaluation of the educational service provided in the academic unit of study. The response options represent a continuous order from 4 to 1, from highest to lowest importance given to the criterion (see Annex 27).

For the application of the instrument in question, the collective writing technique will be adopted, which supposes that the participating subjects can be gathered in the same place, where the distribution of the questionnaire can be answered immediately, as well as its collection. Duverger (1996) estimates that in cases like this one, the drawback lies in the fact that its use is conditioned by the possibility of gathering the group of people who must be investigated.

However, in the case that occupies here, the aforementioned limitation will have to be overcome with the collaboration of the teachers, who will be asked to cede a part of the space and time of their classes in order to achieve the application of the questionnaires in the classrooms. Finally, it must be noted that an intentional selection will be made trying to cover all the semesters of the academic program under examination.

5.3.3.2.2.1.3. The Questionnaire addressed to Graduates

Taking care to observe the aforementioned fundamentals regarding the methodological strategy of the questionnaire, we will proceed to design and elaborate a questionnaire format aimed at graduates of the academic program under analysis (see Annex 28), which will contain in its structure a set of items that will be divided into two global sections.

The first section of the questionnaire will include the registration of the identification data of the subjects, maintaining their confidentiality, but delimiting data of interest for the investigation, in terms of age, sex, marital status, degree obtained, time graduated, employment relationship, sector and type of company in which the subjects under study work. And the second section, likewise, has the purpose of knowing the opinion of the graduates on specific aspects related to the educational service of the school system of the Law Degree program taught at the Faculty of Law and Social Sciences of the Universidad Michoacana. For this, 43 items were raised, through which the assessment of the teachers was requested in relation to the importance granted for the evaluation of the educational service provided in the academic unit of study. The response options represent a continuous order from 4 to 1, from highest to lowest importance given to the criterion (see Annex 28).

For the application of the questionnaire in question, a first personal contact was made with the subjects (the graduates) in order to inform them about the research and request their collaboration, agreeing on the date for a next meeting. And in the second personal contact, the application of the questionnaire was carried out, estimating that in most cases it will be carried out in a directed manner, by the researcher. However, if some cases require it, the questionnaire must be submitted for resolution and its return will be scheduled in a third contact.

5.3.3.2.2.3. Information Processing and Data Analysis

In the second general stage of the investigation, the data was obtained by applying the questionnaires to the professors, students and graduates of the FDyCS of the UMSNH. The items of the questionnaires were presented to the actors in a combined order in their thematic approach (see Annexes 26, 27 and 28). However, for data processing purposes, all the items in each of the questionnaires were classified by their association with the variables (see Annexes 19, 20, 21 and 22). The items in the questionnaires also contain the weighting assigned by each interviewee.

Thus, with the purpose of processing and analyzing the information, firstly, the items of the questionnaires completed by professors, students, and graduates were ordered, according to their association with the variables, and the data contained in them were coded using the scale as a reference. of corresponding measurement and described in advance. Then the coded data was transferred to three matrices that link each of the professors, students and graduates who attended and answered the respective questionnaires with

each of the items of said questionnaires.

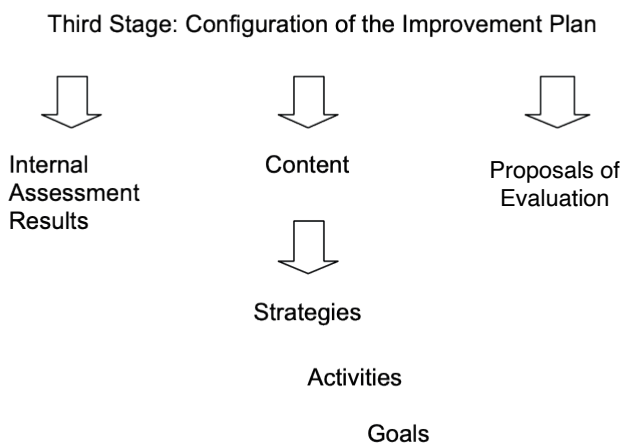
This information is displayed in Tables A.27, A.28 and A.29 of Annexes 29, 30 and 31, respectively, and was processed through the Windows Office computer package (Word and Excel) and SPSS (Statistical Package for the Social Sciences) for Windows. The treatment and statistical analysis applied to the variables under study were: the frequency distribution, the measures of central tendency, the Pearson correlation coefficient and the coefficient of determination. Finally, this information will be essential for the preparation of the quantitative work that makes it possible to identify the relationship between the dependent variable and the independent variables.

5.3.3.3. Third Stage: The Design of the Improvement Plan

5.3.3.3.1. Stage Description

In order to carry out the third stage of investigation, it will be necessary to have the results derived in the preceding stages, so that they can be used in the current investigative phase. In this phase, it is desired to make an improvement proposal so that the necessary activities are carried out to produce a continuous improvement of the quality of the educational service provided in the school system of the Law Degree program at the Faculty of Law and Social Sciences. from the Universidad Michoacana (see Figure 5.3).

Figure 5.3 Third Phase of the Research Strategy



Source: Self made.

Thus, the purpose pursued in this stage of the research is to design a plan for continuous improvement of the quality of higher education that responds to the proposals of

all the members of the academic unit of the HEI under study, so that become the beginning of a culture of quality and promote excellence in all processes provided at the Law School.

Therefore, in the spirit of achieving the aforementioned goal, it is proposed to meet the following objectives:

1. Base the design of the improvement plan from the internal evaluation report obtained from the first and second stage of investigation.
2. Develop the content of the improvement plan in terms of objectives, activities and strategies of each of the analysis units considered, specifying in each case the assignment of responsibility and its temporality.
3. Contemplate the evaluation strategies of the improvement plan.
4. Promote the participation of the members of the department when establishing the proposals for improvements.

5.3.3.3.2. Methodological strategies

The arrival at this stage of the investigation will give way to the possibility of considering the presentation of some proposals to improve the quality of the educational service provided in the academic unit of the IES under study. However, the materialization of this third phase will also demand compliance with the preceding stages or phases of the investigation, since these represent its base and foundation.

All those people who are contemplated to participate in the consultation and evaluation process will have knowledge of the selected criteria and the opportunity to review their opinions and issue their comments in writing before a certain date. This step will not only be carried out to comply with the principle of carrying out the maximum number of scheduled consultations, but also to guarantee that important considerations of the members of the academic unit under analysis are not omitted.

Once the results of the self-assessment (second phase) have been obtained, a sample of the informants will have to be selected to carry out the verification of said results. The sample will be obtained intentionally in response to the real possibilities of location and location.

Thus, the group that will be called “key informants” will have to be deliberately made up of 10 people distributed as follows:

- Three teachers.
- Five students.
- An authority.
- A member of the administrative staff.

Finally, the Improvement Plan is projected to be structured into three general parts. In the first, the purposes, justification and main axes that characterize it will be defined.

In the second part, the planned activities will be determined as they refer to the functions of teaching, research, extension and dissemination, and administration/management. And finally, in the third phase, the evaluation and follow-up proposals will be presented.

CASE STUDY: DATA PROCESSING, ANALYSIS AND INTERPRETATION

As a result of monitoring the process of construction of knowledge from the reality of the facts, the purpose of this chapter is to report a case study from presenting an analysis of the information and data obtained in this investigation in order to identify the discoveries regarding the quality of the educational service in the school system of the educational program of Law Degree taught at the Faculty of Law and Social Sciences of the Universidad Michoacana.

In attention to the separation of the aforementioned stages, the aforementioned analysis will be presented in three sections. Thus, in the first there will be a general description of the academic unit under study, beginning with a brief historical review of the Universidad Michoacana de San Nicolás de Hidalgo and another of its Faculty of Law and Social Sciences, highlighting its organizational structure, and the main characteristics, both of the educational programs offered, and of the affiliated members.

The second section will be intended to present the analysis of the first phase of the investigation, in which an attempt was made to make the first explorations and negotiate the main decisions of the internal evaluation process that corresponds to the second phase. The analysis of this phase will be presented separately, as appropriate to the functions of teaching, research, administration/management and extension and dissemination, as units of study that distinguish this work. What is remarkable about the content that is presented in this stage of the investigation lies in the final wording of the units and the composition of the criteria and sub-criteria selected through consultation by the groups of teachers, students and graduates for, first, the preparation of the questionnaires for teachers, students and graduates, and then the materialization of the evaluation process.

In the third section, the main findings of the internal evaluation process of the members of the academic unit will be indicated. Likewise, the functions of teaching, research, administration/management and extension and dissemination will be separated as appropriate.

6.1 DESCRIPTION OF THE PUBLIC HIGHER EDUCATION INSTITUTION AND YOUR ACADEMIC UNIT OBJECT OF STUDY

6.1.1. Historical Review of the Universidad Michoacana de sAn Nicolás de Hidalgo¹

The Universidad Michoacana de sAn Nicolás de Hidalgo (UMSNH) is heir to the historical tradition that distinguishes it from the rest of the Mexican public universities.

¹ See, Figueroa Zamudio, 1994; and Gutierrez, 1997.

It is currently the institution of higher education with the longest tradition in the state of Michoacán. Its historical background dates back to 1540, the year in which Don Vasco de Quiroga founded the Colegio de San Nicolás Obispo in the city of Pátzcuaro, with the purpose of training priests to help him in the evangelization of the natives of the vast territory under his jurisdiction.

Vasco de Quiroga showed, throughout his episcopal management, special concern to consolidate the nascent educational institution; Thanks to their negotiations, Carlos I of Spain issued a Royal Certificate on the 1st. May 1543, in which he agreed to assume the patronage of the school, which from that date became the Royal College of San Nicolás Obispo.

In 1566, a Royal Execution Office ordered the Ecclesiastical Council to exercise the administration of the Quiroguian campus in the name of the Spanish monarch. Faced with the demands of the post-Tridentine Church, to give a new orientation to the formation of priests, the Cabildo resolved in 1574 to hand over academic responsibility to the well-deserved Order of the Jesuits.

Around 1580, with the change of the episcopal residence from Pátzcuaro to Valladolid, San Nicolás was also transferred and merged with the Colegio de San Miguel Guayangareo. The new cathedral headquarters represented a great advance for the strengthening of the bishopric of Michoacán, however, the formation of priests continued without responding to the claims of the Tridentine Council, widely reaffirmed during the III Mexican Provincial Council of 1585.

To resolve this situation, the fourth bishop of Michoacán, Fray Alonso Guerra, began in 1590 to convert the school into a Tridentine Seminary. This initiative found fierce opposition within the Ecclesiastical Council, considering that accepting the proposal would contravene the objectives that gave life to the campus. On the death of Bishop Guerra, it fell to the successor Fray Domingo de Ulloa to receive on October 17, 1601 the bull of Clement VIII, which ordered the establishment of a Council Seminary taking advantage of the infrastructure of San Nicolás.

The Cabildo's reaction was not long in coming and in open contempt it undertook, through legal channels, an energetic defense that involved the civil and ecclesiastical authorities of New Spain in a confrontation that would last until the year 1610, when Pope Paulo V revoked his predecessor's order. However, the Colegio de San Nicolás maintained its activities regularly during that time without incorporating transcendental changes in its classrooms, where the essentials were taught to attend the religious services of the Spaniards and to evangelize the indigenous people. Concerned as the Valladolid society was in consolidating itself, it was little interested in that its educational institutions reached the development of the European ones; the affirmation of the colonial project must have been necessary for the Creoles to feel the need to match their knowledge to that of the Spanish cloisters.

Consequently, at the end of the 17th century, the Colegio de San Nicolás underwent a profound reform in its regulations and constitutions, which served as the basis for the modification to the study plan of the beginning of the 18th century, in which, among other things, the subjects were included. of Philosophy, Scholastic and Moral Theology. A Royal Decree of November 23, 1797, granted San Nicolás the privilege of incorporating the chairs of Civil Law and Canon Law into its structure.

At the beginning of the 19th century, we can affirm that the school was going through the most solid moments of its existence and everything seemed to indicate that it was embarking on an ascending career within the intellectual world of New Spain. However, the consequences of the independence movement led by a select group of Nicolaitan teachers and students, among whom we can mention Miguel Hidalgo y Costilla, José Ma. Morelos, José Sixto Verduzco, José Ma. Izazaga and Ignacio López Rayón, led to the viceregal government to close it down.

Once Mexico's independence was consummated, the main concern of the new government was focused on the national reorganization based on a new project, which contemplated for the first time on this land, education within the priority areas. This way, the measures tending to the reopening of the campus began during the decade of the twenties, after a long and painful negotiation between the Church and the State, the Ecclesiastical Council ceded, on October 21, 1845, to the Junta Deputy Director of Studies of Michoacán the Board of Trustees of the campus.

With this legal basis, Governor Melchor Ocampo proceeded to reopen it on January 17, 1847, giving it the name of Primitivo y Nacional Colegio de San Nicolás de Hidalgo, thus beginning a new stage in the life of the institution.

In the second half of the 19th century, chemistry, physics, cosmography, mathematics, and biology burst into Nicolaitan classrooms; Laboratories and libraries were enriched with important acquisitions made by the Michoacan government in European countries, while their patrimony grew with donations made by the state executive from secularized assets to Michoacan temples and convents. The airs of renewal that flooded the entity during those years provided solid foundations for the creation of a university in Michoacán.

This project was consolidated after the triumph of the Mexican Revolution, when a few days after taking possession of the government of Michoacán, the engineer Pascual Ortiz Rubio took the initiative in his hands, managing to establish the Michoacana Universidad de San Nicolás de Hidalgo on October 15, 1917, constituted by then with the following dependencies: Colegio de San Nicolás de Hidalgo, Faculties of Jurisprudence and Medicine, School of Engineers, a Normal School for men and another for women, a School of Commerce and Administration, a Practical School of Agriculture, an Industrial School for Ladies, an Academy of Fine Arts and an Institute of Natural Sciences. By 1919, likewise, the State Meteorological Observatory, the Ocampo Theater and the Public Library were part of the University.

As members of the first University Council, the directors of each one of the schools were appointed and as rector the engineer Agustín Aragón, who resigned a few days after not accepting the constitutional protest that the members of Congress forced him to. Faced with this setback, the nascent institution was left adrift, until in 1918 Dr. Alberto Oviedo Mota was appointed as the person in charge of initiating university activities. The following year, Congress appointed Professor José Jara Peregrina as rector and also issued the first measures aimed at consolidating the university, of which the Constitutive Law and the creation of the first budget item that allowed it to remedy the most pressing needs stand out.

In 1920, according to the opinion of Governor Francisco J. Múgica, the University continued “as a group of schools, which marched independently of each other.” To remedy this situation, General Múgica modified the Constitutive Law and appointed new authorities, the rectory was occupied by Ignacio Chávez, a young doctor from Michoacán who recently graduated from the School of Medicine of the National University and who brought that university model very fresh. During his tenure, profound academic and administrative reforms were carried out, which included modifications to the study plans and programs of all the schools, with medicine being the most favored, as it incorporated a multitude of Michoacán doctors into its teaching staff. colleagues of the new rector, of whom it is enough to mention Salvador González Herrejón, Adolfo Arreguín Vidales, Manuel Martínez Báez and Ignacio Chávez himself who gave a complete turnaround to medical education in Michoacán.

On August 1, 1930, by efforts of the then President of the Republic and founder of this Maximum House of Studies, Eng. Pascual Ortiz Rubio, the Colegio de San Nicolás was declared a National Monument.

Also, at the time, this University was nourished by the presence of the intellectuals exiled by the Spanish Franco regime, who brought a new academic vigor to the Nicolaitas classrooms. With them, the University opened new perspectives in its projection, as were the chairs of the Spring University, which were taught in these venues by prominent men of letters and sciences.

The Universidad Michoacana has been a pioneer in establishing bonds and commitment to society. Indeed, the first University that instituted the obligation to provide social service, in return to the community to which it is owed, was precisely ours.

A constant in the history of the Universidad Michoacana has been the increase in the student population, which has promoted several administrative reforms as well as the renewal and increase of professional horizons. In the 1960s, the Schools of Mechanical, Electrical, Chemical and Agrobiological Engineering were created, as well as the Schools of Veterinary Medicine and Zootechnics and Physics-Mathematics, likewise, the educational offer was reoriented by eliminating the secondary school of the University.

However, planning and developing the substantial activities of the University supported by teaching, research and dissemination of culture has been a complex task,

since the history of our institution has been linked to the political life of the nation and the state, giving way to the diffusion and plurality of ideas and attitudes. The Universidad Michoacana has always sought mechanisms to overcome problems and channel the university project within the paths of the academy, scientific, technological, humanistic research and the dissemination of culture.

In the 70s, six degrees were opened in this house of studies, namely: History, Philosophy, Biology, Wood Technology and Economics. And the first cell that outlined other professional research projects was created: the Metallurgical Research Institute, which was the first among us to offer Postgraduate studies. In addition, the Popular School of Fine Arts and the Department of Languages were integrated as special education.

From 1980 to 1990, the offer of Postgraduate courses at the Universidad Michoacana was limited. Between 1992 and 1994, a new perspective emerged for postgraduate studies, and with it, university life was inserted into another level of demands and needs, since several schools were transformed into faculties when the creation of specialties, master's degrees and, for the first time, were approved., in 1994 a doctorate.

In the year 2000, the University Council approved the creation of degrees in Hispanic Language and Literature and Psychology, reaffirming the humanist vocation of our University. Likewise, the Distance Education System was started with the Law Degree.

Although it is undeniable that the Universidad Michoacana has been and is a center of higher education with a strong historical anchorage and social demands, it is also true that as a whole it has avoided participating in the academic competition that has taken place in the different national universities. and foreign, despite the position that historical circumstances gave it. The idea-product of the Mexican Revolution that the spaces of the public University must vindicate the society marginalized by an unfair economic and social regime has been prolonged in the life of the University. However, despite the unavoidable need for the public university to open spaces for low-income classes, the entry into a competitive modernity articulated with the real problems of the production of goods and services cannot be postponed.

6.1.2. Historical Review of the Faculty of Law and Social Sciences²

The origins of the Faculty of Law and Social Sciences (FLSC, or FDyCS by its acronym in Spanish) are linked to those of the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH). The first law studies began at the Colegio de San Nicolás Obispo itself, still in Pátzcuaro, with the study of the "Canons". This is the oldest antecedent of the current FDyCS. And, when in 1580, the Episcopal Headquarters of Pátzcuaro was transferred to Valladolid (today Morelia), the Colegio de San Nicolás Obispo was also transferred to Valladolid and with it the jurisprudence studies.

² See, *idem*.

By deed of donation “Inter Vivos”, dated February 25, 1790, a lady, Doña Francisca Xaviera Villegas Villanueva, donated the amount of sixteen thousand pesos to the Colegio de San Nicolás, whose annual revenues amounted to one thousand eight hundred pesos. Doña Francisca Xaviera made the donation, as a recognition to the Colegio de San Nicolás for the educational benefits received by her brothers, already deceased in 1790, so that the chairs of Canon Law and Civil Law were established.

On November 23, 1797, the two chairs were authorized by royal decree. On November 4, 1798, a brilliant party was organized in front of the College for such an auspicious and dignified academic event, attended by representatives of the Viceroy, the Ecclesiastical Council and the entire town of Valladolid. The Chairs began, in a solemn act, in the month of April 1799. The teachers, who won in the opposition contest, were, for Canon Law, Dr. Victoriano de las Fuentes Vallejo and, for Civil Law, Bachelor Andrés of the Santa Coloma Fountains. This Faculty owes a lot to Mr. José Mariano Timoteo de Escandón y Llera, Count of Sierra Gorda and Knight of the Royal and Distinguished Order of Carlos III, and to Dr. Idelfonso Gómez Limón, Magistral Canon of the Cathedral of Valladolid, for their commitment that they had to organize it.

At the end of the 18th century and the beginning of the 19th century, the Colegio de San Nicolás had reached a commendable academic level, since it offered three branches of knowledge in its classrooms: that of the Priesthood, that of Canon Law and that of Civil Law.

Between 1799 and 1810, fifty-four bachelors graduated from the fledgling law school. The first was Don Manuel Tiburcio Orozco y Álvarez del Castillo, in Canon Law (1802) and Don José Vicente Macías Ramos, in Civil Law (1803). With the War of Independence, the Colegio de San Nicolás suspended its academic activities, to become a prison, first (October 17, 1810) and then a barracks (1811) occupied by the royalist regiment “Dragones de Pátzcuaro”: Our glorious School, from a classroom he went to jail and then to the barracks”.

Its doors were reopened to education until January 17, 1847 in an act presided over by Don Melchor Ocampo, who had received from the Ecclesiastical Council, by public deed, the rights to the Colegio de San Nicolás Obispo, which since then received the name of “Primitive and National College of San Nicolás de Hidalgo”.

In this new stage, the Management of the College fell to Mr. Onofre Calvo Pintado; Santos Degollado was named Secretary and Presbyter Antonio Rabia as Chaplain, who disposed of the old chapel for the religious service. On January 28 of that same year, the chairs of Civil Law and Ecclesiastical Jurisprudence were reopened. The degree of Jurisprudence was conferred by the Supreme Court of Michoacán. In 1854 Law studies were separated into four chairs: Natural Law, Civil Law, Canon Law and Public Law.

In 1867, Dr. Rafael Carrillo and Presbyter Antonio Ortiz, respectively, served as Regent and Vice-Regent of the College. Still in 1892, the chairs of Jurisprudence from the first to the fifth year were taught at the Colegio de San Nicolás, in addition to the subject of Roman Law; but in 1901, by order of the Governor himself, Don Aristeo Mercado, the studies of

Jurisprudence were separated from the College, thus founding the School of Jurisprudence, independently of that glorious institution, which was restricted in its academic life. The first director of the School of Jurisprudence was Mr. Luis B. Valdés, who requested a license the same day of the inauguration, for being at that time, at the same time, Secretary General of the Government. In his place, Mr. Miguel Mesa was in charge of the school management. (The first building of the School of Jurisprudence is located on the corner currently formed by the streets of Morelos Norte and 20 de Noviembre, now a hotel).

Governor Alfredo Elizondo abolished in 1915 the subsidy for the School of Jurisprudence, due to the low demand for this profession and its few students received scholarships in Mexico City; one of these students was Gabino Fraga, later Minister of the Supreme Court of Justice of the Nation.

By State decree dated October 15, 1917 and at the initiative of Eng. Pascual Ortiz Rubio, governor of Michoacán, the Autonomous Universidad de Michoacán was established, officially called the Michoacana Universidad de San Nicolás de Hidalgo, integrated among other dependencies by the School of Jurisprudence.

On August 11, 1919, the same governor Ortiz Rubio promulgated the Law Regulating the University, in whose article 1 the School of Jurisprudence is already mentioned as a Faculty.

6.1.3. Current situation of the Universidad Michoacana de San Nicolás de Hidalgo

6.1.3.1. General structure

Currently, the UMSNH can be defined as a decentralized State agency, with its own legal personality and assets. It is the public higher education institution (IESP) with the longest historical and academic tradition in the State and the region. Its Organic Law -decreed by the H. State Congress on October 3, 1986 and amended on June 23 and September 18, 1986- in force, establishes the following as its substantive functions: 1) provide education at the upper secondary level and superior; 2) conduct scientific research; and, 3) the diffusion of culture and university extension. The foregoing, keeping in mind that the essential purpose of the Nicolaita university is to serve the people, contributing with their daily work to the formation of qualified men in science, technology and culture, who qualitatively raise social values and customs.

Based on the foregoing, it is asserted that through its more than ninety years of existence, the UMSNH has undoubtedly been a pillar in the development of Michoacán, since its members have collaborated in providing solutions in the scientific, administrative and technology, training professionals capable of responding to the social, economic and technical needs for the advancement of the State.

To meet such demands, UMSNH has a set of facilities, three teaching systems, and a diversity of educational programs at the technical, upper secondary, and higher levels. And, according to official data, the offer of the upper secondary level is dispensed in seven preparatory schools and, that of the higher level, is organized in nine Dependencies of Higher Education (DES), in which the academic units (schools, faculties and institutes). These DES are: Health Sciences DES; DES of Administrative Economic Sciences; Law DES; DES of Exact Sciences, Metallurgy and Materials; DES of Humanities; DES of Engineering and Architecture; DES of Agricultural Biological Sciences; DES of Agricultural Sciences of Uruapan; and DES of Agricultural Sciences of Apatzingán. This operational organization at the higher level obeys the disciplinary identity of the Educational Programs (PE) and the geographical grouping of the academic units for the best use of their resources. Its purpose has to do with the possibility of meeting the needs of students more efficiently.

6.1.3.2. Organizational culture

With the pride of being a public, autonomous, plural, inclusive, humanistic and purposeful University, the Universidad Michoacana presents, as constitutive parts of its organizational culture, a mission, a vision and a set of values, which are discussed below.

Regarding its mission, “the Universidad Michoacana de San Nicolás de Hidalgo is heir to an unquestionable historical tradition, decentralized government with its own legal personality and heritage, which within the framework of its social and cultural responsibility seeks for the community: to preserve, transmit and increase universal, humanistic and scientific knowledge; in short, the culture of humanity. [For what] We are a Higher Education Institution structured in a network of academic units dedicated to upper secondary and higher education, scientific research, the dissemination of culture and university extension. [And] In order to fulfill our mission, the functions we carry out are based on responsible participation, labor competence, and the commitment of the Nicolaita community” (Universidad Michoacana de San Nicolás de Hidalgo, 2006: 6).

Likewise, around his vision, “the Universidad Michoacana de San Nicolás de Hidalgo will have in the immediate future its certified strategic management processes, with its objectives, goals and strategies relevant to the Institutional Development Plan, with a legal framework and modern internal structure in an institutional climate of collaboration and commitment in accordance with the purposes of the University. The Academic Units of the Universidad Michoacana de San Nicolás de Hidalgo will formulate their respective Strategic Development Plans, having their mission and vision well defined and in accordance with the institutional ones; These development plans will consider the accreditation of their educational programs and that they will be the essential platform for the academic consolidation of the University, in a modern and functional regulatory framework with an organizational structure in accordance with the functions, requirements and challenges posed by the present

circumstances and that will improve the quality of the services offered by the University. Our academic staff will be based on a Postgraduate academic preparation and will be competent in the performance of their teaching and research activities. The University will take advantage of the new information, communication and learning technologies; It will be transparent in its academic, administrative, financial, and humanistic administration, and it will have effective strategic planning, programming, budgeting, evaluation, and control systems. We see a University that stands out for its scientific production, recognized in the country for its teaching performance according to an innovative teaching model centered on the student, taking into account gender equality and interculturality and support for the indigenous” (Universidad Michoacana de San Nicolás de Hidalgo, 2006: 6).

Finally, the Nicolaitan spirit, from its beginnings, has been faithful to itself, but also open and flexible to face the challenges that new times pose. Therefore, today, the Nicolaitan values that are part of a well-founded axiology and ethics to shape the university identity are:

- Search for Truth and Ethical Obligation with Society.
- Honesty.
- Respect for Life and the Rights of others.
- Human Freedoms.
- Tolerance, Respect and Plurality.
- Humanism.
- Equity.
- Socially Responsible University.

6.1.3.3. Legislation

Around 1916, various institutions were operating in Morelia, among others, the School of Jurisprudence, the School of Medicine, the Normal School, the Higher School of Commerce and Administration, the School of Arts, the Industrial School for Young Ladies and the Michoacán Museum. In order to gather all these institutions, the first Constitutional Governor of Michoacán, after the revolutionary period, the engineer Pascual Ortiz Rubio, on August 14, 1917 sent to the State Congress an initiative for the creation of the Universidad Autónoma del Estado de Michoacán, and this project would be the first step taken by the Ortiz Rubio government for the foundation of the University. Thus, the Legislative Power of the State voted in favor of decree number 9 of October 15, 1917 that established the Universidad Autónoma del Estado de Michoacán, with the name of Universidad Michoacana de San Nicolás de Hidalgo.

And, despite the University having been established since 1917, it was not until 1919

when the dictation of the chairs began. The first Organic Law was approved on August 11, 1919 and was in force until 1933; the second Organic Law governed the destinies of the House of Hidalgo from 1933 to 1939. On October 25, 1957, the State Legislative Power reformed the Organic Law of the University through its decree number 26.

On October 31, 1961, the State Congress approved a new Organic Law for the University. The Organic Law of March 14, 1963 abrogated that of 1961, and in October 1966, through decree number 45, the previous Organic Law was added and modified. Finally, the current Organic Law dates from September 18, 1986, through decree number 299 of the H. State Congress.

Currently, the legal framework of the Universidad Michoacana de San Nicolás de Hidalgo is made up of the following regulations:

1. Organic Law.
2. University Statute.
3. Internal Regulations of the Rector's Commission.
4. Internal Regulations of the H. University Council.
5. Regulations for the Election of University Counselors, Professors and Students.
6. Guidelines for the integration of the Technical Councils and the Election of its Members.
7. Bases for the Auditing Process in the Appointment of Directors.
8. Regulations for the Incorporation of Institutes and Schools.
9. Internal Regulation of Schools Incorporated to the Michoacana University.
10. General Regulations of the Baccalaureate Division.
11. General Registration Regulations.
12. Scholarship Regulations for Students.
13. General Regulation of Exams.
14. Regulations of the Department of University Heritage.
15. General Regulation of Libraries.
16. General Regulations for Academic Staff.
17. General Regulations for Graduate Studies.
18. General Regulations of the Department of Languages.
19. Regulations for the Enjoyment of the Sabbatical Year by Academic Workers.
20. Regulatory Norms for the Granting of Honorary Degrees.
21. Regulations for Granting the Degree of Doctor Honoris Causa.
22. Regulations for the Granting of the "Father of the Nation" Award.

23. Regulatory Provisions on Emeritus Professors.
24. Collective Bargaining Agreement with the Teachers Union of the Universidad Michoacana.
25. Collective Bargaining Agreement with the Single Union of Employees of the Universidad Michoacana.
26. Agreements.
27. Agreements and Circulars.

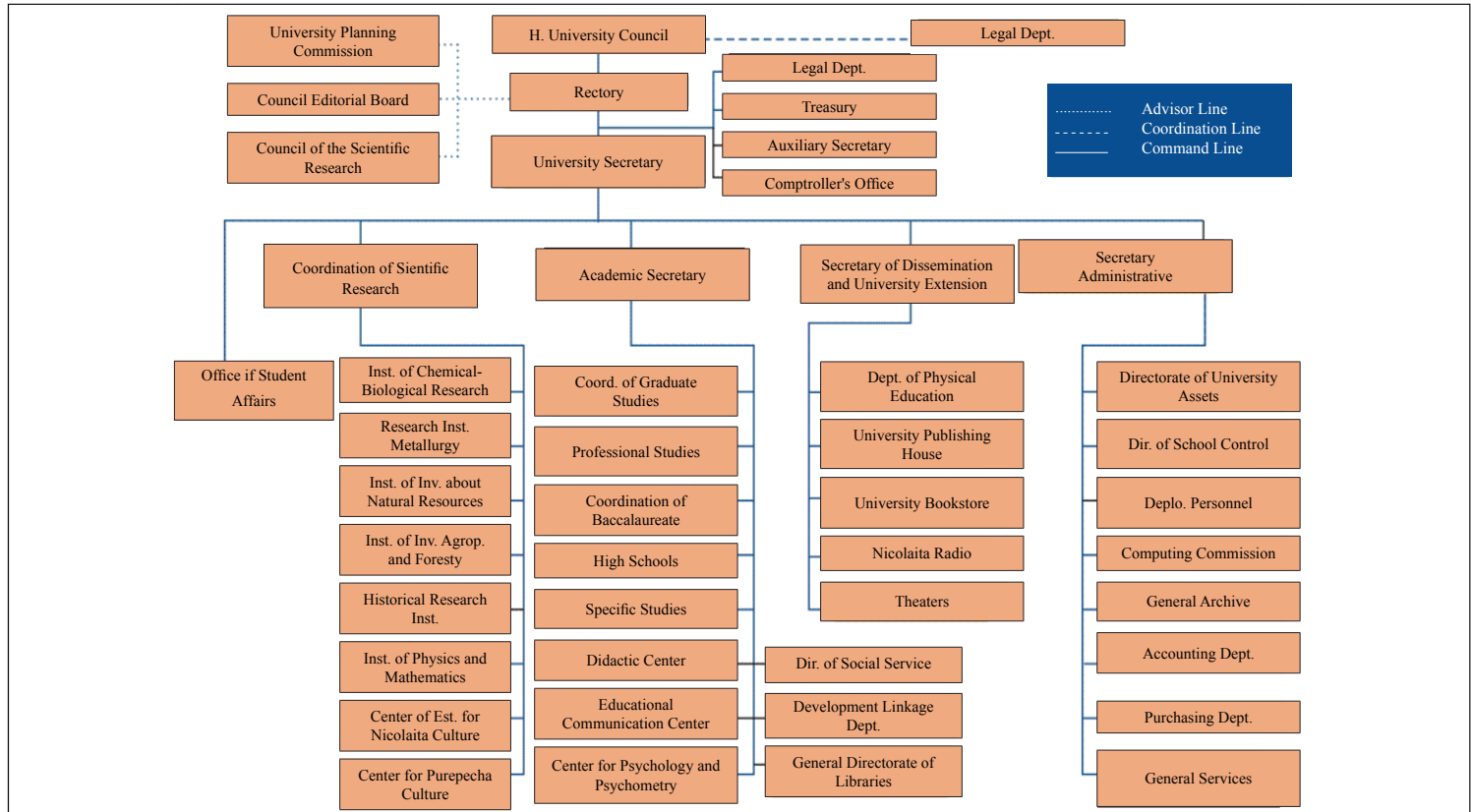
6.1.3.4. Organic Structure of the Universidad Michoacana de San Nicolás de Hidalgo

In accordance with current university legislation, the Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) is made up of the university community, made up of its authorities, academic workers, administrative workers and students. Thus, the university government is formed by: 1) the H. University Council; 2) the Chancellor; 3) the Technical Councils of the Schools, Faculties, Institutes and Professional Units; 4) the Scientific Research Council; 5) the directors of Schools, Faculties, Institutes and Professional Units; and 6) the Steering Committee.

The highest Nicolaitan authority rests with the H. University Council, of which the Rector in turn is its president. This highest collegiate body also has a secretary, who in turn is the head of the General Secretariat of the University. And the Rector's Commission, for its part, is the governing body in charge of appointing the Rector, as well as resolving conflicts between the latter and the University Council.

The university bureaucracy, therefore, begins in the Rectory and in the General Secretary of the University, and expands through the Academic Secretary, the Administrative Secretary, the Secretary of Cultural Diffusion and University Extension, the Auxiliary Secretary, the Treasury, the Scientific Research Coordination, the Comptroller's Office, the Legal Department, the Student Affairs Office, the University Planning Commission and the Editorial Board. The organization chart shown in Table 6.1 graphically exposes the organic structure of House of Hidalgo.

Table 6.1 Organic Structure of the Universidad Michoacana de San Nicolás de Hidalgo*



Source: Coordination of Access to Public Information of the Universidad Michoacana de San Nicolás de Hidalgo.

*/ Approved by the H. University Council on January 25, 1983, and rearranged according to the Organic Law of 1986.

In addition, the UMSNH is made up of the following Faculties, Schools, Institutes, Professional Units and Museums:

1. Faculty of Law and Social Sciences;
2. Faculty of Civil Engineering;
3. Faculty of Medical and Biological Sciences “Dr. Ignacio Chavez”;
4. Faculty of Dentistry;
5. Faculty of Agrobiology “Presidente Juárez”;
6. Faculty of Accounting and Administrative Sciences;
7. Faculty of Electrical Engineering;
8. Faculty of Engineering in Wood Technology;
9. Faculty of Mechanical Engineering;
10. Faculty of Architecture;
11. Faculty of Physical-Mathematical Sciences;
12. Faculty of Biology;
13. Faculty of Veterinary Medicine and Zootechnics;
14. Faculty of History;
15. Faculty of Economics;
16. Faculty of Philosophy “Dr. Samuel Ramos Garcia”;
17. Faculty of Nursing;
18. Faculty of Chemistry-Pharmacobiology;
19. Popular School of Fine Arts;
20. School of Hispanic Language and Literature;
21. School of Psychology;
22. School of Nursing and Public Health;
23. School of Administration of Agricultural Companies;
24. Primitive and National School of San Nicolás de Hidalgo (High School 1);
25. Ing. Pascual Ortiz Rubio High School (High School 2);
26. Gral. José Ma. Morelos y Pavón High School (High School 3);
27. Isaac Arriaga High School (High School 4);
28. Melchor Ocampo High School (High School 5);
29. Lic. Eduardo Ruiz High School (Uruapan);

30. Gral. Lázaro Cárdenas High School (Uruapan);
31. Institute of Historical Research;
32. Institute of Economic and Business Research;
33. Institute of Physics and Mathematics ;
34. Institute of Metallurgical Research;
35. Institute of Chemical-Biological Research;
36. Institute of Agricultural and Forestry Research ;
37. Natural Resources Research Institute;
38. Institute for Philosophical Research;
39. Balsas Professional Unit;
40. Multidisciplinary Center for Biotechnology Studies;
41. Department of Languages;
42. Self-Access Center of the Department of Languages;
43. Center for the Study of the P'urhépecha Culture; and
44. Michoacan Regional Museum.

6.1.4. Current situation of the Faculty of Law and Social Sciences

6.1.4.1. General structure

Currently, the Faculty of Law and Social Sciences (FLSC, or FDyCS by its acronym in Spanish) can be defined as an academic unit (AU) dependent on the Universidad Michoacana de San Nicolás de Hidalgo. Thus, it constitutes a dependency of a public higher education institution (IESP), subject to the Organic Law of the UMSNH, indicative regulations of the substantive functions of this and the rest of the academic dependencies of the Universidad Michoacana: 1) provide education to upper middle and higher level; 2) conduct scientific research; and 3) the diffusion of culture and university extension.

6.1.4.1.1. The Educational Offer

The educational offer of the FDyCS resides in six educational programs, namely: a) Law Degree through the face-to-face or school system; b) Law Degree through the open system; c) Law Degree via the distance system (online); d) Specialty in Procedural Law; e) Specialty in Criminal Law; f) Master's Degree in Law; g) Master's Degree in Information Law; and h) Inter-institutional Doctorate in Law.

6.1.4.1.2. The Community of the Academic Unit

6.1.4.1.2.1. Teaching and Research Staff

In addition, the academic capacity of FDyCS is manifested through its faculty, which for the 2008-2009 school year had the following structure: a) 62 full-time professors; b) 11 part-time teachers; and, c) 259 professors hired by the hour. In total, there is a teaching staff of 332 elements.

6.1.4.1.2.2. The Directors

Likewise, regarding the management staff of the FDyCS during the 2008-2009 period, it was made up of: a) 1 director; 2) 1 deputy director; c) 1 academic secretary; d) 1 administrative secretary; e) 1 student development secretary; f) 1 coordinator of the school system of the Law Degree; g) 1 coordinator of the open system of the Degree in Law; h) 1 coordinator of the distance system of the Degree in Law; i) 1 head of the Graduate Studies Division; and, j) 3 disciplinary officers in the Faculty buildings.

6.1.4.1.2.3. Administrative Staff

Regarding the administrative workers of the FDyCS, in the 2008-2009 school year, there were: a) 11 secretaries; b) 19 technicians; and c) 38 quartermasters, watchmen, messengers and drivers.

6.1.4.1.2.4. The students

Regarding FDyCS students in the 2008-2009 school year, the following enrollment was recorded: a) 4,956 students from the Law Degree school system, in 113 sections or groups; b) 1085 students in the open and distance systems of the Bachelor of Laws career, in 41 sections or groups; c) 61 students of the Procedural Law Specialty, in 4 sections or groups; d) 56 students of the Specialty in Criminal Law, in 4 sections or groups; and, e) 58 students of the Master's Degree in Law, in 4 sections or groups.

6.1.4.1.2.5. the graduates

Finally, the graduates of the 2004-2005, 2005-2006, 2006-2007 and 2007-2008 school years were considered, with the intention of having a consistent sample of graduates for the study period. Thus, there were 1,006, 1,013, 1,076, and 1,107 graduates during the 2004-2005, 2005-2006, 2006-2007, and 2007-2008 cycles, respectively.

6.1.4.2. Organizational culture

The Faculty of Law and Social Sciences of the Universidad Michoacana presents, as constitutive parts of its organizational culture, a mission, a vision and a set of values, which

are addressed below.

Regarding its mission, it indicates that “we are an AU, a member of the DES of Law of the Universidad Michoacana de San Nicolás de Hidalgo that in the field of Legal and Social Sciences has as its goals the comprehensive training of professionals; the generation and innovative application of theoretical-legal knowledge and legal technique; and the extension of the benefits of science and culture to the social and productive environment. Our commitment is that graduates, academic research products and dissemination activities are characterized by their quality, relevance, relevance and contribution to the development of the nation and society; based on the highest ethical and universal values, respect for human dignity and social solidarity” (Faculty of Law and Social Sciences, 2006: 5).

Regarding his vision, it is also noted that “in 2010 the Faculty of Law and Social Sciences is a legal school of recognized prestige and leadership. The quality of its graduates, its educational programs, its academic and research products, extension and linkage; and academic development support it. The members of the Faculty of Law and Social Sciences, the members of its Academic Bodies and its Collegiate Bodies recognize that universal values are not generated by rule, but by what they practice and transmit by example, constant improvement, respect for freedom and human dignity, honesty and social responsibility.

Its educational programs (PE's) are accredited and recognized by external organizations due to their quality and relevance. They are developed in innovative learning environments, centered on the student and promote comprehensive values and competencies in the student, through flexible curricula that operate in all modalities. The various systems have a competent academic staff that is permanently updated in its work to meet school needs. The faculty meets a desirable profile and is organized in a collegiate manner to add their capabilities and achieve the convergence of their efforts in an academic environment of knowledge, creativity, and improvement. Knowledge generation and application activities are closely linked to educational programs and are developed through academic bodies with well-defined lines and acceptable productivity rates.

The government, social and productive sectors participate substantially in the definition and financing of research projects. The set of linking activities, social service and projects aimed at the transparency of technology and specialized advice, as well as dissemination and dissemination, are carried out in an orderly manner and integrated into the academic processes of the FDyCS and the work of the Academic Bodies. Through exchange programs, the academic mobility of professors and students and the realization of joint projects at the national and international level are promoted. Among the skills of students and teachers, the domain of another language and of computing stand out; and in the courses and academic activities an international focus is clearly observed.

The management is efficient and oriented to the final recipient of the service: the student. The processes are agile, automated and have been certified. There is a continuous

improvement policy, based on user feedback and quality indicators, and a reference framework for monitoring and evaluating results. The Faculty has obtained a decent and diversified budget, which corresponds to the quality of the services and its academic capacity. The exercise of government and decision-making are carried out continuously, in strict adherence to regulations and acquired union rights, with academic criteria and based on a culture of planning. Accountability is a fact and the information is transparent” (*Ibidem.*, 6-7).

6.1.4.3. Organic Structure of the Faculty of Law and Social Sciences

The Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo is made up of its authorities, teachers, researchers, technicians, students and administrative staff.

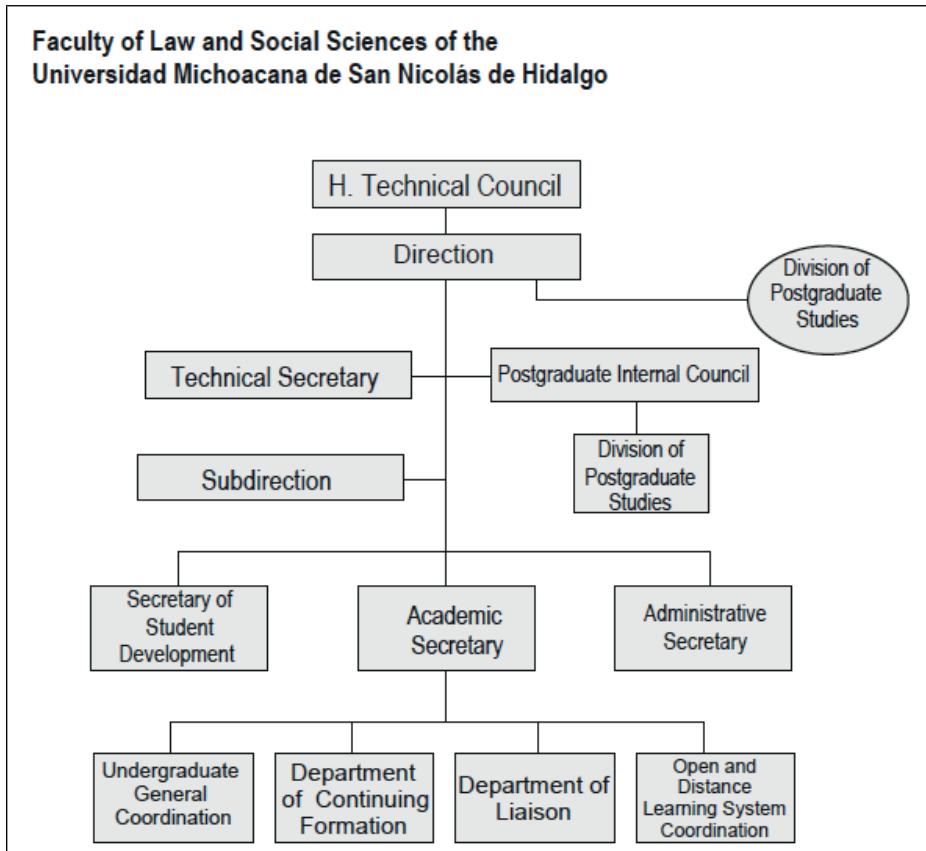
Specifically, the FDyCS has a highest governing body: its H. Technical Council. This is chaired by the Director of the Faculty, and the head of the Academic Secretariat of the Dependency also falls under the responsibility of the Secretary of the H. Technical Council. The Subdirectorate, the Administrative Secretariat, the Student Development Secretariat, the Technical Secretariat, the General Coordination of the Degree, the Coordination of the Degree in the Open System, the Coordination of the Degree in the Distance System, the Coordination of the Center for Legal and Social Research and the Head of the Graduate Studies Division, constitute the bureaucratic complex of the Faculty that, together with the Directorate and the Academic Secretary, make up the administration of the reference academic unit. The organic structure of the Faculty, therefore, is included in the organization chart that is available in Table 6.2.

6.1.4.4. The Study Plan of the Educational Program of the Law degree

The objective of the study plan of the Graduate Degree in Law of the FDyCS of the UMSNH is to train the lawyer as a professional, with the necessary knowledge and skills to understand and solve the problems inherent to the legal discipline, with a solid social conscience in based on the principles of justice, equity, common good and social peace.

The approach under which the reference educational program plan is conceived considers that in the professional practice, the lawyer is in constant connection with other professionals (social workers, accountants, administrators, doctors, engineers, among others), as well as with the people who demand their services, either in offices, courts, public ministry agencies, courts, etc.

Table 6.2 Organic Structure of the Faculty of Law and Social Sciences from the UMSNH



Source: Direction of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo.

Therefore, the Faculty must train human resources capable of advising, processing, managing, preparing and in general solving specific problems of the application of Law in all its branches.

6.1.4.4.1. *The Subjects of the Study Plan of the Degree in Law*

In the Law Degree Study Plan, the credit system is applied, and to obtain the corresponding degree it is necessary to accumulate 360 credits. The quantification of the latter is obtained as follows: each class hour corresponds to two credits, and this way, if the credits are added, a subtotal of 224 credits is generated; 40 more credits are granted for attendance at the Procedural Clinic subjects; for the optional subjects (two per year) that students must take in fourth and fifth grades, the quantification will be increased by 24 credits; and social service and special jobs grant the right to 22 more points. All of the above, increased by 50 credits that correspond to the professional exam, report a total

sum of 360 credits for the Bachelor's Degree. In addition, Table 6.3 accurately refers to the curricular plan of the Law Degree offered by the FDyCS of the UMSNH. Said study plan is taken in annual terms, over five years, and includes 41 subjects to be taken.

6.1.4.5. Mission and Vision of the Educational Program

The mission of the Law Degree program points out that the latter aims to train the lawyer as a professional, with the knowledge and skills necessary to understand and solve the problems inherent to the legal discipline with a solid social conscience based on the principles of justice, equity, common good and social peace.

Likewise, the vision of the reference educational program considers that in the professional practice the lawyer is in constant connection with other professionals (social workers, accountants, administrators, doctors, engineers, among others, as well as with the people who demand their services, either in offices, courts, public prosecutor agencies, courts, etc.). Its function is to advise, process, manage, prepare, and in general solve specific problems of the application of Law in all its branches.

Table 6.3 Study Plan of the FDyCS Law Degree

<i>First year</i>	<i>Second year</i>
Politic science	Administrative law
Civil Law I	Civil Law II
Criminal Law I	Constitutional right
roman law	Labor Law I
History of economic thoughts	Public International Law
Introduction to the study of law	Criminal Law II
Investigation methodology	Civil Procedural Law I
Legal Sociology	Criminal Procedural Law
General Theory of the State	Law history
<i>Third year</i>	<i>Fourth year</i>
Civil Procedural Law II	IV Civil Law
Legal Medicine	Tax Law I
Labor Law II	Procedural Clinic I
Civil Law III	Private international right
Rights to social security	Commercial Law II
Commercial Law I	Amparo I
Individual guarantees	
Economic Law	Electives: Two subjects to study
	Criminology and Penitentiary Law
	Public Administration Theory
	Forensic Psychiatry
	Legal Logic
	Electoral Law
<i>Fifth year</i>	
Amparo II	
Tax Law II	
Philosophy of Law	
Agricultural law	
Procedural Clinic II	
Electives: Two subjects to study	
Banking Law	
Maritime Law	
Notarial and Registry Law	
Judiciary	

Source: Academic Secretariat of the FDyCS of the UMSNH.

6.1.4.6. Income Profile

The entry profile from which the academic program of Graduate is Law starts has to do with having a vocation of service towards their peers, committing to assume ethical-philosophical principles, with values rooted in legal work. In addition, they must have knowledge, competencies, skills, and abilities in the following areas: 1) Logical, critical, analytical, and reflective reasoning; 2) mastery of written and oral language; 3) study habits and aptitude for reading comprehension and research; 4) ability to relate to other people and ability to work in a team; 5) skills for discussion, research and argumentation of social problems based on a critical and humanistic attitude; 6) basic knowledge of the organization of the State and its sphere of competence; and 7) conciliatory vocation.

6.1.4.7. Graduation Profile

At the end of the degree, the graduate of the FDyCS will be able to locate the law as a set of systems arising from the development of society as a response to its problems; will identify the problems of the legal field in its various fields of application and solve these problems through the use of legal techniques and criteria; will understand the democratic and national meaning of the current legal order; he will master epistemology, as well as legal systematics and technique; will know the economic, political and social environment of the Nation in which the Law is applied; apply legal language, both to issue and interpret written documents or oral communications; will participate in the theoretical and practical development of legal doctrine and praxis; will have a solid vocation of service towards the human being and society, ease of social treatment and teamwork; will develop and link the ethical sense of Law with the specific activities of the professional practice of the same; will possess competencies and skills to face difficult situations and the ability to make decisions; and will understand the universal notion of Law, its universal legal concepts and will know the various sources and branches of law, among other capacities.

6.1.4.8. The Degree

In accordance with the current degree regulations in the FDyCS, the degree modalities in the academic unit of reference are diverse, and among them there are: 1) Degree by average, according to academic achievement; 2) professional examination; 3) general exam for graduation of Law Degree; 4) specialization course; and 5) memory in community service.

6.2 ANALYSIS AND INTERPRETATION OF THE DATA OBTAINED IN THE FIRST PHASE OF INVESTIGATION

As previously mentioned, the purposes of this stage were, on the one hand, to sensitize the members of the UMSNH FDyCS about their participation and leadership in the self-assessment process and the design of improvement proposals and, on the other hand, consult the main protagonists of the educational process (teachers, students and graduates) and members of the Faculty regarding those criteria that, in their opinion, are the most important to carry out the evaluation and base the process of continuous improvement of the quality of teaching.

Based on the foregoing, in this section the aspects that the consulted members of the Law Degree of the FDyCS school system of the UMSNH considered pertinent to be included in the process of self-assessment of the quality of the educational service in the academic unit under study. Therefore, the results that are intended to be presented here refer to the opinions that both professors, students, and graduates made of the units of analysis and the

criteria that were consulted through the check list (see Table A.11 *List of Factors Associated with Educational Quality*, from Annex 7), which were agreed upon and legitimized through the questionnaires (of teachers, students, and graduates) that emerged as a product of the discussion groups (of teachers, students, and graduates).

Finally, the assessment that was considered to include a certain criterion in the self-assessment process, through the incorporation of the elements selected by the actors consulted in the respective questionnaire, was given based on the number of mentions received by the elements suggested in the *check list* resolved by teachers, students and graduates. Thus, it was considered to incorporate into the questionnaires items that contain the elements with the most mentions linked to the indicator of the respective factor ³.

6.2.1. Assessment of the Teaching Analysis Unit

As a result of the theoretical investigation of this work, the *teaching variable* adopted the following dimensions:

1. Teaching effectiveness.
2. Didactic strategies.
3. Learning Assessment.
4. Curriculum.
5. Didactic interactions.
6. Planning of university education.
7. Teacher training.
8. Inputs or physical resources.
9. Internal environment.
10. Training processes.
11. Academic staff regulations.
12. Student regulations.

And to choose the indicators of these dimensions, 71 options were proposed, as can be seen in Table 1.4a of Chapter 1 of this study. Through the resolution of the *check list* and the practice of the discussion groups (see Annexes 12, 13 and 14), it was possible to arrive at the consideration of 18, 19 and 16 indicative elements of the 12 dimensions of the teaching variable, for the questionnaires of teachers, students and graduates, respectively. Thus, the correspondence scheme between the dimensions, indicators and items of the *teaching study variable is reported* through Annexes 8, 15 and 19 of this work.

³ When two elements obtained a similar number of mentions, and such number was the highest in relative terms, then it was decided to include both elements in the respective questionnaire through the selection of the questions linked to such elements.

Therefore, the definitive operationalization scheme of the *teaching study variable* is shown in Annex 15, which contains the breakdown of the indicators of the reference variable considered in this study.

The resolution of the *check lists*, the discussion groups, the selection of indicators and the operationalization of the variables, finally, made it possible to configure the questionnaires for teachers, students and graduates. And it is interesting here to refer only to the fact that the *first 18, 19 and 16 items of the questionnaires for professors, students and graduates, respectively, in their data processing version, correspond to the teaching analysis unit*, these items that constituted the medium. to obtain information for the assessments and analysis that regarding *teaching* at the FDyCS of the UMSNH are included in this research (see Annexes 23, 24 and 25).

6.2.2. Assessment of the Research Analysis Unit

The research represents one of the substantive functions of the Universities and their academic units, which is valid in the case of the FDyCS of the UMSNH, object of study in this work. Thus, derived from the theoretical reflection of this study, the *research variable* presented a series of dimensions that are reported below:

1. Legal framework of the investigation.
2. Research organization.
3. Research modalities.
4. Research interactions.
5. Results of the investigation.

In addition, to choose the indicators of these dimensions, 24 options were proposed, as can be seen in Table 1.4b of Chapter 1 of this study. Through the resolution of the *check list* and the practice of the discussion groups (see Annexes 12, 13 and 14), it was possible to arrive at the consideration of 12, 16 and 7 indicative elements of the 5 dimensions of the research variable, for the questionnaires of teachers, students and graduates, respectively. Thus, the correspondence scheme between the dimensions, indicators and items of the *research study variable is reported* through Annexes 8, 15 and 19 of this work.

Therefore, the definitive operationalization scheme of the *research study variable* is shown in Table A.15 of Annex 16, which contains the breakdown of the indicators of the reference variable considered in this study.

The resolution of the *check lists*, the discussion groups, the selection of indicators and the operationalization of the variables, finally, made it possible to configure the questionnaires for teachers, students and graduates. And it is interesting here to refer only to the fact that the *second 12, 16 and 7 items of the questionnaires for professors, students and graduates, respectively, in their data processing version, correspond to the research*

analysis unit, these items that constituted the medium. for obtaining information for the assessments and analysis that, regarding the research in the FDyCS of the UMSNH, are included in this work (see Annexes 23, 24 and 25).

6.2.3. Assessment of the Administration/Management Analysis Unit

As a result of the theoretical review carried out in this work, the following dimensions were identified for the *administration/management variable*:

1. Personnel administration.
2. Management of administrative and financial processes.
3. Academic-administrative management of the program.
4. Quality improvement management.
5. Institutional organization and structure.
6. Regulations for employees.
7. Regulatory guidelines for administration.

Thus, to choose the indicators of these dimensions, 26 options were proposed, as can be seen in Table 1.4b of Chapter 1 of this study. Through the resolution of the *check list* and the practice of the discussion groups (see Annexes 12, 13 and 14), it was possible to arrive at the consideration of 11, 10 and 10 indicative elements of the 26 dimensions of the administration/management variable., for the questionnaires of teachers, students and graduates, respectively. Thus, the correspondence scheme between the dimensions, indicators and items of the *administration/management study variable is reported* through Annexes 8, 15 and 19 of this work.

Therefore, the definitive operationalization scheme of the administration/management study variable is shown in Annex 17, which contains the breakdown of the indicators of the reference variable considered in this analytical exercise.

The resolution of the *check lists*, the discussion groups, the selection of indicators and the operationalization of the variables, finally, made it possible to configure the questionnaires for teachers, students and graduates. And it is interesting here to refer only to the fact that the *third* 11, 10 and 10 items of the questionnaires for professors, students and graduates, respectively, in their data processing version, correspond to the *administration/management analysis unit*, these items that constituted the means of obtaining information for the assessments and analysis that regarding teaching at the FDyCS of the UMSNH are included in this research (see Annexes 23, 24 and 25).

6.2.4. Assessment of the Extension and Dissemination Analysis Unit

extension and diffusion analysis unit, within the framework of the IES, represents

for the academic units of the universities the opportunity to dynamically project culture and guide society as a whole with university actors. In such an assessment, this unit has included the criteria that allow it to be characterized both in the general field and in the particular forms and modalities of the FDyCS of the UMSNH.

In addition, as a result of the theoretical investigation of this work, the *extension and diffusion variable* adopted the following dimensions:

1. Legal framework.
2. Organization.
3. Formats.
4. Interactions.
5. Product.
6. Relations with the context.

And to choose the indicators of these dimensions, 34 options were proposed, as can be seen in Table 1.4c of Chapter 1 of this study. Through the resolution of the *check list* and the practice of the discussion groups (see Annexes 12, 13 and 14), it was possible to arrive at the consideration of 10, 10 and 10 indicative elements of the 34 dimensions of the teaching variable, for the questionnaires of teachers, students and graduates, respectively. Thus, the correspondence scheme between the dimensions, indicators and items of the extension and diffusion study variable is reported, through Annexes 8, 15 and 19 of this work.

Therefore, the definitive operationalization scheme of the *extension and diffusion study variable* is shown in Table A.17 of Annex 18, which contains the breakdown of the indicators of the reference variable considered in this study.

The resolution of the *check lists*, the discussion groups, the selection of indicators and the operationalization of the variables, finally, made it possible to configure the questionnaires for teachers, students and graduates. And it is interesting here to refer only to the fact that the last 10, 10 and 10 items of the questionnaires for professors, students and graduates, respectively, in their data processing version, correspond to the extension and diffusion analysis unit, items *that* constituted the means of obtaining information for the evaluations and analysis that, regarding the *extension and dissemination*, in the FDyCS of the UMSNH are included in this investigation (see Annexes 23, 24 and 25).

6.3 ANALYSIS AND INTERPRETATION OF THE INFORMATION OBTAINED IN THE SECOND PHASE OF INVESTIGATION

Below is the analysis of the self-evaluation process carried out in the FDyCS of the UMSNH during the 2008-2009 school year, in order to account for the data obtained from the application of the questionnaires to teachers, students and graduates. In addition, in

order to display the information in a certain order, the divisions of criteria and subcriteria or dimensions and indicators continue to be used, as appropriate and refer to the four structured units of analysis (or variables): teaching, research, administration/management. and extension and diffusion.

6.3.1. The Questionnaires, their Application and Classification Data Earned

After the corresponding cover letter, the questionnaires for professors, students, and graduates are articulated from two essential parts, namely: the classification data and the thematic data of the respondent's opinion. It is on the first that the exposition of which one realizes immediately will have to be concentrated.

Thus, in the case of the questionnaire for teachers, thirteen items were made in order to classify the members of the teaching sector of the FDyCS of the UMSNH. In such a dynamic, then, the professors of the academic unit under study were qualitatively cataloged based on the consideration of the following criteria:

1. Sex.
2. Age.
3. Seniority at the University.
4. Contract condition.
5. Category.
6. Hiring time.
7. Level of studies completed.
8. Discipline to which the studies carried out belong.
9. Area(s) of Law in which he teaches.
10. Whether or not there is an administrative charge.
11. Whether or not research is carried out at the University.
12. Area(s) of Law in which the investigation is carried out.
13. Types of work carried out around the investigation.

After applying the 75 questionnaires for teachers in accordance with the established methodological protocols, the information obtained from considering the *classification data section* was the following:

1. 74% of the teachers surveyed were male and the remaining 26% were female.
2. 18% of the teachers considered in the consultation are between 30 and 40 years old; The age of 43% of the teachers surveyed ranges between 40 and 50; 27% are teachers between 50 and 60 years old; and the remaining 12% are teachers over 60 years of age.

3. 8% of the professors surveyed have been at UMSNH for less than 5 years; 14% have worked from 5 to 10 years; 19% have between 10 and 15 years of university work; 24% of those consulted have between 15 and 20 years of service; 22% stated that they were between 20 and 25 years old; and the remaining 13% reported that they have more than 25 years of teaching service.
4. Regarding the condition of permanent contract or temporary contract, 73% of the teachers surveyed have a permanent contract and the remaining 27% have a temporary contract.
5. Of the teachers surveyed, 11% were full professors; 21% associate professors; and the remaining 68% were teachers by subject.
6. 32% of the professors consulted are employed full-time by the University, and the remaining 68% have an hourly employment contract.
7. The educational level of the teachers consulted was as follows: 11% have a doctorate; 39% have a master's degree; 4% have a specialty; and the remaining 46% only have a bachelor's degree.
8. Regarding the discipline of the studies carried out by the surveyed teachers, the information obtained was the following: a) of the 75 surveyed, 94% have a degree in Law, and the remaining 6% have degrees in Accounting, Economics, Sciences Policies and Teaching; b) Among those who have specialties (4%), these have been in Procedural Law, Criminal Law, Electoral Law and Constitutional Law; c) Master's degrees, for 39% of the sample, are: 78% in Law, 9% in Education, 2% in Economic Sciences and the remaining 11% in Social Sciences; and, d) the doctoral degrees are in the areas of Law (88%), Sociology (2%), Education (4%), Economics (2%) and Administration (4%).
9. In addition, 26% of those surveyed direct teaching towards Civil Law; 24% to Criminal Law; 7% to Commercial Law; 16% to Constitutional Law; 8% to International Law; 10% to Economic Law; 4% to Notarial Law; and the remaining 5%, to Administrative Law.
10. 16% of the professors consulted on the day the questionnaire was applied had an administrative position within the UMSNH, and the remaining 84% did not have any position.
11. 32% of the teachers surveyed carry out research work in the academic unit of study, and the remaining 68% of teachers do not carry out these tasks.
12. Of the tenured and associate professors who carry out research (32% of the sample), 29% direct their investigative work towards Civil Law, 18% towards Criminal Law, 22% towards Constitutional Law, 12% towards International Law, 8% towards Economic Law. The remaining 11% stated that they directed it towards other areas of Law not contemplated in the options provided in the questionnaire.
13. Regarding the work formats carried out by the teachers consulted, the following information was obtained: 71% of the sample declared having made presentations;

32% declared having written books or produced digests; 68% reported having supervised theses; 32% noted their participation in research projects; and 61% stated that they had articles of their authorship.

Secondly, through the questionnaire for students, six items were articulated in order to classify the members of the student sector of the FDyCS of the UMSNH. In such a dynamic, then, the students of the academic unit under study were classified qualitatively based on the consideration of the following criteria:

1. Sex.
2. Age.
3. Time in the academic unit.
4. Grade in the academic unit.
5. Whether or not there is a representation charge.
6. If there is a representation position, what is it?

After applying the 94 student questionnaires in accordance with the established methodological protocols, the information obtained from considering the *classification data section* was as follows:

1. 54% of the students surveyed were male and the remaining 46% were female.
2. 2% of the students considered in the consultation are under 18 years of age; The age of 68% of the students surveyed ranges between 18 and 23; 17% are students between 31 and 35 years old; and the remaining 13% were students over 35 years of age.
3. 28% of the students surveyed have been at UMSNH for less than 1 year; 17% have been studying at the University for 1 to 2 years; 19% have 2 to 3 years at the University; 20% of those consulted have between 3 and 4 years of university stay; 7% stated that they were between 4 and 5 years old; and the remaining 9% reported that they have more than 5 years in the academic unit.
4. Around the degree they are studying in the Law Degree of the FDyCS of the UMSNH, 30% of the students surveyed are in their first year; 17% are in the second year; 19% go through the third grade; 29% of the students surveyed are in their fourth year; and 7% are in the fifth year.
5. 13% of the students consulted on the day the questionnaire was applied had a representation position within the UMSNH, and the remaining 87% had no position.
6. Finally, of the students consulted with representation positions, 0% were university counselors; 10 were technical advisors, 15% were student advisors; and the remaining 75% were group leaders.

Finally, in the case of the graduates, the formulated questionnaire proposed eight items in order to classify the former students of the FDyCS of the UMSNH. In such a

dynamic, then, the graduates of the academic unit under study were qualitatively classified based on the consideration of the following criteria:

1. Sex.
2. Age.
3. Graduate time.
4. Form of admission to the academic unit.
5. Length of stay in the academic unit.
6. Time elapsed to obtain the first job.
7. Professional performance sector.
8. Area of Law linked to professional performance.

After applying the 75 questionnaires for graduates in accordance with the established methodological protocols, the information obtained from considering the *classification data section* was the following:

1. 57% of the teachers surveyed were male and the remaining 43% were female.
2. 39% of the former students considered in the consultation are under 30 years of age; The age of 25% of the graduates surveyed ranges between 30 and 40; 17% are alumni between the ages of 40 and 50; 16% are alumni between 50 and 60 years old; and the remaining 3% are graduates over 60 years of age.
3. Regarding the time of graduation, 36% of the respondents are less than 1 years old; 33% of alumni are between 1 and 5 years old; 11% from 6 to 10 years old; 9% between 11 and 15 years old; 7% between 16 and 20 years old; and 4% over 20 years.
4. 93% of the former students surveyed revealed that they entered the FDyCS of the UMSNH through the presentation and approval of a selection exam; and the remaining 7% stated that they had done so after administratively closing their enrollment in the academic unit under study.
5. About the time in which they stayed in the FDyCS of the UMSNH, 71% of the respondents revealed that they had done so for an average of five years, and the remaining 29% reported having a stay of more than five years.
6. The time elapsed to join the first job was less than a year for 12% of those surveyed; between 1 and 2 years for 28%; between 3 and 4 years for 31%; and more than 4 years for the remaining percentage of respondents (29%).
7. Finally, 37% of the consulted graduates work professionally in the public sector, and the remaining 63% do so in the private sector.

6.3.2. The Questionnaires, their Application and the Thematic Information of Opinion of the Respondent: The Processing of the Study Variables

Along with the classification data, in the questionnaires for professors, students, and graduates, the consultation of a series of thematic opinion data was considered. This section is specified, precisely, to address the aforementioned thematic data of opinion of the respondents.

Table 6.1

Teacher Questionnaire* distributed by Variables and Questions designed for Field Research

Variables	Items
Teaching	1-18
Investigation	19-30
Administration/Management	31-42
Extension and Diffusion	43-51

*/ Version for application of the instrument.

Source: Exhibits 7-21.

Therefore, within the framework of the structural axis of the consultation of the selected groups (second part of the questionnaires: *Thematic data on the opinion of the respondent*), the questionnaire for teachers included 51 items, of which 18 corresponded to the teaching variable, 12 to the research variable, 11 to the administration/management variable and 10 to the extension and dissemination variable (see Table 6.1). In addition, in a period of one week, this questionnaire was applied to 75 professors of the FDyCS of the UMSNH with the expected success.

Table 6.2

Student Questionnaire* distributed by Variables and Questions designed for Field Research

Variables	Items
Teaching	1-19
Investigation	20-25
Administration/Management	26-35
Extension and Diffusion	36-45

*/ Version for application of the instrument.

Source: Exhibits 7-21.

In the case of students, the student questionnaire considered 45 items, of which 19 were linked to the teaching variable, 6 to the research variable, 10 to the administration/management variable, and 10 to the extension and dissemination variable (see Table 6.2). Likewise, in a period of one week the questionnaire could be applied to 95 active students of the FDyCS of the UMSNH with the expected results.

Table 6.3

Alumni Questionnaire* distributed by Variables and Questions designed for Field Research

Variables	Items
Teaching	1-16
Investigation	17-23
Administration/Management	24-33
Extension and Diffusion	34-43

*/ Version for application of the instrument.

Source: Exhibits 7-21.

And, following the same logic, for the alumni segment, 43 items were formulated in the graduate questionnaire, of which 16 were identified with the teaching variable, 7 with the research variable, 10 with the administration and management variable, and 10 with the variable. extension and diffusion variable (see Table 6.3). In addition, in a period of two weeks it was possible to apply and collect the questionnaire from 95 former students of the FDyCS of the UMSNH with the programmed results.

From these questionnaires and their application, it became feasible to obtain clear and precise information, with a standardized structure, which translated and operationalized the problem under investigation.

It is noteworthy that the questionnaires comply with the validity and reliability required of any information gathering instrument. They are valid as long as they seek to “capture in a significant way and to a sufficient and satisfactory degree what is the object of investigation” (Ander-Egg, 1994: 273); and they are reliable since they show “the ability to obtain the same and similar results by applying the same questions about the same facts or phenomena” (*Idem*).

In the case of these three questionnaires, which constituted the fundamental instruments in the collection of information on the different variables that are part of the investigation, the level of validity and reliability was derived by obtaining the Cronbach’s Alpha reliability statistic. Said statistic turned out to be 0.903 in the teacher questionnaire (see Annex 22); 0.880 in the student questionnaire (see Annex 23); and 0.912 in the graduate questionnaire (see Annex 24). Thus, these statistics support the validity and reliability of the questionnaires used in the field research of this study.

6.3.2.1. Processing of the Dependent Variable Educational Quality

The analysis of the Educational Quality in the Faculty of Law and Social Sciences of the UMSNH, the dependent variable of this study, was carried out based on the results obtained from the calculations made on the data matrices of the applied questionnaires. These data matrices were considered for the cases of the questionnaires of teachers, students and graduates, in their version for application of the instrument, and have been

arranged in Annexes 29, 30, 31, 32, 33 and 34 of this document.

Thus, the first results in terms of their measures of central tendency for the dependent variable have been reported in the Annexes section of this work. In the case of the teacher questionnaire, see Annex 36; in the case of the student questionnaire, see Annex 45; and in the case of the questionnaire for graduates, see Annex 54.

Likewise, the results obtained from the frequency distribution for the dependent variable were reported in the Annexes section of this thesis.

In the case of the teacher questionnaire, see Annex 37. In this case, the number of response categories is four for each of the 51 items around the dependent variable Educational Quality, considered in the teacher questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 204 (51×4), while the minimum score is 51 (51×1); and the intermediate scores are 102 (51×2) and 153 (51×3).

In consideration of the above (51, 102, 153 and 204), the frequency distribution of the dependent variable Educational Quality in the FDyCS of the UMSNH from the application of the teacher questionnaire, reports that 1.3%, 52 % and 46.7% of the responses to such questionnaires indicate that the faculty of the FDyCS of the UMNSH accept Educational Quality as a relevant factor never, sometimes and frequently, respectively (see Annex 37).

For the case of the student questionnaire, see Annex 46 of this work. In this case, the number of response categories is four for each of the 45 items around the dependent variable Educational Quality, considered in the student questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 180 (45×4), while the minimum score is 45 (45×1); and the intermediate scores are 90 (45×2) and 135 (45×3).

In consideration of the above (45, 90, 135 and 180), the frequency distribution of the independent variable Teaching in the FDyCS of the UMSNH from the application of the student questionnaire, reports that 1.1%, 54.2% and 45.8% of the responses to such questionnaires indicate that the UMNSH FDyCS student body accepts Educational Quality as a relevant factor never, sometimes and frequently, respectively (see Annex 46).

For the case of the questionnaire for graduates, see Annex 55 of this work. In this case, the number of response categories is four for each of the 43 items around the dependent variable Educational Quality, considered in the questionnaire for graduates. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 172 (43×4), while the minimum score is 43 (43×1); and the intermediate scores are 86 (43×2) and 129 (43×3).

In consideration of the above (43, 86, 129 and 172), the frequency distribution of the independent variable Teaching in the FDyCS of the UMSNH from the application of the graduate questionnaire, reports that 2.1%, 55.3% and 42.6% of the responses to such questionnaires indicate that the graduates of the FDyCS of the UMNSH accept Educational

Quality as a relevant factor never, sometimes and frequently (see Annex 55).

6.3.2.2. Processing of the Independent Variables Teaching, Research, Administration/Management and Extension and Dissemination

Having identified the main determinant factors of the quality of the educational service provided in the school program for the Law Degree of the FDyCS of the UMSNH, the main objective of this research, it is imperative to determine the influence that the independent variables Teaching, Research, Administration/Management and Extension and Diffusion, have on the dependent variable Educational Quality, one of the particular objectives of this study. Thus, for the fulfillment of this objective, the statistical analysis of the referred independent variables is useful and that has been expressed as exposed in the following spaces.

In the case of the teacher questionnaire, the results in terms of the measures of central tendency for the independent variables Teaching, Research, Administration/Management, and Extension and Dissemination, are reported through Annex 38.

In addition, in the case of the student questionnaire, the results in terms of the measures of central tendency for the independent variables Teaching, Research, Administration/Management, and Extension and Dissemination, are reported through Annex 47.

And, in the case of the questionnaire for graduates, the results in terms of the measures of central tendency for the independent variables Teaching, Research, Administration/Management, and Extension and Dissemination, are reported through Annex 56.

6.3.2.2.1. Processing of the Independent Variable Teaching

The analysis of teaching at the Faculty of Law and Social Sciences of the UMSNH, one of the independent variables of this study, was carried out based on the results obtained from the calculations made on the data matrices of the applied questionnaires. These data matrices were considered for the cases of the questionnaires for teachers, students and graduates, in their version for application of the instrument, and have been arranged in Annexes 55, 44 and 53 of this document.

Thus, in relation to the independent variable Teaching, the frequency distribution that emerged from the field research, in the case of the teacher questionnaire, is addressed through Annex 39 of this work. In this case, the number of response categories is four for each of the 18 items of the independent variable Teaching, considered in the teacher questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 72 (18×4), while the minimum score is 18 (18×1); and the intermediate scores are 36 (18×2) and 54 (18×3).

In consideration of the above (18, 36, 54 and 72), the frequency distribution of the independent variable Teaching in the FDyCS of the UMSNH from the application of the

teacher questionnaire, reports that 41.3% and 58.7% of the responses to such questionnaires indicate that the faculty of the FDyCS of the UMNSH appreciate Teaching as a variable that sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 39).

In the case of the student questionnaire, the frequency distribution for the independent teaching variable is available through Annex 48 of this thesis. In this case, the number of response categories is four for each of the 19 items of the independent variable teaching, considered in the student questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 76 (19×4), while the minimum score is 19 (19×1); and the intermediate scores are 38 (19×2) and 57 (19×3).

In consideration of the above (19, 38, 57 and 76), the frequency distribution of the independent variable Teaching in the FDyCS of the UMSNH from the application of the student questionnaire, reports that 35.1% and 64.9% of the responses to such questionnaires indicate that the students of the FDyCS of the UMNSH appreciate teaching as a variable that sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 48).

And, in the case of the graduate questionnaire, the frequency distribution for the independent variable Teaching is concentrated in the information displayed in Annex 57 of this document. In this case, the number of response categories is four for each of the 16 items of the independent variable Teaching, considered in the graduate questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 64 (16×4), while the minimum score is 16 (16×1); and the intermediate scores are 32 (16×2) and 48 (16×3).

In consideration of the above (16, 32, 48 and 64), the frequency distribution of the independent variable Teaching in the FDyCS of the UMSNH from the application of the questionnaire of graduates, reports that 34% and 66% of the responses to such questionnaires indicate that the graduates of the FDyCS of the UMNSH appreciate teaching as a variable that sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 57).

6.3.2.2.2. Processing of the Independent Research Variable

The analysis of the Research in the Faculty of Law and Social Sciences of the UMSNH, one of the independent variables of this study, was carried out based on the results obtained from the calculations made on the data matrices of the applied questionnaires. These data matrices were considered for the cases of the questionnaires for teachers, students and graduates, in their version for application of the instrument, and have been arranged in Annexes 35, 44 and 53 of this document.

Thus, in relation to the independent variable Research, the frequency distribution

that emerged from the field study, in the case of the teacher questionnaire, is addressed through Annex 40 of this document. In this case, the number of response categories is four for each of the 12 items of the independent variable Investigation, considered in the teacher questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 48 (12×4), while the minimum score is 12 (12×1); and the intermediate scores are 24 (12×2) and 36 (12×3).

In consideration of the above (12, 24, 36 and 48), the frequency distribution of the independent variable Research in the FDyCS of the UMSNH from the application of the teacher questionnaire, reports that 6.7%, 64% and 29.3% of the answers to such questionnaires point out that the faculty of the FDyCS of the UMNSH appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 40).

In the case of the student questionnaire, the frequency distribution for the independent variable Investigation was the one expressed in the information available in Annex 49 of this work. In this case, the number of response categories is four for each of the 6 items of the independent variable Investigation, considered in the student questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 24 (6×4), while the minimum score is 6 (6×1); and the intermediate scores are 12 (62) and 18 (6×3).

In consideration of the above (6, 12, 18 and 24), the frequency distribution of the independent variable Research in the FDyCS of the UMSNH from the application of the student questionnaire, reports that 20.2%, 47.9% and 31.9% of the answers to such questionnaires indicate that the students of the FDyCS of the UMNSH appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 49).

And, in the case of the graduate questionnaire, the frequency distribution for the independent variable Research is the one provided in Annex 58 of this thesis. In this case, the number of response categories is four for each of the 7 items of the independent research variable, considered in the graduate questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 28 (7×4), while the minimum score is 7 (7×1); and the intermediate scores are 14 (7×2) and 21 (7×3).

In consideration of the above (7, 14, 21 and 28), the distribution of frequencies of the independent variable research in the FDyCS of the UMSNH from the application of the questionnaire of graduates, reports that 7.4%, 56.4% and 36.2% of the answers to such questionnaires point out that the graduates of the FDyCS of the UMNSH appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of educational quality (see Annex 58).

6.3.2.2.3. Processing of the Independent Variable Administration/ Management

The analysis of the Administration/Management at the Faculty of Law and Social Sciences of the UMSNH, one of the independent variables of this study, was carried out based on the results obtained from the calculations made on the data matrices of the applied questionnaires. These data matrices were considered for the cases of the questionnaires for teachers, students and graduates, in their version for application of the instrument, and have been arranged in Annexes 35, 44 and 53 of this document.

Thus, in relation to the independent variable Administration/Management, the frequency distribution that emerged from the field study, in the case of the teacher questionnaire, was the one displayed in Annex 41 of this investigation. In this case, the number of response categories is four for each of the 12 items of the independent variable administration/management, considered in the teacher questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 48 (12×4), while the minimum score is 12 (12×1); and the intermediate scores are 24 (12×2) and 36 (12×3).

Considering the above (12, 24, 36 and 48), the frequency distribution of the independent variable Administration/Management, in the FDyCS of the UMSNH from the application of the teacher questionnaire, reports that 2.7%, 38.6% and 58.7% of the answers to such questionnaires point out that the faculty of the FDyCS of the UMNSH appreciate Administration/Management as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 41).

In the case of the student questionnaire, the frequency distribution for the independent variable Administration/Management is included in Annex 50 of this thesis. In this case, the number of response categories is four for each of the 10 items of the independent variable Administration /Management, considered in the student questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 40 (10×4), while the minimum score is 10 (10×1); and the intermediate scores are 20 (10×2) and 30 (10×3).

In consideration of the above (10, 20, 30 and 40), the frequency distribution of the independent variable Administration/Management in the FDyCS of the UMSNH from the application of the student questionnaire, reports that 4.3%, the 52.1% and 43.6% of the answers to such questionnaires point out that the students of the FDyCS of the UMNSH appreciate the Administration/Management as a variable that never, frequently and sometimes, respectively, affects the concept of Educational Quality (see Annex 50).

And, in the case of the graduate questionnaire, the frequency distribution for the independent variable Administration/Management was the one presented in Annex 59 of this document. In this case, the number of response categories is four for each of the 10 items of the independent variable Administration/Management, considered in the graduate questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 40 (10×4), while the minimum score is 10 (10×1); and

the intermediate scores are 20 (10×2) and 30 (10×3).

In consideration of the above (10, 20, 30 and 40), the distribution of frequencies of the independent variable Administration/Management in the FDyCS of the UMSNH from the application of the questionnaire of graduates, reports that 7.4%, the 47.9% and 44.7% of the answers to such questionnaires point out that the graduates of the FDyCS of the UMSNH appreciate the Administration/Management as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 59).

6.3.2.2.4. Processing of the Independent Variable Extension and Diffusion

The analysis of the extension and diffusion in the Faculty of Law and Social Sciences of the UMSNH, one of the independent variables of this study, was carried out based on the results obtained from the calculations made on the data matrices of the applied questionnaires. These data matrices were considered for the cases of the questionnaires for teachers, students and graduates, in their version for application of the instrument, and have been arranged in Annexes 35, 44 and 53 of this document.

Thus, in relation to the independent variable Extension and Diffusion, the frequency distribution that emerged from the field research, in the case of the teacher questionnaire, is the one available in Annex 42 of this research. In this case, the number of response categories is four for each of the 9 items of the independent variable Extension and Diffusion, considered in the teacher questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 36 (9×4), while the minimum score is 9 (9×1); and the intermediate scores are 18 (19×2) and 27 (9×3).

In consideration of the above (9,18, 27 and 36), the frequency distribution of the independent variable Extension and Diffusion in the FDyCS of the UMSNH from the application of the teacher questionnaire, reports that 34.7%, the 62.3% and 2.7% of the responses to such questionnaires point out that the faculty of the FDyCS of the UMSNH appreciate Extension and Diffusion as a variable that affects sometimes, frequently and always, respectively, in the concept of Quality Educational (see Annex 42).

In the case of the student questionnaire, the frequency distribution for the independent variable Extension and Diffusion is displayed in the content of Annex 51 of this work. In this case, the number of response categories is four for each of the 10 items of the Extension and Diffusion independent variable, considered in the student questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 40 (10×4), while the minimum score is 10 (10×1); and the intermediate scores are 20 (10×2) and 30 (10×3).

In consideration of the above (10, 20, 30 and 40), the frequency distribution of the independent variable Extension and Diffusion in the FDyCS of the UMSNH from the application of the student questionnaire, reports that 4.3%, the 35.1% and 60.6% of the

responses to such questionnaires indicate that the students of the FDyCS of the UMNSH appreciate Extension and Diffusion as a variable that affects sometimes, frequently and always, respectively, in the concept of educational quality (see Annex 51).

And, in the case of the questionnaire for graduates, the frequency distribution for the independent variable Extension and Diffusion was the one reported in Annex 60 of this document. In this case, the number of response categories is four for each of the 10 items of the independent variable Extension and Diffusion, considered in the graduate questionnaire. Thus, 4 is the maximum value and 1 the minimum value for each *item*. Therefore, the maximum total score is 40 (10×4), while the minimum score is 10 (10×1); and the intermediate scores are 20 (10×2) and 30 (10×3).

In consideration of the above (10, 20, 30 and 40), the distribution of frequencies of the independent variable Extension and Diffusion in the FDyCS of the UMSNH from the application of the questionnaire of graduates, reports that 8.5%, 51.1 % and 40.4% of the answers to such questionnaires point out that the graduates of the FDyCS of the UMNSH appreciate Extension and Diffusion as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 60).

6.4 SYNTHESIS OF ANALYSIS AND INTERPRETATION OF INFORMATION OBTAINED IN THE SECOND PHASE OF INVESTIGATION: CORRELATION AND DETERMINATION

Continuing with the processing and statistical interpretation of the variables, it becomes imperative to introduce the statistical concepts of correlation and determination in this study. Thus, the Pearson correlation coefficient (r) is a statistical test that is used to analyze the relationship between two variables measured at a level by intervals or ratio. This coefficient is calculated from the punctuations registered in a sample in two variables. The scores obtained from one variable are linked to the scores obtained from another variable, in the same subjects (Hernández, Fernández & Bautista, 2007).

Furthermore, the Pearson correlation coefficient is likely to vary from (-1.00) to (+1.00), where:

- (-1.00) → Perfect negative correlation.
Thus, “the larger X, the smaller Y” proportionally. That is, every time X increases by one unit, Y always decreases by a constant amount. And this also applies to the following situation: “A smaller X, a larger Y”.
- (-0.90) → Very strong negative correlation between the variables.
- (-0.75) → Considerable negative correlation between the variables.
- (-0.50) → Mean negative correlation between the variables.
- (-0.10) → Weak negative correlation between the variables.
- (0.00) → Inexistence of any correlation between the variables.
- (+0.10) → Weak positive correlation between the variables.
- (+0.50) → Average positive correlation between the variables.
- (+0.75) → Considerable positive correlation between the variables.
- (+0.90) → Very strong correlation between the variables.
- (+1.00) → Perfect correlation between the variables.
Thus, “the greater X, the greater Y” or “the lesser X, the lesser Y” proportionally. Every time X increases, Y always increases by a constant amount.

The sign accounts for the direction of correlation (positive or negative), and the numerical value accounts for the magnitude of the correlation concept.

According to the main means to process a correlation coefficient (statistical analysis programs), if the significance (s) is less than the value 0.05, it is affirmed that the coefficient is significant at the level of 0.05, that is, 95% confidence. in which the correlation is true and 5% probability of error. If the significance is less than 0.01, the coefficient is significant at the 0.01 level, that is, 99% confidence that the correlation is true and 1% probability of error.

When the Pearson correlation coefficient is squared, the coefficient of determination (r^2) can be obtained. The result will account for the variance of common factors. That is, the percentage change of a variable due to the change of another variable and vice versa.

First of all, in the case of applying the teacher questionnaire, the data obtained by formulating the Pearson correlation coefficient (r) in this study were those shown in Table 6.4.

Table 6.4
Pearson’s Correlation Coefficients from the Teacher Questionnaire Application

<i>Variables</i>	<i>Correlation</i>
Teaching	0.890
Investigation	0.773
Administration/ Management	0.790
Extension and Diffusion	0.835
Educational quality	0.822

Source: Information obtained from the field research carried out, and provided in Annex 43.

Likewise, considering the same instrument and actors, the data derived from the formulation of the coefficient of determination (r^2) in the ongoing investigation, were those available through Table 6.5.

Table 6.5
Determination Coefficients from the Teacher Questionnaire Application

<i>Variables</i>	<i>Determination</i>
Teaching	0.792
Investigation	0.597
Administration/ Management	0.624
Extension and Diffusion	0.697
Educational quality	0.677

Source: Information obtained from the field research carried out, and provided in Annex 43.

Tables 6.4 and 6.5 give an account of the concepts of correlation and determination from the application of the measurement instrument to the segment of professors of the FDyCS of the UMSNH. And the statistical reading of such coefficients is, first, that both Teaching, Research, Administration/Management and Extension and Diffusion are positively and directly related to Educational Quality, since the Pearson correlation coefficients of these variables were located in considerable positive correlation between the variables and strong correlation between the variables, highlighting the link between Educational Quality and Teaching; and second, that all the independent variables positively determine educational quality, that is, the dependent variable. This is shown by the levels of such coefficients: average positive determination, considerable positive and strong among the variables, highlighting the determination exerted by the Teaching on Educational Quality.

Secondly, in the case of the application of the student questionnaire, the data obtained when formulating the Pearson correlation coefficient (r) in the present study, were those that are shown in Table 6.6.

Table 6.6
Pearson's Correlation Coefficients from the Student Questionnaire Application

<i>Variables</i>	<i>Correlation</i>
Teaching	0.857
Investigation	0.580
Administration/ Management	0.808
Extension and Diffusion	0.739
Educational quality	0.746

Source: Information obtained from the field research carried out, and provided in Annex 52.

Likewise, considering the same instrument and actors, the data derived from the formulation of the coefficient of determination (r^2) in the ongoing investigation, were those available through Table 6.7.

Table 6.7
Determination Coefficients from the Teacher Questionnaire Application

<i>Variables</i>	<i>Determination</i>
Teaching	0.734
Investigation	0.336
Administration/ Management	0.653
Extension and Diffusion	0.546
Educational quality	0.556

Source: Information obtained from the field research carried out, and provided in Annex 52.

Tables 6.6 and 6.7 give an account of the concepts of correlation and determination from the application of the measurement instrument to the student segment of the FDyCS of the UMSNH. And the statistical reading of such coefficients is, first, that both Teaching, Research, Administration/Management and Extension and Diffusion are positively and directly related to Educational Quality, since the Pearson correlation coefficients of these variables were located in considerable positive correlation between the variables and strong correlation between them, highlighting the link between Educational Quality and Teaching, as well as Educational Quality and Administration/Management; and second, that all the independent variables positively determine Educational Quality, that is, the dependent variable. This is shown by the levels of such coefficients: average positive determination and considerable positive between the variables, highlighting the determination exerted by teaching on Educational Quality.

Thirdly, in the case of the application of the questionnaire for graduates, the data obtained by formulating the Pearson correlation coefficient (r) in the present study, were those that are shown in Table 6.8.

Table 6.8
Pearson's Correlation Coefficients from the Application of the Alumni Questionnaire

<i>Variables</i>	<i>Correlation</i>
Teaching	0.872
Investigation	0.815
Administration/ Management	0.863
Extension and Diffusion	0.805
Educational quality	0.838

Source: Information obtained from the field research carried out, and provided in Annex 61.

Likewise, considering the same instrument and actors, the data derived from the formulation of the coefficient of determination (r^2) in the ongoing investigation, were those available through Table 6.9.

Table 6.9
Determination Coefficients from the Application of the Alumni Questionnaire

<i>Variables</i>	<i>Determination</i>
Teaching	0.760
Investigation	0.664
Administration/ Management	0.745
Extension and Diffusion	0.648
Educational quality	0.703

Source: Information obtained from the field research carried out, and provided in Annex 61.

Tables 6.8 and 6.9 give an account of the concepts of correlation and determination from the application of the measurement instrument to the segment of graduates of the FDyCS of the UMSNH. And the statistical reading of such coefficients is, first, that both Teaching, Research, Administration/Management and Extension and Diffusion are positively and directly related to educational quality, since the Pearson correlation coefficients of these variables were located in considerable positive correlation between the variables and strong correlation between them, highlighting the link between Educational Quality and Teaching, and Educational Quality and Administration/Management; and second, that all the independent variables positively determine Educational Quality, that is, the dependent variable. This is shown by the levels of such coefficients: average positive determination and considerable positive between the variables, highlighting the determination exerted by Teaching on Educational Quality.

FOURTH PART.
RESULTS AND PROPOSAL

RESULTS OF INVESTIGATION

The internal evaluation or self-evaluation that has been achieved in the FDyCS of the UMSNH, has made it possible to arrive at the description of its current situation; but not only that, since it also represented a participatory exercise of effective reflection of its members.

In this chapter section the results of this research are presented; that is to say, it realizes the conditions in which the educational quality of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo is found. For this, an analysis of the variables considered in the study, endogenous and independent, is carried out; and fundamentally, the levels of correlation and determination between them are identified.

Thus, the results obtained in the field research are made known, and which have been derived from the self-evaluation of teaching, research, administration/management and extension and dissemination. Then, these results are integrated and interpreted through a self-assessment report. Afterwards, an exercise is carried out to contrast the results obtained through the consideration of the participation of the key informants in the investigation, which were defined in the strategy of this investigation. In addition, an expansion of the quantitative study and interpretation of the research results is articulated, considering the set of dependent and independent variables analyzed. Next, the quantitative examination of the study hypotheses is formulated ; a synthesis of the integral results of the study is shown; and, finally, a section is established for the discussion of the latter.

From this process it was possible to use an evaluative approach of the strengths and weaknesses of the FDyCS of the UMSNH regarding the educational quality of its services and, above all, identify elements to propose the design of a quality improvement plan. for the academic unit examined. In these spaces, the detection of the strengths and weaknesses self-defined by the members of the Faculty (based on the completed questionnaires) will be sought, so that from them the main aspects that must guide the proposals for improvement are derived.

The main features that characterize the self-assessment report of the FDyCS of the UMSNH are the following: a) the self-assessment report of the FDyCS of the UMSNH reported here is global, in the sense that it covers the four dimensions object of analysis (teaching, research, administration/management and extension and dissemination), emphasizing the feasible relationships between them; b) the report is reflective and critical, since it represented a participatory exercise of deep reflection among all the members of the academic unit under review; c) the self-assessment was comprehensive, to the extent that it was based on the participation and competition of all the members of the Faculty, as well as on the combination of quantitative data and qualitative opinions; d) the report was agreed with the members of the academic unit, therefore, both for the selection of the analysis criteria, and for the subsequent verification before designing the improvement plan;

and e) the self-evaluation was useful and committed, since it is intended to serve as a basis for decision-making that can be executed by the members of the FDyCS.

7.1 FIELD INVESTIGATION RESULTS

In this section, the results obtained from the field research will be presented, through which it was possible to derive quantitative aspects of the variables that influence the Educational Quality of the object of study. Consequently, partial reports of the self-assessment instrumented in the FDyCS of the UMSNH will be presented immediately, in consideration of highlighting the results obtained by the study variables.

7.1.1. Results obtained from the Self-assessment of the Independent Variable Teaching

In the context of the Second Phase of Research, and as a result of the application of the measurement instrument (the questionnaire) to professors, students and graduates of the Faculty of Law and Social Sciences of the Universidad Michoacana, it can be derived here a partial self-assessment report around the dependent variable Teaching.

In the first place, from the consideration of the answers corresponding to the 18 items on Teaching, and formulated in the questionnaire for teachers (see Annex 62), the most outstanding aspects obtained were:

- | | |
|------------|---|
| Item No. 1 | 46% and 25.3% of the professors revealed that in the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo (FDyCS of the UMSNH), frequently and always, respectively, the ordinary admission of students is carried out based on a selection exam as a reference academic criterion. |
| Item No. 2 | 46.7% and 49.3% of the professors pointed out that in the FDyCS of the UMSNH, frequently and always, respectively, oral presentation constitutes a didactic strategy used in the Law Degree academic program. |
| Item No. 3 | 28% and 57% of the faculty indicated that frequently and always, respectively, in the FDyCS of the UMSNH, teamwork is a didactic dynamic instrumented in the reference academic program. |
| Item No. 4 | 30.7% and 34.7% of the academic staff reported that frequently and always, respectively, in the FDyCS of the UMSNH, the debate or discussion of ideas constitutes a didactic strategy used in the classes of the academic program in question. |
| Item No. 5 | 78.7% of the academics revealed that always, in the UMSNH FDyCS, in the learning evaluation process, the teacher carries out a scheduled evaluation with the students of the groups in which he teaches a subject. |
| Item No. 6 | 72% of the professors stated that in the UMSNH FDyCS, in the learning evaluation process, the professor always performs a written evaluation. |
| Item No. 7 | 29.3% and 44% of the teaching staff stated that frequently and always, respectively, in the FDyCS of the UMSNH, in the Law Degree curriculum there is an adequate combination of theoretical and practical content. |

- Item No. 8 40% and 37.3% of the teaching staff affirmed that frequently and always, respectively, in the FDyCS of the UM SNH there is fluid communication between professors and students.
- Item No. 9 22.7% and 53.3% of the professors asserted that frequently and always, respectively, in the FDyCS of the UMSNH the number of students per class is adequate for teaching.
- Item No. 10 60% and 29.3% of the faculty pointed out that frequently and always, respectively, in the FDyCS of the UMSNH, the faculty participates in events such as academic conferences on their area of knowledge.
- Item No. 11 52% and 25.3% of the teaching staff indicated that frequently and always, respectively, in the FDyCS of the UMSNH the conditions of the classrooms are adequate for teaching.
- Item No. 12 30.7% and 30.7% of the professors assured that frequently and always, respectively, in the FDyCS of the UMSNH the library equipment responds to the needs of the user.
- Item No. 13 24% and 36% of the teaching staff indicated that frequently and always, respectively, the FDyCS of the UMSNH has clearly defined its mission.
- Item No. 14 41.3% and 44% of the academic sector pointed out that frequently and always, respectively, in the FDyCS of the UMSNH, academic freedom is respected, which promotes an adequate work environment for work.
- Item No. 15 57.3% of the professors assured that in the FDyCS of the UMSNH, the professors always participate in a periodic review of the study plan of the Law Degree.
- Item No. 16 61.3% and 20% of the academics affirmed that frequently and always, respectively, in the FDyCS of the UMSNH the only institutional way of admission of the teaching staff is the open competitive examination.
- Item No. 17 50.7% of the segment of academics of the FDyCS of the UMSNH opined that professors are never stimulated for their promotion due to their academic productivity based on the corresponding regulations.
- Item No. 18 40% and 40% of the teaching staff estimated that frequently and always, respectively, in the graduation process of the students of the FDyCS of the UMSNH, teachers participate based on their professional profiles.

Secondly, from the consideration of the answers corresponding to the 19 Items on Teaching, and formulated in the questionnaire for students (see Annex 63), the most outstanding aspects obtained were:

- Item No. 1 41.5% and 33% of the students revealed that frequently and always, respectively, the Law Degree of the FDyCS of the UMSNH has institutional academic tutoring programs for student development.
- Item No. 2 40.4% and 55.3% of the students indicated that frequently and always, respectively, the master class is a didactic strategy used in the FDyCS of the UMSNH.
- Item No. 3 36.2% and 50% of the student segment pointed out that frequently and always, respectively, teamwork constitutes a didactic dynamic implemented in the UMSNH Law Degree academic program.
- Item No. 4 30.9% and 36.2% of the student community asserted that the debate is used frequently and always, respectively, as a didactic dynamic instrumented in the FDyCS of the UMSNH.
- Item No. 5 81.9% of the students revealed that in the learning evaluation process, the UMSNH FDyCS teacher performs permanent evaluation.
- Item No. 6 74.5% of the students reported that in the UMSNH FDyCS, professors consider bibliographic research papers as part of learning assessment.

- Item No. 7 29.8% and 48.9% of the students reported that frequently and always, respectively, in the study plan of the Law Degree of the FDyCS of the UMSNH there is an interesting offer of elective subjects for the student.
- Item No. 8 41.5% and 36.2% of the students indicated that frequently and always, respectively, in the FDyCs of the UMSNH, the faculty is available to guide the student when necessary.
- Item No. 9 56.4% of the student community recognized that in the UMSNH FDyCS, class schedules are adequate to the needs of said community.
- Item No. 10 58.5% and 30.9% of the students, frequently and always, respectively, accept that in the UMSNH FDyCS the professors are constantly updating their knowledge.
- Item No. 11 52.1% and 22.3% of the student community of the FDyCS of the UMSNH, revealed that frequently and always, respectively, the teaching staff is capable of adequately transmitting their knowledge to the students.
- Item No. 12 34% and 31.9% of the students of the FDyCS of the UMSNH, assured that frequently and always, respectively, the conditions of the classrooms were adequate for the studies.
- Item No. 13 26.6% and 38.3% of the students of the FDyCS of the UMSNH assured that frequently and always, respectively, the equipment of the computer center responded to the needs of the student.
- Item No. 14 42.6% and 41.5% of the students of the FDyCS of the UMSNH affirmed that frequently and always, respectively, the academic unit made its mission known effectively among its students.
- Item No. 15 33% and 56.4% of the students indicated that frequently and always, respectively, the FDyCS promotes student participation.
- Item No. 16 61.7% and 18.1% of the students reported that frequently and always, respectively, with the knowledge and skills imparted by the professors in the FDyCS of the UMSNH, the interest of the students in the subjects is motivated.
- Item No. 17 51.1% and 20.2% of the student body revealed that never and frequently, respectively, the students participate as a consulted audience in the Opposition Contests, mechanisms by which the faculty makes their institutional entry to the FDyCS of the UMSNH.
- Item No. 18 40.4% and 43.6% of the students assured that frequently and always, respectively, students with high academic performance are stimulated with academic scholarships in the FDyCS of the UMSNH.
- Item No. 19 69.1% of the student body pointed out that the FDyCS always has institutional regulations for undergraduate students to be incorporated into research coordinated by the faculty.

Third, from the consideration of the answers corresponding to the 16 items on Teaching, and formulated in the questionnaire for graduates (see Annex 64), the most outstanding aspects obtained were:

- Item No. 1 50% and 20.2% of the graduates reported that frequently and always, respectively, according to their experience, the FDyCS of the UMSNH has actions aimed at increasing terminal efficiency.
- Item No. 2 51.1% and 43.6% of the graduates suggested that frequently and always, respectively, during their stay at the FDyCS, the didactic strategy of teamwork was applied in the classes.
- Item No. 3 61.7% of the graduates thought that in the FDyCS the partial evaluations were always adequate to know what the students have learned.

- Item No. 4 29.8% and 39.4% of the graduates, frequently and always, respectively, on learning assessment, considered it appropriate to incorporate research work in said assessment for students.
- Item No. 5 74.5% of the graduates considered that the contents of the subjects of the FDyCS curriculum were always adapted to the present reality of the national and regional context.
- Item No. 6 71.3% of the graduates estimated that the FDyCS teachers were always concerned about student learning.
- Item No. 7 According to their experience, 26.6% and 41.5% of the graduates considered that the admission policy to the FDyCS of the UMSNH was frequently and always pertinent, respectively.
- Item No. 8 According to their experience, 41.5% and 42.6% of the graduates considered that the UMSNH FDyCS graduation policy was adequate frequently and always, respectively.
- Item No. 9 66.0% of the graduates, according to their experience, affirmed that in the Law Degree of the FDyCS of the UMSNH, the teaching staff always had a sufficient level of theoretical knowledge.
- Item No. 10 According to their experience, 61.7% of the graduates of the FDyCS of the UMSNH pointed out that the teaching staff always had an acceptable level of knowledge.
- Item No. 11 According to their experience, 54.3% and 30.9% of the graduates indicated that the physical facilities of the FDyCS were comfortable and welcoming, frequently and always, respectively.
- Item No. 12 36.2% and 27.7% of the graduates, according to their experience, revealed that the performance of directors, professors and students of the FDyCS of the UMSNH, frequently and always, respectively, was framed in a climate of mutual respect.
- Item No. 13 21.3% and 31.9% of the graduates, according to their appreciation, pointed out that the education received at the FDyCS, sometimes and always, respectively, allowed them to develop a personality with a critical attitude.
- Item No. 14 45.7% and 41.5% of the graduates, based on their experience, indicated that the knowledge and skills acquired in their training at the FDyCS of the UMSNH, frequently and always, respectively, have application in their current professional performance.
- Item No. 15 According to their experience, 36.2% and 56.4% of the graduates reported that the regulations referring to the admission of academic staff were frequently and always applied, respectively, with the necessary rigor in the FDyCS.
- Item No. 16 68.1% of the graduates indicated that during their stay at the FDyCS they frequently had access to information about scholarships offered to students with high academic performance.

These results noted and broken down around the self-assessment obtained from the independent variable Teaching, among the segments of professors, students and graduates, will be taken up and integrated into the *Self-assessment Report*, which will be presented later.

7.1.2. Results obtained from the Self-assessment of the Variable Independent Research

In the context of the Second Phase of Research, and as a result of the application of the measurement instrument (the questionnaire) to professors, students and graduates of the Faculty of Law and Social Sciences of the Michoacana University, it will be derived here a partial self-assessment report around the dependent variable Investigation.

In the first place, from the consideration of the answers corresponding to the 12 items on Research, and formulated in the questionnaire for teachers (see Annex 62), the most outstanding aspects obtained were:

- Item No. 19 64% of the professors revealed that, in accordance with its legal framework, the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo (FDyCS of the UMSNH) has always had institutional regulations for the development and promotion Of the investigation.
- Item No. 20 46.7% and 18.7% of the UMSNH FDyCS professors assured that frequently and always, respectively, there is at least one annual call to participate in institutional research projects.
- Item No. 21 46.7% of the faculty indicated that in the FDyCS of the UMSNH there are never institutional policies and procedures for the evaluation of research projects; and only 26.7% and 8.0% consented to their existence.
- Item No. 22 45.3% and 36% of the academic staff reported that frequently and always, respectively, in the FDyCS of the UMSNH, the faculty involved in the research task is organized into academic bodies.
- Item No. 23 25.3% and 40% of the academics reported that frequently and always, respectively, in the FDyCS of the UMNSH the research proposals of the academics correspond to their research lines.
- Item No. 24 32% and 30.7% of the professors stated that in the FDyCS of the UMSNH, the academic support received for the research work by the faculty, sometimes and frequently, respectively, is supervised by the corresponding university authorities.
- Item No. 25 54.7% of the teaching staff affirmed that in the FDyCS, the teaching staff immersed in research frequently develop research projects evaluated and supported only by the UMSNH.
- Item No. 26 28.0% and 12% of the faculty stated that frequently and always, respectively, the UMSNH FDyCS faculty immersed in research relates the latter to teaching through the production of a work manual for their subject.
- Item No. 27 41.3% and 16% of the professors affirmed that frequently and always, respectively, the researchers of the FDyCS of the UMSNH involve the students in the research incorporating them in their projects as research assistants.
- Item No. 28 33.3% and 14.7% of the teaching staff pointed out that frequently and always, respectively, in the FDyCS of the UMSNH, professor-researchers publish books to make their research contributions known.
- Item No. 29 56% of the teaching staff indicated that in the UMSNH FDyCS the teaching staff immersed in research always publish their scientific articles as a result of their investigative work.
- Item No. 30 42.7% and 41.3% of the professors assured that frequently and always, respectively, the results of the research carried out in the FDyCS of the UMSNH are translated into papers presented at academic events by the professor-researchers.

Secondly, from the consideration of the answers corresponding to the 6 items on the Research variable, and formulated in the questionnaire for students (see Annex 63), the most outstanding aspects obtained were:

- Item No. 20 43.6% and 17% of the students revealed that the FDyCS of the UMSNH frequently and always, respectively, has institutional regulations so that undergraduate students are incorporated into research coordinated by the faculty.
- Item No. 21 44.7% of the students pointed out that the UMSNH FDyCS never promotes scholarships for research assistants, which are accessed through institutional mechanisms.
- Item No. 22 40.4% and 39.4% of the student segment pointed out that frequently and always, respectively, in the FDyCS of the UMSNH the student involved in the research task is organized in research projects led by the professor-researchers.
- Item No. 23 38.3% and 10.6% of the student community asserted that at the FDyCS the student research assistants frequently and always, respectively, are incorporated into research sponsored by the UMSNH.
- Item No. 24 33% and 29.8% of the students revealed that through the research projects coordinated by the professors, FDyCS students sometimes and frequently, respectively, have the opportunity to write their theses.
- Item No. 25 53.2% of the student body reported that the results of the research in the FDyCS are frequently translated into books by teachers, from which students expand their knowledge.

Thirdly, from the consideration of the answers corresponding to the 7 Items on the Research variable, and formulated in the questionnaire for graduates (see Annex 64), the most outstanding aspects obtained were:

- Item No. 17 44.7% of the graduates reported that the FDyCS of the UMSNH never had a specific regulation for the development and promotion of research.
- Item No. 18 46.8% and 34% of the graduates suggested that during their stay at the FDyCS of the UMSNH they frequently and always had access to calls to participate as students in institutional research projects coordinated by the faculty.
- Item No. 19 57.4% of the graduates believed that during their stay at the FDyCS of the UMSNH, the faculty always participated actively in institutional research projects.
- Item No. 20 45.7% of the graduates indicated that during their stay in the FDyCS of the UMSNH, funds were frequently applied for the development of the research, which included professors and students, who were accessed through institutional mechanisms and subject to control.
- Item No. 21 46.8% of the graduates considered that the research projects coordinated by the professors and assisted by the students were never supported by the UMSNH.
- Item No. 22 42.6% and 37.2% of the graduates estimated that the research activities carried out by the assistant professors-researchers, frequently and always, respectively, allowed the students to carry out their undergraduate thesis.
- Item No. 23 47.9% of the graduates, according to their experience, considered that the results of the research generated in the FDyCS of the UMSNH frequently translated into chapters of thematic books that accounted for the institutional level of scientific and technological innovation.

These results, noted and broken down around the self-assessment obtained from the independent variable Research among the segments of professors, students, and graduates, will be taken up and integrated into the *Self-assessment Report*, which will be presented later.

7.1.3. Results obtained from the Self-assessment of the Variable Independent Administration/Management

Within the framework of the Second Research Phase, and as a result of the application of the measurement instrument (the questionnaire) to the professors, students and graduates of the Faculty of Law and Social Sciences of the Universidad Michoacana, it will be derived here a partial self-assessment report around the dependent variable of this Administration/Management study.

In the first place, based on the consideration of the answers corresponding to the 12 items on Administration/Management, and formulated in the questionnaire for teachers (see Annex 62), the most outstanding aspects obtained were:

- Item No. 31 42.7% and 36% of the professors revealed that the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo (FDyCS of the UMSNH) frequently and always, respectively, offers support programs for training and permanent updating. of his faculty.
- Item No. 32 66.7% of the UMSNH FDyCS professors assured that they are always provided with material for the proper development of their work.
- Item No. 33 65.3% of the faculty indicated that in the UMSNH FDyCS the current profile of the personnel in charge of teaching and research tasks frequently corresponds to the ideal profile proposed.
- Item No. 34 36% and 18.7% of the academic staff reported that in the FDyCS of the UMSNH, frequently and always, respectively, there is a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.
- Item No. 35 64% of the academics reported that in the FDyCS of the UMSNH there are frequently procedures and mechanisms for the evaluation of the performance of administrative personnel.
- Item No. 36 37.3% and 40% of the professors stated that the UMSNH FDyCS frequently and always, respectively, has the collegiate bodies defined within its organizational structure and duly installed for academic and administrative decision-making.
- Item No. 37 54.7% of the teaching staff affirmed that in the FDyCS of the UMSNH the teachers are frequently committed to the institutional mission.
- Item No. 38 50.7% and 32% of the teaching staff affirmed that in the FDyCS of the UMSNH frequently and always, respectively, the academics are periodically evaluated in their professional performance.
- Item No. 39 38.7% and 25.3% of the professors affirmed that in the FDyCS of the UMSNH frequently and always, respectively, there is coherence in the organizational structure of the university unit.
- Item No. 40 44% and 34.7% of the faculty pointed out that in the case of the FDyCS of the UMSNH frequently and always, respectively, a specific regime is applied for the hiring of non-academic personnel.
- Item No. 41 52% of the faculty indicated that the FDyCS of the UMSNH frequently complies with the regulations for the management of institutional finances.
- Item No. 42 48% and 10.7% of the professors assured that in the FDyCS of the UMSNH frequently and always, respectively, special funds are applied for the development of the extension function.

Secondly, from the consideration of the answers corresponding to the 6 items on the

Administration/Management variable, and formulated in the questionnaire for students (see Annex 63), the most outstanding aspects obtained were:

- Item No. 26 30.96%, 28.7% and 27.7% of the students revealed that in the FDyCS of the UMSNH never, frequently and always, respectively, teachers are provided with material for the adequate development of their work in classes.
- Item No. 27 36.2% and 13.8% of the students indicated that in the FDyCS of the UMSNH frequently and always, respectively, there is a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.
- Item No. 28 30.9% and 17% of the student segment pointed out that frequently and always, respectively, in the FDyCS of the UMSNH, procedures are applied for the evaluation of the performance of administrative personnel.
- Item No. 29 60.6% of the student community asserted that the FDyCS has collegiate bodies defined within its organizational structure, which are duly installed for academic and administrative decision-making.
- Item No. 30 36.2% and 47.9% of the students revealed that in the FDyCS of the UMSNH the students frequently and always, respectively, are committed to the institutional mission.
- Item No. 31 45.7% and 30.9% of the students reported that in the FDyCS of the UMSNH frequently and always, respectively, the students periodically evaluate the performance of their teachers.

Thirdly, from the consideration of the answers corresponding to the 10 Items on the Administration/Management variable, and formulated in the questionnaire for graduates (see Annex 64), the most outstanding aspects obtained were:

- Item No. 24 39.4% and 27.7% of the graduates reported that in the FDyCS of the UMSNH, teachers are sometimes and frequently, respectively, provided with material for the proper development of their work in the classroom.
- Item No. 25 59.6% of the graduates suggested that in the UMSNH FDyCS there is frequently a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.
- Item No. 26 31.9% and 16% of the graduates believed that during their stay in the FDyCS of the UMSNH frequently and always, respectively, procedures were applied to evaluate the performance of administrative personnel.
- Item No. 27 46.8% and 20.2% of the graduates indicated that during their stay in the FDyCS of the UMSNH frequently and always, respectively, the Faculty had the proper installation of the collegiate bodies defined within the organizational structure of the academic unit.
- Item No. 28 37.2% and 14.9% of the graduates estimated that in the FDyCS of the UMSNH frequently and always, respectively, the teaching staff and the students committed to the institutional mission.
- Item No. 29 51.1% of the graduates estimated that in the FDyCS of the UMSNH the role of the teacher and the managers was always evaluated in each school cycle.
- Item No. 30 43.6% and 38.3% of the graduates, according to their experience, considered that frequently and always, respectively, there was a correspondence between the organizational structure and the nature of the university unit.

- Item No. 31 38.3% and 38.3% of the graduates suggested that during their stay at the FDyCS of the UMSNH frequently and always, respectively, a regime was applied for the hiring of non-academic personnel.
- Item No. 32 62.8% of the graduates believed that during their stay in the FDyCS of the UMSNH there was always a regulatory framework for authorities and the exercise of their functions.
- Item No. 33 60.6% of the graduates indicated that during their stay in the FDyCS of the UMSNH, the regulations for the management of institutional finances were frequently complied with.

These results, noted and broken down around the self-assessment obtained from the Administration/Management independent variable, among the segments of professors, students, and graduates, will be taken up and integrated into the *Self-Assessment Report*, which will be presented later.

7.1.4. Results obtained from the Self-assessment of the Variable Independent Extension and Diffusion

In the context of the Second Phase of Research, and as a result of the application of the measurement instrument (the questionnaire) to professors, students and graduates of the Faculty of Law and Social Sciences of the Universidad Michoacana, it can be derived here a partial self-assessment report on the dependent variable Extension and Diffusion of this study.

In the first place, from the consideration of the answers corresponding to the 9 items on the Extension and Diffusion variable, and formulated in the questionnaire for teachers (see Annex 62), the most outstanding aspects obtained were:

- Item No. 43 54.7% and 17.3% of the professors revealed that, according to its legal framework, the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo (FDyCS of the UMSNH), frequently and always, respectively, has with institutional policies for the development of the diffusion of culture.
- Item No. 44 48% and 30.7% of the professors pointed out that in the FDyCS of the UMSNH, frequently and always, respectively, professors have access to research stays with other national and/or foreign educational institutions.
- Item No. 45 46.7% and 10.7% of the faculty indicated that frequently and always, respectively, UMSNH FDyCS professors participate in the institution's social activities.
- Item No. 46 46.7% and 25.3% of the academic staff reported that frequently and always, respectively, the professors of the FDyCS of the UMSNH link teaching to knowledge of the needs of the population.
- Item No. 47 46.7% and 49.3% of the professors revealed that, in their opinion, the Faculty of Law and Social Sciences of the Michoacana Universidad de San Nicolás de Hidalgo (FDyCS of the UMSNH), frequently and always, respectively, constitutes a factor of Social Mobility.
- Item No. 48 57.3% of the professors pointed out that in the FDyCS of the UMSNH the professors always contribute to the formation of opinion leaders who fight for the progress of the social change of the population.

- Item No. 49 30.7% and 34.7% of the faculty indicated that frequently and always, respectively, the UMSNH FDyCS faculty develop social service activities of legal advice in the marginal areas of the State's municipalities.
- Item No. 50 78.7% of the academic staff reported that through teaching, the UMSNH FDyCS is always linked to the government sector, which it trains through specialization and updating courses.
- Item No. 51 72% of the professors revealed that through research activities, the FDyCS of the UMSNH is always part of an international network of universities that share teaching mobility.

Secondly, based on the consideration of the answers corresponding to the 10 items on the Extension and Diffusion variable, and formulated in the questionnaire for students (see Annex 63), the most outstanding aspects obtained were:

- Item No. 36 36.2% and 44.7% of the students revealed that, according to its legal framework, the FDyCS of the UMSNH frequently and always, respectively, has institutional policies for the promotion and development of the dissemination of culture.
- Item No. 37 54.4% and 24.5% of the students indicated that in the FDyCS of the UMSNH frequently and always, respectively, special funds are promoted and applied for the development of extension.
- Item No. 38 47.9% and 37.2% of the student segment pointed out that frequently and always, respectively, UMSNH FDyCS students participate in the institution's sports activities.
- Item No. 39 38.3% and 28.7% of the student community asserted that frequently and always, respectively, UMSNH FDyCS students have access to academic exchange stays with other national and/or foreign educational institutions.
- Item No. 40 42.6% and 38.3% of the interviewees revealed that the students of the FDyCS of the UMSNH frequently and always, respectively, link their academic activities with the knowledge of the social needs of the population.
- Item No. 41 46.8% and 37.2% of the student body reported that the FDyCS of the UMSNH frequently and always, respectively, constitutes a factor of social mobility.
- Item No. 42 51.1% and 20.2% of the students reported that frequently and always, respectively, the students of the FDyCS of the UMSNH contribute with their point of view to the solution of problems that stop social progress.
- Item No. 43 42.6% and 18.1% of the student body indicated that frequently and always, respectively, in the FDyCs of the UMSNH the students develop free legal advice activities in the marginal areas of the State municipalities.
- Item No. 44 44.7% and 36.2% of the student community recognized that through social service, frequently and always, respectively, the students of the FDyCS of the UMSNH are linked to the government sector, in which a large part is inserted through work later.
- Item No. 45 43.6% and 13.8% of the students questioned affirm that through research activities, frequently and always, respectively, the FDyCS of the UMSNH is part of an international network of universities that share student mobility.

Third, from the consideration of the responses corresponding to the 10 Items on the Extension and Diffusion variable, and formulated in the questionnaire for graduates (see Annex 64), the most outstanding aspects obtained were:

- Item No. 34 39.4% and 19.1% of the graduates reported that, according to their experience, in compliance with the university legal framework, the FDyCS of the UMSNH frequently and always had, respectively, institutional policies for the development of the extension and dissemination of culture.
- Item No. 35 62.8% of the graduates suggested that frequently, during their stay in the FDyCS of the UMSNH, the professors and students received financial support for extension activities.
- Item No. 36 35.1% and 40.4% of the graduates believed that during their time at the FDyCS of the UMSNH, the professors had access to research stays with other national and foreign educational institutions.
- Item No. 37 51.1% and 20.2% of the graduates state that during their stay in the FDyCS of the UMSNH, frequently and always, respectively, the students had access to academic exchanges with other national and foreign higher education institutions.
- Item No. 38 During their stay at the UMSNH FDyCS, 48.9% and 31.9% of the graduates frequently and always considered, respectively, that the students participated in community social service activities.
- Item No. 39 40.4% and 18.1% of the graduates estimated that, based on their experience, the students of the FDyCS of the UMSNH frequently and always, respectively, linked research to knowledge of the social needs of the population.
- Item No. 40 According to their experience, 42.6% and 29.8% of the graduates considered that frequently and always, respectively, the UMSNH FDyCS faculty contributed with their points of view to the debate on the solution of the problems that stop progress. of the society.
- Item No. 41 According to their experience, 54.3% and 23.4% of the graduates considered that frequently and always, respectively, UMSNH students developed free counseling activities in the marginal areas of State municipalities.
- Item No. 42 According to their experience, 51.1% and 17% of the graduates pointed out that the FDyCS of the UMSNH was found frequently and always, respectively, linked to the government sector through teaching and social service.
- Item No. 43 44.7% and 3.2% of the graduates of the FDyCS of the UMSNH, according to their experience, indicated that frequently and always, respectively, through their research activities the Faculty is part of an international network of universities that they share student mobility.

These results, noted and broken down around the self-assessment obtained from the independent variable extension and diffusion, among the segments of professors, students, and graduates, will be taken up and integrated into the Self-assessment *Report*, which will be presented later.

7.2 INTEGRATION AND INTERPRETATION OF RESULTS: SELF-ASSESSMENT REPORT

In the preceding spaces, the results obtained from the self-assessment of the independent variables of this study (Teaching, Research, Administration/Management and Extension and Dissemination) have been exposed. This within the framework of the application of the measurement instrument (the questionnaire) to teachers, students and graduates of the Faculty of Law and Social Sciences of the Universidad Michoacana, in order to have an assessment of the concept of Quality. Education and its determinants in said academic unit.

Immediately, the most outstanding aspects resulting from the analysis will be integrated and commented, specifying the findings on the development of Teaching, Research, Administration/Management and Extension and Dissemination, in the unit under study, showing in summary the strengths and weaknesses detected. for the FDyCS of the UMSNH in each concept.

Firstly, regarding the Teaching variable, the strengths identified considering the opinions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. Ordinary admission of students from a selection exam as a reference academic criterion.
2. Knowledge and preparation by the teaching staff on group dynamics, such as teamwork and debate or discussion of ideas.
3. The teacher carries out a scheduled evaluation with the students.
4. In the Law Degree curriculum there is an adequate combination of theoretical and practical content.
5. Assertive communication and agreements between teachers and students.
6. The number of students per class is adequate.
7. The teaching staff encourages their updating and training.
8. The library equipment responds to the basic needs of the user.
9. Clear definition of the mission.
10. Academic freedom is respected.
11. Faculty participation in curriculum reviews is considered.
12. The institutional entry route for teachers is the competitive examination.
13. Teachers participate in the graduation process for students based on their professional profiles.
14. Willingness of teachers to guide students through tutorial action.
15. The teacher evaluates the student's learning permanently.
16. Class schedules appropriate to the needs of the community of the academic unit.
17. Promotion of student participation.
18. Students with high academic performance are stimulated with academic scholarships.
19. There are institutional regulations for undergraduate students to be included in research coordinated by the faculty.
20. Teachers with a sufficient level of knowledge.

21. Climate of mutual respect between managers, teachers and students.
22. Students' positive appreciation of their critical personality and ability to make decisions.
23. Students satisfied with their performance.
24. The knowledge and skills acquired by the student during their training have application in their professional performance.

And, in contrast, the weaknesses detected in the Teaching variable, in the estimation of the perceptions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. Use of traditional didactic strategies, such as oral presentation.
2. The learning assessment process considers conservative strategies.
3. Professors are not encouraged to be promoted due to their academic productivity based on the corresponding regulations.
4. The conditions of the classrooms are not accepted by consensus as adequate for the teaching-learning process.
5. There is a lack of teaching effort to adequately transmit knowledge to students.
6. The equipment of the computer center does not respond fully to the needs of the student.
7. Students' interest in subjects is not properly motivated by the knowledge and skills imparted by their teachers.
8. Insufficient participation of students as a consulted audience in institutional opposition contests.
9. There are not enough actions aimed at increasing terminal efficiency.
10. Extra-sectarian activities are not carried out.
11. High levels of student desertion.

Secondly, regarding the Research variable, the strengths identified considering the opinions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. There are institutional regulations for the development and promotion of research.
2. Every year there is a call to participate in institutional research projects.
3. The faculty involved in the research task is organized into academic bodies.
4. The research proposals of the academics correspond to their research lines.
5. The academic support received by the researchers is supervised by the corresponding university authorities.
6. The results of the research work of the teaching staff are translated into scientific

articles and presentations at academic events.

7. The students consider that there is a consistent book publication strategy as a result of the research of the teachers, through which the students expand their knowledge.

8. The teaching staff actively participate in institutional research projects.

9. Professors, students and graduates have a favorable attitude towards the research task.

And, in contrast, the weaknesses detected in the Research variable, in the estimation of the perceptions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. Lack of institutional policies and procedures for the evaluation of research projects.
2. Development of research projects evaluated and supported solely by the UMSNH.
3. Insufficient relationship between research and teaching.
4. Researchers insufficiently involve students in research by incorporating them into their projects as research assistants.
5. The professors consider that there is a weak strategy of publishing books by professors and researchers to make their research contributions known.
6. Insufficient scholarships for research assistants.
7. According to the students, there are minimal opportunities for them to write their thesis through their participation in research projects coordinated by the professors.
8. Human and material resources assigned to research are low.

Third, regarding the Administration/Management variable, the strengths identified considering the opinions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. There are support programs for the training and permanent updating of its teaching staff.
2. Material is available for the proper development of the teaching-learning process.
3. Adequate profile of the personnel in charge of teaching and research tasks.
4. Correspondence between institutional financial management and the satisfaction of the needs of the academic unit.
5. There are collegiate bodies in the organizational structure and duly installed for academic and administrative decision-making.
6. There is a sufficient level of commitment from teachers and students with the institutional mission.
7. Academics are periodically evaluated on their professional performance.

8. There is coherence in the organizational structure of the university unit.
9. A specific regime is applied for the contracting of non-academic personnel.
10. The regulations for the management of institutional finances are complied with.
11. There is a regulatory framework for authorities and the exercise of their functions.

And, in contrast, the weaknesses detected in the Administration/Management variable, in the estimation of the perceptions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. Insufficient correspondence between institutional financial management and the satisfaction of the needs of the academic unit.
2. There are no permanent procedures and mechanisms for evaluating the performance of administrative staff.
3. The special funds allocated to the development of the extension function are insufficient.
4. There are no training plans for administrative staff.
5. Teachers and students do not participate in process improvement.
6. No quality policies, structures or mechanisms are identified in which the functions related to quality management reside.

Finally, regarding the Extension and Diffusion variable, the strengths identified considering the opinions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. There are institutional policies for the development of the dissemination of culture.
2. Teachers and students have access to research stays with other national and/or foreign educational institutions.
3. Teachers and students participate in the social activities of the institution.
4. Teachers and students link teaching to knowledge of the needs of the population.
5. The academic unit constitutes a factor of social mobility.
6. Teachers contribute to the formation of opinion leaders who fight for the progress of the social change of the population.
7. The faculty and students carry out activities of social service of legal advice in the marginal areas of the municipalities of the State.
8. The Faculty is always linked to the government sector, which it trains through specialization and updating courses.
9. The Faculty is part of an international network of universities that share teaching and student mobility.
10. The students contribute with their point of view to the solution of problems that

stop social progress.

11. The students are linked, through the social service, with the government sector, in which a large part is inserted to work later.

And, in contrast, the weaknesses detected in the Extension and Diffusion variable, in the estimation of the perceptions of professors, students and graduates of the FDyCS of the UMSNH, are the following:

1. Insufficient special funds are promoted and applied for the development of extension and dissemination.
2. Extension and dissemination activities are carried out in isolation from teaching, research and administration/management.
3. There is no extension and dissemination program by the academic unit.

The strengths and weaknesses detected from the analysis of the results of the opinions expressed by the professors, students and graduates of the FDyCS of the UMSNH around the variables Teaching, Research, Administration/Management and Extension and Dissemination, bring a qualitative appreciation of the state of Educational Quality in said academic unit and, in addition, they provide useful elements for the formulation of some possible strategies that will represent the fundamental bases for the preparation of the Improvement Plan that will be prepared and exposed in the next chapter of this work.

7.3 THE PARTICIPATION OF KEY INFORMANTS IN THE INVESTIGATION: CONTRASTING THE RESULTS

Having pointed out the findings on the development of Teaching, Research, Administration/management and Extension and Dissemination in the FDyCS of the UMSNH, based on the presentation of the strengths and weaknesses detected for each concept in the unit of analysis, The results of this study were presented in the form of a self-assessment report to a sample of informant subjects, who are referred to in this research as "key informants". This group, in accordance with what is established in the methodological agenda of this work, had the objective of carrying out the verification of the results obtained, and was formed intentionally in attention to the effective possibilities of localization and location, both for the delivery as for the collection of information, by 10 people deliberately distributed as follows:

- Three teachers.
- Five students.
- An authority.
- A member of the administrative staff.

To carry out the consultation, the self-assessment report was provided to each of

the key informants, who had a reasonable time (one month) to review and analyze the information in order to issue their considerations.

Once the time interval was completed, the information was collected among the members of the group of key informants. 90% (9 of the 10) of the key informants consulted made known their agreement with the self-assessment report submitted, highlighting their acceptance regarding the presentation of the series of strengths and weaknesses regarding the UMSNH FDyCS.

Thus, among the observations and comments provided by the key informants, it is possible to highlight the suggestion that, in the Improvement Plan, distinguish those activities whose responsibility is the exclusive responsibility of the members of the FDyCS of the UMSNH and those that are conditioned to the intervention of a higher hierarchical unit (university authorities).

Likewise, other aspects suggested by the key informants and which we wished to highlight here was the dissemination of the Improvement Plan to the entire community of the FDyCS of the UMSNH.

It is worth mentioning that it could not be achieved that 100% of the key informants consulted were in favor of the self-assessment report because one of the members of said group omitted to carry out the suggested analysis. The person who did not provide the required information apologized for his omission, arguing that he had difficulties in carrying out the requested review of the self-assessment report due to daily occupations.

It must be considered, however, that the number of key informants who responded to the consultation represented an important participation of the key informants that guaranteed a significant, adequate and sufficient participation of the members of the FDyCS in terms of the legitimacy of the diagnosis formulated and the consequent design of the Improvement Plan for the academic unit under study.

7.4 ANALYSIS AND INTERPRETATION OF RESEARCH RESULTS

7.4.1 Educational Quality

In accordance with the instrumented research protocol, the educational quality of the UMSNH FDyCS was estimated considering the variables under study, which includes the three instrumented questionnaires (for professors, students, and graduates) and its 51, 45, and 43 items (see Annexes 23, 24 and 25), as well as all the respondents (75 teachers, 94 students and 94 graduates), resulting in the average of 151,440, 132,883 and 125,734 units that located on the scale show the coincident opinion of teachers, students and graduates that the Educational Quality in the FDyCS of the UMSNH is *medium high* (see Annexes 36, 45 and 54).

Similarly, in the cases of the questionnaires for teachers, students and graduates, the mode was 142, 124 and 117 units, respectively, meaning that they were the opinions that were repeated the most times and that correspond to an Educational Quality in the FDyCS of the UMSNH *average high*, in the coincident opinion of professors, students and graduates (see Annexes 36, 45 and 54). Meanwhile, the range in the teacher questionnaire fell to 97 points, with a minimum value of 97 points and a maximum value of 194 points, which shows that 1.3%, 52% and 46.7% of the responses of such questionnaire pointed out that the faculty of the FDyCS of the UMNSH perceive the Educational Quality *as low, regular low and regular high*, respectively (see Annex 36). The range in the student questionnaire was 90 points, with a minimum value of 80 points and a maximum value of 170 points, which shows that 1.1%, 54.2% and 45.8% of the responses to such questionnaire reveal that the student body of the FDyCS of the UMNSH perceives the Educational Quality *as low, regular low and regular high*, respectively (see Annex 45). And the range in the questionnaire for graduates was 84 points, with a minimum value of 78 points and a maximum value of 162 points, which shows that 2.1%, 55.3% and 42.6% of the responses to said questionnaire point to that the graduates of the FDyCS of the UMNSH perceive the Educational Quality *as low, regular low and regular high* (see Annex 54).

The concept of standard deviation for the questionnaires for professors, students, and graduates was 18.7928, 15.9838, and 17.9792 units, respectively, therefore, given the range of each segment, they are considered acceptable amounts (see Annexes 36, 45, and 54).

The results found for each of the independent variables, as well as for the dependent variable, show the direct relationship that occurs between them. In this case, Teaching, Research, Administration/Management and Extension and Diffusion are the direct determinants of the regular levels (low and high) of Educational Quality in the FDyCS of the UMSNH. And therefore, Pearson correlations (r) of 0.8220, 0.7460 and 0.8387, considering the questionnaires of teachers, students and graduates, respectively (see Annexes 43, 52 and 61). Determination coefficients (r^2) of 0.6775, 0.5565 and 0.7035 are also reported, in the estimation of the questionnaires of professors, students and graduates, respectively, and which indicate that 67.57%, 55.65% and 70.35% of the Quality The educational level of the FDyCS of the UMSNH is determined by the independent variables studied (see Annexes 43, 52 and 61).

7.4.2. The Teaching

From the instrumented research protocol, the teaching of the FDyCS of the UMSNH was estimated considering the three instrumented questionnaires (of professors, students and graduates) and their 18 (of 51), 19 (of 45) and 16 (of 43) thematic items (see Annexes 23, 24 and 25), as well as all the respondents (75 teachers, 94 students and 94 graduates),

resulting in the average of 55,827, 60,021 and 50,745 units that located on the scale show the coincident opinion of teachers, students and graduates (see Annexes 38, 47 and 56) that the Educational Quality in the FDyCS of the UMSNH is *medium high* (see Annex 65).

Likewise, in the cases of the questionnaires for professors, students, and graduates, the mode was 52, 55, and 47 units, respectively, meaning that they were the opinions that were repeated the most times and that correspond to a Teaching in the FDyCS of the UMSNH. *average high*, in the coincident opinion of teachers, students and graduates (see Annexes 38, 47 and 56). Meanwhile, the range in the teacher questionnaire fell to 29 points, with a minimum value of 39 points and a maximum value of 68 points, which shows that 41.3% and 58.7% of the responses to said questionnaire indicated that the The faculty of the FDyCS of the UMNSH appreciate Teaching as a variable that sometimes and frequently affects, respectively, the concept of educational quality (see Annex 39). The range in the student questionnaire was 32 points, with a minimum value of 42 points and a maximum value of 74 points, which shows that 35.1% and 64.9% of the responses to this questionnaire indicate that the students of the FDyCS of the UMNSH appreciate Teaching as a variable that affects sometimes and frequently, respectively, in the concept of Educational Quality (see Annex 48). And the range in the questionnaire for graduates was 25 points, with a minimum value of 37 points and a maximum value of 62 points, which shows that 34% and 66% of the responses to this questionnaire indicate that graduates of the FDyCS of the UMNSH appreciate Teaching as a variable that affects sometimes and frequently, respectively, in the concept of Educational Quality (see Annex 57).

The concept of standard deviation for the questionnaires for professors, students, and graduates was 7.0392, 6.9622, and 6.9017 units, respectively, therefore, given the range of each segment, they are considered acceptable amounts (see Annexes 38, 47, and 56).

The results found for the independent variable under analysis, as well as for the dependent variable, show the direct relationship that occurs between them. In this case, Teaching is a direct determinant of the regular levels (low and high) of educational quality in the FDyCS of the UMSNH. And therefore, Pearson correlations (r) of 0.890, 0.857 and 0.872, considering the questionnaires of teachers, students and graduates, respectively (see Annexes 43, 52 and 61). Determination coefficients (r^2) of 0.792, 0.7340 and 0.760 are also reported, in the estimation of the questionnaires of professors, students and graduates, respectively, and that indicate that 79.20%, 73.40% and 76.00% of the Quality Education of the FDyCS of the UMSNH is determined by the independent variable Teaching (see Annexes 43, 52 and 601).

7.4.3. The Investigation

According to the instrumented research protocol, the UMSNH FDyCS Research

variable was estimated considering the three instrumented questionnaires (from professors, students and graduates) and their 12 (of 51), 6 (of 45) and 7 (of 43) questionnaires. thematic items (see Annexes 23, 24 and 25), as well as all the respondents (75 teachers, 94 students and 94 graduates), resulting in the average of 32,587, 15,00 and 19,223 units that located on the scale show the coincident opinion of teachers, students and graduates (see Annexes 38, 47 and 56) that the Educational Quality in the FDyCS of the UMSNH is *medium high, medium low and medium high*, respectively (see Annex 65).

Likewise, in the cases of the questionnaires for professors, students, and graduates, the mode was 30, 15, and 17 units, respectively, meaning that they were the opinions that were repeated the most times and that correspond to a Research in the FDyCS of the UMSNH. *average high*, in the coincident opinion of teachers, students and graduates (see Annexes 38, 47 and 56). Meanwhile, the range in the teacher questionnaire fell to 29 points, with a minimum value of 15 points and a maximum value of 44 points, which shows that 6.7%, 64% and 29.3% of the responses of such questionnaire point out that the faculty of the FDyCS of the UMNSH appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 40). The range in the student questionnaire was 16 points, with a minimum value of 6 points and a maximum value of 22 points, which shows that 20.2%, 47.9% and 31.9% of the responses to said questionnaire indicate that UMNSH FDyCS students appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 49). And the range in the graduate questionnaire was 29 points, with a minimum value of 15 points and a maximum value of 44 points, which shows that 7.4%, 56.4% and 36.2% of the responses of said questionnaire point to that the graduates of the FDyCS of the UMNSH appreciate Research as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 58).

The concept of standard deviation for the questionnaires for professors, students, and graduates was 6.0874, 3.9322, and 3.9080 units, respectively, so given the range of each segment, they are considered acceptable amounts (see Annexes 38, 47, and 56).

The results found for the independent variable under analysis, as well as for the dependent variable, show the direct relationship that occurs between them. In this case, Research is a direct determinant of the regular levels (low and high) of Educational Quality in the FDyCS of the UMSNH. And therefore, Pearson correlations (r) of 0.7730, 0.580 and 0.815, considering the questionnaires of teachers, students and graduates, respectively (see Annexes 42, 51 and 60). Determination coefficients (r^2) of 0.5970, 0.3360 and 0.664 are also reported, in the estimation of the questionnaires of professors, students and graduates, respectively, and which indicate that 59.70%, 33.60% and 66.40% of the Quality Education of the FDyCS of the UMSNH is determined by the independent variable Investigation (see Annexes 43, 52 and 610).

7.4.4. Administration/Management

In accordance with the instrumented research protocol, the Administration/Management variable of the UMSNH FDyCS was estimated considering the three instrumented questionnaires (of professors, students and graduates) and their 12 (of 51), 10 (of 45) and 10 (of 43) thematic items (see Annexes 23, 24 and 25), as well as all the respondents (75 professors, 94 students and 94 graduates), resulting in an average of 35,347, 28,564 and 28,426 units that, located on the scale, show the coincident opinion of professors, students and graduates (see Annexes 38, 47 and 56) that the Educational Quality in the FDyCS of the UMSNH is *medium high* (see Annex 65).

Likewise, in the cases of the questionnaires for professors, students, and graduates, the mode was 37, 31, and 27 units, respectively, meaning that they were the opinions that were repeated the most times and that correspond to an Administration/Management variable in the FDyCS. of the UMSNH *average high*, in the coincident opinion of professors, students and graduates (see Annexes 38, 47 and 56). Meanwhile, the range in the teacher questionnaire fell to 33 points, with a minimum value of 13 points and a maximum value of 46 points, which shows that 2.7%, 38.6% and 58.7% of the responses of such questionnaire indicate that the faculty of the FDyCS of the UMNSH appreciate the Administration/Management as a variable that never, sometimes and frequently, respectively, affects the concept of Educational Quality (see Annex 41). The range in the student questionnaire was 26 points, with a minimum value of 13 points and a maximum value of 39 points, which shows that 4.3%, 52.1% and 43.6% of the responses to said questionnaire indicate that the students of the FDyCS of the UMNSH appreciate the administration/management as a variable that affects never, frequently and sometimes, respectively, in the concept of Educational Quality (see Annex 50). And the range in the graduate questionnaire was 25 points, with a minimum value of 13 points and a maximum value of 38 points, which shows that 7.4%, 47.9% and 44.7% of the responses of said questionnaire point to that the graduates of the FDyCS of the UMNSH appreciate the Administration/Management as a variable that affects never, sometimes and frequently, respectively, in the concept of Educational Quality (see Annex 59).

The concept of standard deviation for the questionnaires for professors, students, and graduates was 5.5568, 4.2491, and 4.9503 units, respectively, therefore, given the range of each segment, they are considered acceptable amounts (see Annexes 38, 47, and 56).

The results found for the independent variable under analysis, as well as for the dependent variable, show the direct relationship that occurs between them. In this case, the Administration/Management is a direct determinant of the regular levels (low and high) of Educational Quality in the FDyCS of the UMSNH. And therefore, Pearson correlations (r) of 0.790, 0.808 and 863, considering the questionnaires of teachers, students and graduates,

respectively (see Annexes 43, 52 and 61). Determination coefficients (r^2) of 0.624, 0.653 and 0.745 are also reported, in the estimation of the questionnaires of professors, students and graduates, respectively, and that indicate that 62.40%, 65.30% and 74.50% of the Quality Education of the FDyCS of the UMSNH is determined by the independent variable Administration/Management (see Annexes 43, 52 and 61).

7.4.5. Extension and Diffusion

Based on what is established in the instrumented research protocol, the Extension and Diffusion variable of the UMSNH FDyCS was estimated considering the three instrumented questionnaires (of professors, students and graduates) and their 9 (of 51), 10 (of 45) and 10 (of 43) thematic items (see Annexes 23, 24 and 25), as well as all the respondents (75 professors, 94 students and 94 graduates), resulting in an average of 27.6, 29.298 and 27.340 units located on the scale they show the coincident opinion of professors, students and graduates that the educational quality in the FDyCS of the UMSNH is *medium high* (see Annexes 38, 47 and 56).

Likewise, in the cases of the questionnaires for professors, students, and graduates, the mode was 30, 31, and 31 units, respectively, meaning that they were the opinions that were repeated the most times and that correspond to a variable extension and diffusion in the FDyCS. of the UMSNH average high, in the coincident opinion of professors, students and graduates (see Annexes 38, 47 and 56). Meanwhile, the range in the teacher questionnaire fell to 17 points, with a minimum value of 19 points and a maximum value of 36 points, which shows that 34.7%, 62.3% and 2.7% of the responses of such questionnaire point out that the faculty of the FDyCS of the UMSNH appreciate Extension and Diffusion as a variable that affects sometimes, frequently and always, respectively, in the concept of Educational Quality (see Annex 42). The range in the student questionnaire was 29 points, with a minimum value of 10 points and a maximum value of 39 points, which shows that 4.3%, 35.1%, and 60.6% of the responses to said questionnaire indicate that the students of the FDyCS of the UMSNH appreciate Extension and Diffusion as a variable that affects sometimes, frequently and always, respectively, in the concept of educational quality (see Annex 51). And the range in the graduate questionnaire was 29 points, with a minimum value of 10 points and a maximum value of 39 points, which shows that 8.5%, 51.1% and 40.4% of the responses to such questionnaires indicate that UMSNH FDyCS graduates appreciate Extension and Diffusion as a variable that never, sometimes and frequently affects, respectively, the concept of Educational Quality (see Annex 60).

The concept of standard deviation for the questionnaires for professors, students, and graduates was 4.1039, 5.8251, and 5.5968 units, respectively, therefore, given the range of each segment, they are considered acceptable amounts (see Annexes 38, 47, and 56).

The results found for the independent variable under analysis, as well as for the dependent variable, show the direct relationship that occurs between them. In this case, the Extension and Diffusion is a direct determinant of the regular levels (low and high) of educational quality in the FDyCS of the UMSNH. Consequently, there are Pearson (r) correlations of 0.835, 0.739 and 0.805, considering the questionnaires of professors, students and graduates, respectively (see Annexes 43, 52 and 61). Determination coefficients (r^2) of 0.697, 0.546 and 0.648 are also reported, in the estimation of the questionnaires of professors, students and graduates, respectively, and which indicate that 69.70%, 54.60% and 64.80% of the quality The educational level of the FDyCS of the UMSNH is determined by the independent variable Extension and Diffusion (see Annexes 43, 52 and 61).

7.4.6. Dependent and Independent Variables: Contrast of Results

In terms of the objectives of this study -to distinguish the main determining factors of the quality of the educational service provided in the school program of Law Degree of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo, and to determine the functional relationship between the dependent and independent variables of the study- it becomes necessary to carry out a contrasting exercise of the results of the evaluation of the independent variables with those of the dependent variable in the case of the FDyCS of the UMSNH, our study unit.

The results obtained both for the independent variables and for Educational Quality, account for the direct relationship that occurs between these variables. That is, the regular levels (low and high) of the independent variables correspond to a regular Educational Quality in the FDyCS of the UMSNH, confirming the hypothesis of the present investigation, according to which Teaching, Scientific Research, Administration/ Management and Extension and Diffusion are the factors that determine to a greater extent the quality of the educational service provided in the university career of Bachelor of Law of the Faculty of Law and Social Sciences (academic unit) of the Michoacana Universidad de San Nicolás de Hidalgo (Institution of Public Higher Education).

And both variables, independent and dependent, also presented a positive and acceptable Pearson correlation, close in all cases to 0.8220, 0.7460 and 0.8387 (considering the questionnaires applied to professors, students and graduates); as well as a concept of positive and acceptable determination, close in all cases to 0.6775, 0.5565 and 0.7035 (in the estimation of the questionnaires applied to teachers, students and graduates).

7.5 QUANTITATIVE TEST OF THE STUDY HYPOTHESIS

The results obtained for the hypothesis of the present investigation, according to which teaching, scientific research, administration/management and extension and diffusion are the factors that determine to a greater extent the quality of the educational service provided in the Bachelor's degree in Law from the Faculty of Law and Social Sciences

(academic unit) of the Michoacana Universidad de San Nicolás de Hidalgo (Public Higher Education Institution), show that there is a Pearson correlation concept equal to 0.8220, 0.7460 and 0.8387, the concept that derives from the consideration of the correlation coefficients obtained from the application of the instruments for measuring the opinions of teachers, students and graduates. And these levels of correlation explain a high level of link between Educational Quality and the independent variables.

Likewise, the concept of determination between the independent and dependent variables is derived from the consideration of the partial determination coefficients obtained from the application of the instruments for measuring the opinions of teachers, students, and graduates. These levels of determination were located at 0.6775, 0.5565 and 0.7035, which means that the educational quality of the FDyCS of the UMSNH is explained in 67.75%, 55.65% and 70.35% by teaching, research, administration/management and extension and diffusion.

7.6 SYNTHESIS OF RESEARCH RESULTS

The results of the quantitative analysis of the present investigation that have been exposed in the previous sections are likely to be synthesized, for which a complex of ten tables with schematic information will be configured.

The first table (see Table 7.1) contains the averages reached by each of the variables in the questionnaires that were applied to the 75 UMSNH FDyCS professors who agreed to answer them. Also included is the qualification of educational quality according to the Likert-type scale that was used for this purpose, where a high regular educational quality stands out, registered by the determinant factors considered (teaching, research, administration/management and extension and diffusion). And with regard to the final result, in consideration of the appreciations of the teaching sector, it is declared that the FDyCS of the UMSNH, on average, has a high level of regular educational quality.

Table 7.1

Classification of Educational Quality in relation to its Determining Factors in the Teacher Questionnaire

Determining factors	Maximum possible score on scale	Score recorded on the scale	%	Rating assigned on the Likert-type scale for the dependent variable
Teaching	72	55,827	77.5375	<i>Regular high educational quality</i>
Investigation	48	32,587	67.8895	<i>Regular high educational quality</i>
Administration or Management	48	35,347	73.6395	<i>Regular high educational quality</i>
Extension and Diffusion	36	27,680	76.8888	<i>Regular high educational quality</i>
General average	204	151,440	74.2352	<i>Regular high educational quality</i>

Source: Information obtained from the field research carried out.

Likewise, the second table (see Table 7.2) reports the averages obtained for each of the variables in the questionnaires that were applied to the 94 students of the FDyCS of the UMSNH who agreed to answer them. In addition, the qualification of educational quality is included according to the Likert-type scale that was used for this purpose, where a regular high educational quality stands out, determined by the factors of teaching, administration/management and extension and dissemination; and it also realizes a low regular educational quality determined by the research as a factor considered.

Table 7.2

Classification of Educational Quality in relation to its Determining Factors in the Student Questionnaire

Determining factors	Maximum possible score on scale	Score recorded on the scale	%	Rating assigned on the Likert-type scale for the dependent variable
Teaching	76	60,021	78,975	<i>Regular high</i> educational quality
Investigation	24	15,000	62.5000	<i>Regular low</i> educational quality
Administration or Management	40	28,564	71,410	<i>Regular high</i> educational quality
Extension and Diffusion	40	29,298	73,245	<i>Regular high</i> educational quality
General average	180	132,883	73,823	<i>Regular high</i> educational quality

Source: Information obtained from the field research carried out.

With regard to the final result, in the estimation of the evaluations of the student body, it is declared that the FDyCS of the UMSNH, on average, has a high level of regular educational quality.

Table 7.3

Classification of Educational Quality in relation to its Determining Factors in the Graduates Questionnaire

Determining factors	Maximum possible score on scale	Score recorded on the scale	%	Rating assigned on the Likert-type scale for the dependent variable
Teaching	64	50,745	79.2890	<i>Regular high</i> educational quality
Investigation	28	19,223	68.6535	<i>Regular high</i> educational quality
Administration or Management	40	28,426	71,065	<i>Regular high</i> educational quality
Extension and Diffusion	40	27,340	68.35	<i>Regular high</i> educational quality
General average	172	125,734	73,101	<i>Regular high</i> educational quality

Source: Information obtained from the field research carried out.

In the same way, the third table (see Table 7.3) gives an account of the averages reported for each of the variables in the questionnaires that were applied to the 94 graduates of the FDyCS of the UMSNH. Also included is the qualification of educational quality according to the Likert-type scale that was used for this purpose, where a regular high educational quality stands out, determined by the factors of teaching, research, administration/management and extension and dissemination.

Consequently, in the estimation of the evaluations of the graduates of the FDyCS of the UMSNH, it is declared that this academic unit of reference, on average, has a high level of regular educational quality.

Table 7.4

Level of Importance of the Determinants of Educational Quality in the Teacher Questionnaire

Determining factors	Order of priority*	Score recorded in the Questionnaire	% in score	Importance level**		Degree of importance of the determinants
Teaching	0.473	55,827 / 72	0.7753	0.3667	36.67%	<i>High prioritization and regular high evaluation</i>
Investigation	0.315	32,587 / 48	0.6788	0.2138	21.38%	<i>Regular high prioritization and regular high evaluation</i>
Administration or Management	0.167	35,347 / 48	0.7363	0.1229	12.29%	<i>Regular low prioritization and regular high evaluation</i>
Extension and Diffusion	0.0450	27,680 / 36	0.7688	0.0345	3.459%	<i>Low prioritization and regular high evaluation</i>
Summation	1.00					

Source: Information obtained from the field research carried out.

*/ Determining factors prioritized from the application of the Analytical Hierarchy technique ca to the data obtained in the documentary research, Table 1.3 of this study.

**/ The level of importance was obtained by multiplying the prioritization amounts by % in score.

In the next section of tables (7.4, 7.5 and 7.6) it becomes necessary to remember the fact of having prioritized the determining factors of the dependent variable through the technique of analytical data hierarchization, which was established in the first part of this study. The application of this technique had the purpose of finding the degree of importance of the independent variables by multiplying their value with the percentages of the points obtained in the questionnaire. The results reveal the importance that has been given to each determining factor regarding educational quality, the determined variable, in this research work.

Thus, in Tables 7.4, 7.5 and 7.6 the determining factors have been arranged in

order according to the degree of importance found, on the one hand in the references of theoretical development, and on the other hand in the quantitative exercise carried out. It must be remembered that the frequencies of appearance in the consulted literature were used to determine a preliminary importance with which the ranking procedure was based. In addition, the percentages with respect to the total points that each variable could reach in the questionnaires applied to the professors, students and graduates of the FDyCS of the UMSNH were used, and the qualifications established in the column called degree of importance of the determining factors *correspond* to the combination made between the prioritization of the factor and the scope that each one of them had in the corresponding scale.

Table 7.5

Level of Importance of the Determinants of Educational Quality in the Student Questionnaire

Determining factors	Order of priority*	Score recorded in the Questionnaire	% in score	Importance level**		Degree of importance of the determinants
Teaching	0.473	60,021 / 76	0.7897	0.3735	37.35%	<i>High prioritization and regular high evaluation</i>
Investigation	0.315	15,000 / 24	0.6250	0.1968	19.68%	<i>Regulate high prioritization and regulate low evaluation</i>
Administration or Management	0.167	28,564 / 40	0.71410	0.1192	11.92%	<i>Regular low prioritization and regular high evaluation</i>
Extension and Diffusion	0.0450	29,298 / 40	0.7324	0.0329	3.295%	<i>Low prioritization and regular high evaluation</i>
Summation	1.00					

Source: Information obtained from the field research carried out.

* / Determining factors prioritized from the application of the Analytical Hierarchy technique ca to the data obtained in the documentary research, Table 1.3 of this study.

** / The level of importance was obtained by multiplying the prioritization amounts by % in score.

In accordance with the above, and based on the information reported in Table 7.4, in determining the educational quality of the FDyCS of the UMSNH, teaching was highly prioritized in the study and evaluated as regular high by the teaching staff; the research was prioritized in high regular terms and evaluated in the same terms by the teaching staff; administration/management registered low regular prioritization in the study and registered high regular evaluation by teachers; and the extension and diffusion was prioritized with low levels in the study and reported a high regular evaluation in consideration of the academic plant.

Table 7.6

Level of Importance of the Determinants of Educational Quality in the Graduates Questionnaire

Determining factors	Order of priority*	Score recorded in the Questionnaire	% in score	Importance level**		Degree of importance of the determinants
Teaching	0.473	50,745 / 64	0.7928	0.3749	37.49%	<i>High prioritization and regular high evaluation</i>
Investigation	0.315	19,223 / 28	0.6865	0.2162	21.62%	<i>Regular high prioritization and regular high evaluation</i>
Administration or Management	0.167	28,426 / 40	0.7106	0.1186	11.86%	<i>Regular low prioritization and regular high evaluation</i>
Extension and Diffusion	0.0450	27,340 / 40	0.6835	0.0307	3.075%	<i>Low prioritization and regular high evaluation</i>
Summation	1.00					

Source: Information obtained from the field research carried out.

*/ Determining factors prioritized from the application of the Analytical Hierarchy technique ca to the data obtained in the documentary research, Table 1.3 of this study.

**/ The level of importance was obtained by multiplying the prioritization amounts by % in score.

In the same logic, and based on the information reported in Table 7.5, in determining the educational quality of the FDyCS of the UMSNH, teaching was highly prioritized in the study and evaluated as fairly high by the student community; the research was prioritized in high regular terms and evaluated in low regular terms by the students; the administration/management registered a low regular prioritization in the study and registered a high regular evaluation by the students; and the extension and diffusion was prioritized with low levels in the study and reported a high regular evaluation in consideration of the student segment.

In addition, based on the information recorded in Table 7.6, in determining the educational quality of the FDyCS of the UMSNH, teaching was highly prioritized in the study and evaluated as regular high by the community of graduates; the research was prioritized in high regular terms and evaluated in similar terms by the graduates; the administration/management registered a low regular prioritization in the study and registered a high regular evaluation by the graduates; and the extension and diffusion was prioritized with low levels in the study and reported a high regular evaluation in the consideration of the segment of graduates.

On the other hand, Tables 7.7, 7.8 and 7.9 report the levels of correlation and determination of the factors regarding educational quality in the FDyCS of the UMSNH. Both the correlations and the determinations warn in some way the attention that is received in the academic unit of reference, and from the perspectives of the professors, the students

and the graduates, for each one of the elements that intervene in the definition of quality. education, because their opinion evaluations expressed in the questionnaires provide information about the situation of teaching, research, administration/management and dissemination and extension. In such a way that it is possible to indicate in which aspect(s) the efforts to improve the situation of the academic quality of the FDyCS of the UMSNH must be accentuated.

Table 7.7

Assessment of Determining Factors in relation to Educational Quality in the Teacher Questionnaire

Relationship of the independent variables with Educational Quality	Correlation coefficient	Determination coefficient	Assessment of the relationship with Educational Quality*
Teaching	0.890	0.792	<i>strong positive</i>
Investigation	0.773	0.597	<i>considerable positive</i>
Administration or Management	0.790	0.624	<i>considerable positive</i>
Extension and Diffusion	0.835	0.697	<i>strong positive</i>

Source: Tables A.40 and A.42 of Annex 43.

Table 7.7 summarizes the results for each of the independent variables, according to the data provided by the teacher questionnaire. Thus, the results found for teaching and educational quality in the FDyCS of the UMSNH present a correlation coefficient of 0.890, which indicates that there is a positive and high level of correlation between these two variables. Meanwhile, the coefficient of determination of 0.792, realizes that in 79.2% the educational quality is explained by teaching. The results for research and educational quality in the FDyCS of the UMSNH show a correlation coefficient of 0.773, which indicates that there is a considerable positive correlation between these two variables. The determination coefficient was 0.597, and from which it is established that 59.7% of the educational quality is explained by the research activity.

Regarding the administration/management results, they present a correlation coefficient of 0.790 units, which indicates a high relationship between these two variables. The coefficient of determination, for its part, was located at 0.624, and it expresses that 62.4% of the educational quality of the FDyCS of the UMSNH is explained by the administration/management tasks. And with regard to extension and diffusion, the correlation coefficient of this independent variable with educational quality was 0.835 units, which indicates a broad relationship between these two variables. For its part, the resulting determination coefficient was 0.697 units, an amount that reflects that 69.7% of educational quality is explained by extension and diffusion.

Table 7.8

Assessment of Determining Factors in relation to Educational Quality in the Student Questionnaire

Relationship of the independent variables with Educational Quality	Correlation coefficient	Determination coefficient	Assessment of the relationship with Educational Quality
Teaching	0.857	0.734	<i>strong positive</i>
Investigation	0.580	0.336	<i>medium positive</i>
Administration or Management	0.808	0.653	<i>strong positive</i>
Extension and Diffusion	0.739	0.546	<i>considerable positive</i>

Source: Tables A.49 and A.50 of Annex 52.

Similarly, Table 7.8 summarizes the results for each of the independent variables, according to the data provided by the student questionnaire. Consequently, the results found for teaching and educational quality in the FDyCS of the UMSNH present a correlation coefficient of 0.857, which indicates that there is a positive and high level of correlation between these two variables. Meanwhile, the coefficient of determination of 0.734, realizes that in 73.4% the educational quality is explained by teaching. The results for research and educational quality in the FDyCS of the UMSNH show a correlation coefficient of 0.580, which indicates that there is a positive and medium correlation between these two variables. The determination coefficient was 0.336, and from which it is established that 33.6% of the educational quality is explained by the research activity.

Regarding the administration/management results, they present a correlation coefficient of 0.808 units, which indicates a high relationship between these two variables. The coefficient of determination, for its part, was located at 0.653, and it expresses that 65.3% of the educational quality of the FDyCS of the UMSNH is explained by the administration/management tasks. And with regard to extension and diffusion, the correlation coefficient of this independent variable with educational quality was 0.739 units, which indicates a positive relationship between these two variables. For its part, the resulting determination coefficient was 0.546 units, an amount that reflects that 54.6% of educational quality is explained by extension and diffusion.

Table 7.9

Assessment of Determining Factors in relation to Educational Quality in the Graduates Questionnaire

Relationship of the independent variables with Educational Quality	Correlation coefficient	determination coefficient	Assessment of the relationship with Educational Quality
teaching	0.872	0.760	<i>strong positive</i>
Investigation	0.815	0.664	<i>strong positive</i>
Administration or Management	0.863	0.745	<i>strong positive</i>
Extension and Diffusion	0.805	0.648	<i>strong positive</i>

Source: Tables 58 and 59 of Annex 61.

Similarly, Table 7.8 summarizes the results for each of the independent variables, according to the data provided by the graduate questionnaire. Thus, the results found for teaching and educational quality in the FDyCS of the UMSNH present a correlation coefficient of 0.872, which indicates that there is a positive and high level of correlation between these two variables. Meanwhile, the determination coefficient of 0.760, shows that 76.0% of educational quality is explained by teaching. The results for research and educational quality in the FDyCS of the UMSNH show a correlation coefficient of 0.815, which indicates that there is a positive and high correlation between these two variables. The determination coefficient was 0.664, and from which it is established that 66.4% of the educational quality is explained by the research activity.

Regarding the administration/management results, they present a correlation coefficient of 0.863 units, which indicates a positive and high relationship between these two variables. The coefficient of determination, for its part, was located at 0.745, and it expresses that 74.5% of the educational quality of the FDyCS of the UMSNH is explained by the administration/management tasks. And with regard to extension and diffusion, the correlation coefficient of this independent variable with educational quality was 0.805 units, which indicates a broad relationship between these two variables. For its part, the resulting determination coefficient was 0.648 units, an amount that reflects that 64.8% of educational quality is explained by extension and diffusion.

Until now, all the analyzes carried out in this study have been carried out considering a bivariate relationship between educational quality and each one of the determining factors of said variable (teaching, research, administration/management and dissemination and extension), abstracting from the effect of other agents (those not considered, assuming that they influence to a lesser extent according to what is stipulated in the theoretical framework of this research), but it is also useful to find the correlation that all these factors have at the same time (those considered and those not contemplated) together with educational quality. To achieve this, the multiple regression multivariate analysis method was applied, which, according to the foreseen circumstances, will make it feasible to examine the effect

of two or more independent variables on at least one independent variable.

In quantitative studies, multiple regression is used to predict the value of a dependent variable knowing the value and influence of the independent variables included in the test. The basic information that was obtained with this method was the multiple correlation coefficient (R) that indicates the correlation between the dependent variable and all the other independent variables considered at the same time. The value of the coefficient in question is located between 0 and 1 units, and the higher its value indicates that the independent variables explain to a greater extent the change in the dependent variable. In addition, the multiple correlation coefficient raised to the square (R^2) accounts for the percentage of change of the dependent variable caused by the independent variables.

The results obtained through the method described show that the regression model built (see Table 7.10), taking into account educational quality as a dependent variable and teaching, research, administration/management and extension and dissemination as independent variables, as well as the average of data obtained from the questionnaires of professors, students and graduates of the FDyCS of the UMSNH, has a multiple correlation coefficient (R) equal to 0.8022 and a percentage of variation between the independent factors and educational quality (R^2) of 0.6435, which explains a high correlation between educational quality and the factors of teaching, research, administration/management, and extension and dissemination. In addition, in 64.35% the educational quality of the FDyCS of the UMSNH is determined by the factors considered in the model (teaching, research, administration/management and extension and dissemination). The calculations of the referenced model can be consulted in the annexes corresponding to the topic, at the end of this document.

Table 7.10

Summary of Results of the Regression Model to determine Educational Quality in the FDyCS of the UMSNH

Model	R	R^2	R^2 adjusted	Estimated standard error
1	0.8022(a)	0.6435	0.5959	0.8530

a/ Factors considered: Constant, Teaching, Research, Administration/Management and Extension and Diffusion.
The model considered the average statistical data provided by the application of the questionnaires to teachers, students and graduates.

Source: Annexes 29, 30 and 31.

And, returning to the previous analyzes and evaluations for each one of the determining factors of the dependent variable, it is feasible to conclude that in general the

academic quality of the FDyCS of the UMSNH presents a strong relationship of dependency with teaching, research, administration/management and extension and diffusion. Besides, these factors were the ones that had the greatest influence in determining the educational quality of the FDyCS of the UMSNH (64.35%).

Consequently, after reviewing in advance the scores derived from the correlation coefficients and determination of the vivariate relationships between the independent and independent factors, the quantitative study of this research is concluded through the materialization of the multivariate analysis method of multiple regression, whose correlation and determination scores confirm what the partial correlation and determination coefficients had reported. And both the first and the second quantitative results (bivariate analysis and multivariate method) confirm and provide a solid quantitative foundation to the hypothesis of the present investigation:

Teaching, scientific research, administration/management and extension and dissemination are the factors that determine to a greater extent the quality of the educational service provided in the university career of Law Degree of the Faculty of Law and Social Sciences (academic unit), from the Universidad Michoacana de San Nicolás de Hidalgo (Institution of Public Higher Education).

7.7 DISCUSSION OF RESULTS

In this research, the 2008-2009 school year of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo was considered as the study period. However, the research work (office and field) was carried out in a broader period: from September 2008 to May 2011. During this time, they were designed, proposed, reconsidered and adjusted, and The opinion measurement instruments were applied to the study subjects, considering the object of analysis: the educational quality in the FDyCS of the UMSNH, under a participatory research protocol. In this period, the derived information was processed, analyzed and interpreted; and, in addition, the preparation and completion of the external evaluation process of the FDyCS of the UMSNH was attended, as well as the preparation of the accreditation process of the same academic unit.

The results obtained in the development of this research are close to reality, since teachers, students and graduates were consulted through the questionnaires regarding the object of study. Thus, with this study it is affirmed that it is feasible to carry out scientific research using participatory protocols and correlational designs in public institutions of higher education in Mexico, because in the FDyCS of the UMSNH it was possible to know the reality of its educational quality, and there were facilities to interview the actors involved with the object of study and obtain relevant information.

The general objective of this investigation, which was drawn up at the beginning of it, was to distinguish the main conditioning factors of the quality of the educational service provided in the school program of Law Degree of the FDyCS of the UMSNH, in order

to define the situation current of it. In addition, this objective was complemented with a particular interest in determining the functional relationship between the dependent and independent variables of the study. In this regard, and from a review of the specialized literature on the quality of the educational service in Higher Education Institutions, as well as the application of the Analytical Hierarchy technique to the data obtained in documentary research, a scheme of relative global importance of the factors considered in the study of educational quality. Thus, teaching, research, administration/management, and extension and diffusion were identified, a priori, as the factors that condition educational quality in the FDyCS of the UMSNH, with relevances of 47.3%, 31.5%, 16.7%, and 4.5. %, respectively. And this determination justified the importance given to each variable considered in the analysis of educational quality.

The main assumption of the research, likewise, was raised preserving the systemic relationships of the variables involved in determining the educational quality of the academic unit under study. In the process of approving or rejecting the proposed working hypothesis, the data from the theoretical study and the quantitative analysis (frequencies, measures of central tendency, variability, correlations, determinations, and regressions) were used. And, in light of such data, the assumption was satisfactorily proven. Thus, effectively, teaching, scientific research, administration/management and extension and dissemination are the factors that determine to a greater extent the quality of the educational service provided in the university career of Law Degree of the Faculty of Law and Sciences. Sociales (academic unit) of the Universidad Michoacana de San Nicolás de Hidalgo (Institution of Public Higher Education).

The concept of correlation between educational quality, teaching, research, administration/management, and extension and diffusion registered high, medium, and considerable scores, which means that there is a positive and direct link between the independent variables and the dependent variable. And, in similar terms, the concept of determination of educational quality by teaching, research, administration/management and extension and dissemination resulted. In addition, the expansion of the quantitative analysis through an extended linear regression model, in which bivariate relationships are overcome and multivariate links are examined, allowed us to obtain results that confirmed the existence of a broad relationship between quality education and the independent variables, as well as a considerable incidence of the latter towards the endogenous variable.

Likewise, the results of this study are accepted and validated by the actors involved in the FDyCS of the UMSNH regarding the academic quality, teaching, research, administration/management and extension and dissemination that materialize in said unit. academic. The opinion measurement instrument arose from a consultation and meetings from which consensus was derived to justify which aspects to consider and how to distinguish the main conditioning factors of the quality of the educational service provided in the FDyCS School Law Degree program of the UMSNH. Even once the exam data was processed, analyzed

and interpreted, 90% of them were validated and legitimized by a group of key informants belonging to the academic unit analyzed. Consequently, a pragmatic, representative, inclusive and purposeful approach stands out in this study.

In addition, within the framework of the preparation of this study, the FDyCS scheduled and carried out its external evaluation process, in charge of the Inter-Institutional Committees for the Evaluation of Higher Education (CIEES, by its acronym in Spanish), obtaining as a result of its diagnostic evaluation the Level 1. Consequently, this event represented an ideal opportunity to compare, confront, and appreciate the data from our study and those used in the external evaluation of the academic unit of reference. Likewise, the preparation phase for the accreditation of the FDyCS of the UMSNH was attended, a situation that also gave an account of a new opportunity to confront, complement and equate data. And, both the external evaluation and the preparation of the accreditation in the FDyCS of the UMSNH, made it possible to confirm and strengthen the data used in this research.

Finally, the results of this research provide a general overview of the conditions in which the educational quality of the FDyCS of the UMSNH is found and, despite the fact that it is based on the opinion of the interviewed actors, it is estimated that it has a close relationship with reality, since it was obtained from the appreciations of those who live day by day a high regular educational quality in the academic unit examined. Thus, this work provides a source of information that can be useful for the diagnosis, planning and implementation of strategies to improve the educational quality of the FDyCS of the UMSNH.

PROPOSALS TO IMPROVE EDUCATIONAL QUALITY IN THE PUBLIC HIGHER EDUCATION INSTITUTIONS OF MEXICO AND IN THE FACULTY OF LAW AND SOCIAL SCIENCES OF THE UNIVERSIDAD MICHOACANA DE SAN NICOLÁS DE HIDALGO

With the precedence of seven-chapter sections that keep among themselves a sequential order necessary to achieve the corresponding exposition logic, the last chapter of this thesis is presented, *Proposals to Improve the Educational Quality in the Public Higher Education Institutions of Mexico and in the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo*.

The conception and design of the improvement plan for the FDyCS of the UMSNH represent a fundamental aspiration within our research, since it is our recommendation, product of the study, to improve the levels of educational quality in the academic unit examined. However, the findings and conclusions derived from this case study have also made it possible to prepare a series of assessments, perspectives and critical points of view regarding the means of achieving or assuring educational quality in public universities. Mexican; and hence this final space is used to formulate a *Proposal for Academic Evaluation of Public Higher Education Institutions in Mexico with a Quality Assurance and Accountability Approach*, that is, a scheme around educational quality applicable to all IESPs in Mexico.

8.1 PROPOSAL FOR AN IMPROVEMENT PLAN FOR THE FACULTY OF LAW AND SOCIAL SCIENCES OF THE UNIVERSIDAD MICHOACANA DE SAN NICOLÁS FROM HIDALGO

The design of the Improvement Plan represents a cardinal aspiration within the present investigation. However, it is based on and becomes important in the preceding stages and, particularly, in the participation of the entire community of the Faculty of Law and Social Sciences of the Michoacana University.

The exploration and consensus phase and the self-assessment phase have definitely been two essential points to design, base and develop this Improvement Plan proposal. And it is of vital importance not to mention that said Plan constitutes the result of the last stage of the research strategy proposed in this study.

8.1.1. Approach and Purposes of the Improvement Plan

This Improvement Plan for the UMSNH FDyCS is based on the self-assessment report derived from the first and second stages of the ongoing investigation. The objective of this Plan lies in the achievement for the FDyCS of the UMSNH of the continuous

improvement of the quality of the educational service provided, thus promoting a culture of quality in the academic unit of study.

This general purpose can be broken down into the following specific objectives:

1. Incorporate the members of the Faculty as main protagonists in improving the quality of the educational service.
2. Establish homogeneous quality criteria from the proposals of the members of the academic unit of reference.
3. Respond to current requirements for higher legal education in terms of quality and innovation.
4. Encourage the improvement of the teaching, research, administration/management and extension and dissemination activities of the members of the Faculty.
5. Promote critical reflection of the members of the FDyCS regarding the criteria of educational quality in public higher education institutions.
6. Contribute to the motivation and satisfaction of the staff, promoting the participation of all members of the Faculty, taking into account their contributions and concerns in improvement activities.
7. Move towards the beginning of a possible application for accreditation before the corresponding authorities.

8.1.2. Justification of the Improvement Plan

The Improvement Plan is identified with the concept of continuous improvement towards quality. Thus, continuous improvement involves a change in the behavior of the people who make up an organization.

Said Plan must encourage the modifications required in the processes. Although evaluation processes represent an important requirement for improving the quality of education, their relevance lies in the fact that they serve to support the implementation of improvement actions.

In the particular case of the UMSN FDyCS, the exploration and consensus phase and the self-assessment stage, indicated and developed in advance in this document, represent an important aspect because they lead to the conception and design of a continuous improvement plan for educational quality for IESP.

The contributions of an education evaluation process must be incorporated through an improvement plan to the academic unit evaluated. And it is that, it is noted, that an improvement plan accounts for an essential means to achieve a culture of quality in educational centers (Bricall, 2000), and specifically in IESPs.

Currently, it is imperative for IESPs to maintain permanent mechanisms to ensure the quality of teaching (Medina & Bonales, 2008). Day by day the social demands progress

so that the universities become social agents to respond to the changes and innovations that are permanently registered.

In this sense, an improvement plan is justified so that the IESPs, and particularly the protagonists of the educational process, are responsible for promoting and developing quality policies and mechanisms for continuous improvement.

8.1.3. Responsible and Times of the Improvement Plan

In the UMSNH FDyCS Improvement Plan, the persons or units responsible for the activities proposed in said Plan are: the central authorities of the University, the authorities of the Faculty, the professors of the Unit university and its students. In some activities, the responsibility may be shared.

In addition, the Improvement Plan that is proposed here has been considered for three years. However, the activities will have to materialize at three levels, namely: in the short term, which implies a maximum duration of one year; in the medium term, which represents a maximum duration of two years; and in the long term, which accounts for a maximum duration of three years. Thus, to indicate said temporality, the short-term, medium-term and long-term specifications must be used. And when the activities require more than one of the indicated timings, the corresponding specifications will be included.

8.1.4. Planning of Activities of the Faculty of Law and Social Sciences

The planning of the activities of the Faculty of Law and Social Sciences of the UMSNH will consider the period of 2011-2013, and contains the improvement actions around teaching, research, administration/management and extension and dissemination, in the consideration of those responsible and the periods of time in which they must be carried out.

8.1.4.1. Improvement Actions around Teaching

The proposals for improvement that are stipulated to be carried out in the FDyCS of the UMSNH during the period of 2011-2013 in terms of teaching, are the following:

Action 1	Responsible	Time
Training and support for teachers in terms of teaching strategies and incorporation of teaching media and resources.	UMSNH authorities / FDyCS authorities.	Short term / medium term.
Action 2	Responsible	Time
Training and support for teachers in terms of training and implementation of learning assessment strategies.	UMSNH authorities / FDyCS authorities.	Short term / medium term.

Action 3	Responsible	Time
Promote among teachers the encouragement for their promotion for their academic productivity based on the corresponding regulations.	UMSNH authorities.	Short term.
Action 4	Responsible	Time
Improve classroom conditions to adapt them to the teaching-learning process.	UMSNH authorities / FDyCS authorities.	Short term / medium term.
Action 5	Responsible	Time
Promote a greater teaching effort to adequately transmit knowledge to students.	UMSNH authorities / FDyCS authorities.	Short term / medium term
Action 6	Responsible	Time
Have a computer center equipment that responds fully to the needs of the student.	UMSNH authorities / FDyCS authorities.	Short term / medium term.
Action 7	Responsible	Time
Promote the interest of students in the subjects based on the motivation due to the knowledge and skills taught by their teachers.	FDyCS authorities/ teachers/ students.	Medium term
Action 8	Responsible	Time
Generate student participation as a consulted audience in institutional opposition contests.	FDyCS authorities/ teachers/ students.	Medium term
Action 9	Responsible	Time
Undertake actions aimed at increasing terminal efficiency in the Faculty.	FDyCS authorities/ teachers.	Medium term / long term.
Action 10	Responsible	Time
Organize and promote extra-scientific activities.	FDyCS authorities/ teachers/ students.	Medium term.
Action 11	Responsible	Time
Counteract student desertion.	FDyCS authorities/ teachers/ students.	Medium term / long term.

8.1.4.2. Improvement Actions around Research

The improvement proposals that are stipulated to be carried out in the FDyCS of the UMSNH during the period of 2011-2013 in terms of research, are the following:

Action 1	Responsible	Time
Establish and promote institutional policies and procedures for the evaluation of research projects.	FDyCS authorities/ teachers.	Medium term / long term.
Action 2	Responsible	Time
Promote and activate the participation of teachers in research projects with the allocation of resources from outside the UMSNH.	FDyCS authorities/ teachers.	Medium term / long term.
Action 3	Responsible	Time
Propitiate the conditions to broaden the relationship between research and teaching, starting from creating lines of research oriented to the Law Degree, and consolidating the unit destined to coordinate the research activities in the FDyCS of the UMSNH.	FDyCS authorities/ teachers.	Medium term / long term.
Action 4	Responsible	Time
Increase the opportunities for FDyCS professors and researchers to involve students in research by incorporating them into their projects as research assistants.	UMSNH Authorities / FDyCS authorities/ teachers.	Medium term / long term.
Action 5	Responsible)	Time
Implement a strategy for review, arbitration, editing and publication of the results of the research carried out by the FDyCS teaching staff.	UMSNH Authorities / FDyCS authorities/ teachers.	Medium term / long term.
Action 6	Responsible	Time
Increase the number of scholarships for research assistants, as part of the general strategy to expand opportunities for FDyCS professors and researchers to involve students in research.	UMSNH Authorities / FDyCS authorities/ teachers.	Medium term / long term.
Action 7	Responsible	Time
Expand the opportunities for FDyCS students to write their thesis through their participation in research projects, as part of the general strategy expansion of opportunities for FDyCS professors and researchers to involve students in research.	UMSNH Authorities / FDyCS authorities/ teachers.	Medium term / long term.

Action 8	Responsible	Time
Progressively increase the human and material resources assigned to research, as a result of a research promotion policy and various management actions.	UMSNH Authorities / FDyCS authorities/ teachers.	Medium term / long term.

8.1.4.3. Improvement Actions around Administration/Management

The improvement proposals that are stipulated to be carried out in the FDyCS of the UMSNH during the period of 2011-2013 in terms of administration/management, are the following:

Action 1	Responsible	Time
Promote a balance between the functions of teaching, research, administration/management and extension and dissemination, carried out by the FDyCS professors.	FDyCS authorities/ teachers.	Short term.

Action 2	Responsible	Time
Promote the conditions to activate the participation of teachers in research projects with the allocation of resources outside the UMSNH.	FDyCS authorities/ teachers.	Medium term / long term.

Action 3	Responsible	Time
Take the necessary steps to achieve a better budget allocation.	FDyCS authorities/ teachers.	Medium term / long term.

Action 4	Responsible	Time
Improve the correspondence between institutional financial management and the satisfaction of the needs of the academic unit, as part of carrying out the necessary steps to achieve a better budget allocation.	FDyCS authorities.	Medium term / long term.

Action 5	Responsible	Time
Permanently propose the procedures and mechanisms for evaluating the performance of administrative staff.	FDyCS authorities.	Short term / medium term/ long term.

Action 6	Responsible	Time
Design a permanent training plan for the administrative staff of the FDyCS.	FDyCS authorities.	Short term/ medium term/ long term.

Action 7	Responsible	Time
Formally define the functions, responsibility and authority of the members of the FDyCS.	FDyCS authorities.	Short term/ medium term.

Action 8	Responsible	Time
Promote the participation of the members of the FDyCS in the improvement of the processes.	FDyCS authorities/ teachers.	Short term/ medium term/ long term.
Action 9	Responsible	Time
Establish mechanisms to improve communication channels in the Faculty.	FDyCS authorities.	Short term/ medium term.
Action 10	Responsible	Time
Start a program for planning, receiving and monitoring requests, complaints and suggestions in the academic unit.	FDyCS authorities.	Short term/ medium term.
Action 11	Responsible	Time
Create a commission or committee for quality management in the FDyCS, in charge of formulating quality policies that contribute to institutional improvement.	FDyCS authorities.	Short term/ medium term/ long term.
Action 12	Responsible	Time
Develop permanent plans to improve educational quality with the participation of all members of the Faculty.	FDyCS authorities/ teachers.	Short term/ medium term/ long term.
Action 13	Responsible	Time
Create a commission or committee for evaluation, and that is in charge of permanently carrying out the processes of evaluation and monitoring of the personnel's performance, as well as supporting the improvement actions that are required, and keeping the personnel duly informed about their performance. professional.	FDyCS authorities.	Short term/ medium term/ long term.
Action 14	Responsible	Time
Create a commission or planning committee, and that this entity be in charge of designing and proposing planning actions for the academic unit that operate in accordance with university planning.	FDyCS authorities.	Short term/ medium term/ long term.

8.1.4.4. Improvement Actions around Extension and Diffusion

The proposals for improvement that are stipulated to be carried out in the FDyCS of the UMSNH during the period of 2011-2013 in terms of extension and dissemination, are the following:

Action 1	Responsible	Time
Improve the correspondence between the development of extension and dissemination and the satisfaction of the extension and dissemination needs of the academic unit, as part of carrying out the necessary steps to achieve a better budget allocation.	FDyCS authorities.	Short term/ medium term.
Action 2	Responsible	Time
Promote the increase of extension and dissemination activities in the academic unit from the creation of a commission or administrative area that coordinates extension and dissemination activities.	FDyCS authorities.	Short term/ medium term.
Action 3	Responsible	Time
Create an extension and dissemination program by the academic unit, and that said task be in charge of the commission or administrative area that coordinates the extension and dissemination activities, in coordination with the institutional extension and dissemination program.	FDyCS authorities.	Short term/ medium term.
Action 4	Responsible	Time
Integrate extension and dissemination activities within the functions of the teaching staff.	FDyCS authorities/ teachers.	Short term/ medium term.
Action 5	Responsible	Time
Encourage members of the FDyCS to carry out extension and dissemination activities.	FDyCS authorities/ teachers/ students.	Short term/ medium term.
Action 6	Responsible	Time
Promote a comprehensive participation of the members of the Faculty in extension and dissemination activities.	FDyCS authorities/ teachers/ students.	Short term/ medium term.
Action 7	Responsible	Time
Promote the expansion of the participation of the members of the Faculty in the solution of community problems through extension and diffusion activities.	FDyCS authorities/ teachers/ students.	Short term/ medium term.

8.1.5. Improvement Plan Evaluation Scheme

The proposed Improvement Plan provides for the establishment of its evaluation, so that the evaluative review is carried out in a timely manner and also guarantees feedback on the activities.

Thus, it is suggested that the evaluation scheme of the Improvement Plan be developed in two modalities. On the one hand, a partial evaluation is proposed at each of the moments indicated in the timing of the activities: first year (short term), second year (medium term) and third year (long term).

In each of these three moments, the evaluation process must show the results that have been generated during the period or, perhaps, those that have ceased to be produced.

On the other hand, the development of a general evaluation of the entire Improvement Plan is proposed at the time of completion of the Plan, and such examination is expected to be comprehensive.

Finally, to carry out the evaluation scheme of the FDyCS of the UMSNH Improvement Plan, the creation, before the implementation of the Plan, of the Improvement Plan Evaluation and Monitoring Commission is proposed, in order to cover the need for an internal area to be in charge of the task of evaluating and monitoring the actions of the Plan in the academic unit of reference. And it is suggested that said Commission be integrated in a plurality so that the concept of representativeness essential for the success of this type of exercise is present in it.

8.2 THE EVALUATION OF THE EDUCATIONAL QUALITY IN THE INSTITUTIONS OF PUBLIC HIGHER EDUCATION IN MEXICO: CRITICISM AND FINAL PROPOSAL

8.2.1. Critical Vision of the Evaluation of the Quality of Education in the Public Higher Education Institutions of Mexico

As it has been pointed out in this work, today Mexico has different organisms and processes related to the evaluation for the assurance of the quality of education in its Public Higher Education Institutions (IESP). However, almost two decades after having several of these instruments, it becomes imperative to question whether they have been and are suitable for the proposed purposes, given the articulation they have with each other.

Specifically, the CIEES and the COPAES have the same universe, with the difference that the evaluation of the former is of a diagnostic nature and that of the latter is for accreditation purposes. The CIEES are seen as *peers* making formative, not *punitive, evaluation* and making recommendations for improvement. On the other hand, the evaluation for accreditation is valued as a qualification that will be assigned to the program: “accredited, not accredited or conditioned”, and from the result obtained some financial,

prestigious or other consequence is glimpsed.

Therefore, it will be necessary to know if from the perspective of the IESP the evaluation processes are viewed as an opportunity for improvement or as a limitation to academic diversity. And it is appropriate to inquire, consequently, about the real incentives that Mexico has for academic evaluation: quality assurance, access to additional resources or prestige in the academic market?

Through two meticulous studies, *Single Exam and Evaluation Culture in Mexico* and *Critical Issues in Higher Education in Latin America in the 1990s. Comparative studies*, Aboites (2002) and Kent (2002) formulated an analytical scheme around the features of the culture of evaluation in Mexico. In considering the UPM, we agree with these authors in identifying, at least, the following weaknesses in the current evaluation system: 1) an evaluation process without full participation ; 2) evaluation as a political discourse of opposition; 3) the absence of a legal framework for the current evaluation system; 4) the lack of transparency in the evaluation; 5) the lack of a *meta-evaluation*; and, 6) evaluation as deficient social policy.

For this reason, it is to be observed in Mexican higher education a gradual *acceptance of the idea of evaluation* as an important component of what has generally been called *the modernization of higher education*. However, its consolidation in institutional and academic practices and norms is uneven and incipient to build a project for a democratic country, founded on a culture of knowledge and participation, and prosperous for all (Kent, 2002: 285-290).

In the following spaces, the critical points referred to in Mexico, in our opinion, the current evaluation system of IESPs will be addressed.

8.2.1.1. Evaluation without Integral Participation

In the evaluation discourse in Mexico, the absence of a clear and structured development that specifies the importance and function of the participation of all stakeholders (Executive, Judicial and Legislative Branches; State secretariats, unions, rectors, academics) is notorious., scientists, students, experts and the general public). In the evaluation proposals, in their general scrutiny and in the specific forms that must be adopted, the unilateral vision of the Executive predominates.

The foregoing has to do with the fact that educational evaluation in this country is not a matter of society but an act of the Federal Executive, despite the different organizational formulas it adopts. The evaluation also includes the least participatory trends in the exercise of government power in the country; Education, seen this way, is not a collector of different and advanced practices.

If in the first education systems the obligation of the State was clearly *to impart*, at present it only corresponds *to propose* and *attend*; that is, an obligation that is only of a

moral nature.

For Kent (2002), the interest of the different political actors in Mexico has been poor, with the exception of the Executive Power, experts, scientists and public opinion. And the claim of society is clear; however, the Legislative Branch cannot even be said to have or is participating in the decisions that concern academic evaluation. Therefore, the fact that the evaluation process in Mexico lacks full participation is endorsed, which constitutes one of the weaknesses of the current evaluation system.

8.2.1.2. Evaluation as Contrasting Political Discourse

A second feature of the Mexican evaluation scheme is an evaluation as a political discourse of opposition: the axis that *contrasts the light and the dark*, that is, the legitimate interest in the transformation and improvement of educational quality on the one hand, and the dark motivation or illegitimate for the other. Thus, criticism or opposition to evaluation initiatives may well come from those who are systematically enemies of everything that comes from the authorities or worse still, from the fact that the debate around these issues (evaluation) sometimes it hides another type of situation, such as the impossibility of holding those who evaluate accountable, the evasion of responsibilities and the fear of facing evidence of inefficiency, inconsequentiality, irrelevance or inefficiency.

A second axis of opposition in the discourse is that of *chaos-order*. At this level, apparently an alternative vision, as to whether it is linked to an important mobilization, “is exaggeratedly treated as certain chaos and about to happen” (Aboites, 2002: 125). Thus, the emergence of scholarships and incentives were surrounded by a discourse that apparently served to justify its structure: “The incentives are not for everyone because not everyone works” (*Idem*)¹.

Knowing *-not knowing* constitutes a third axis of opposition: the evaluator knows, therefore the problems, if any, are the result of the *lack of information* of those evaluated or of those in charge of operating the program, or are the result of ignorance or personal or institutional disability². Finally, the tendency to move in the *discourse of opposition* means a display of defense and an attempt to defeat the adversary. A speech like this, therefore, is a very poor instrument if what you want to analyze and diagnose in depth are the evaluation problems³. Consequently, the fact that the evaluation process in Mexico is linked to political

1 Aboites points out that: “The idea of allocating funds to only 30% of academics arose because, as we all know, many people do not work. Those who work must be rewarded” (Aboites, 2002: 125). And Kent adds: “A part of the academics found themselves incorporated into the corresponding evaluation and incentive processes, but the salaries of the majority remained depressed. Thus, the selective increase in academic fees (...) ran the risk of becoming primarily a new mechanism for segmenting the academic market and only secondarily an instrument for raising productivity (...) it is worth asking if this mechanism induces an increase in performance individual or if it is merely an instrument of differentiated salary increases” (Kent, 2002: 286).

2 Kent points out that “the accreditation offered (...) does not amount to legal action but in view of the proliferation of private institutions of very different levels of quality under the traditional regime of lax government regulation” exerts “an influence on the prestige and public image of private institutions that would have an impact on the consumer market” (*Ibidem.*, 289).

3 According to Kent “it is evident that there was a first politically ductile movement towards the installation of evaluation

discourse of opposition is endorsed, which constitutes one of the weaknesses of the current evaluation system.

8.2.1.3. Absence of a Legal Framework for the System Current Assessment

The third feature of the current evaluation culture in Mexico is the lack of a legal framework. In other words, the current accrediting system, in addition to being a *protected monopoly (Idem)*⁴, does not have a legal instrument that supports it⁵.

In the Mexican context, the term *accreditation*, for example, today does not appear in the law, although it is contemplated in the essence of the legal framework, since it is an evaluation of educational programs. Current law does not contemplate subjecting top tier schools to accreditation.

In the case of the Autonomous Public Universities (UPA), the *status* granted to them by Section VII of Article 3 of the Constitution is violated⁶. ANUIES itself, promoter of such a system, asks the Congress of the Union to give legal powers to COPAES⁷.

Finally, the accreditors as civil associations under the Federal Civil Code⁸, open the door to suspicion and the possibility of acts of corruption, given their discretion to operate and the discreet and indirect support of the Executive Branch⁹. Additionally, academics, trade unionists, students, and parents have expressed their concern about the operation

mechanisms and structures in a system historically alien to it. However, its legitimization and its full assimilation into institutional and academic practices were uneven. There were mixed messages, a great diversity of government intentions and an uneven assimilation of the *evaluation culture*" (*Ibidem.*, 289-290).

4 Formal civil associations are private organizations; However, the civil associations for the external evaluation of IESPs have among their members the SEP, ANUIES, public and private universities, professional and academic civil associations, and companies. This is the main justification that they are not in practice private organizations; however, it is precisely the main weakness to assert that they are autonomous organizations, a necessary attribute for external evaluators. The SEP allocates additional financing for the IESPs that are accredited through these associations, (in which the SEP itself participates), making it difficult for the government to audit the donations made for this purpose. On the other hand, associations such as GENEVAL sometimes charge a fee to students for applying an entrance or exit exam, in order to comply with part of the procedures in the IPES, which contrasts with Article 3 of the Constitution: "All The education provided by the State will be free". In addition, these civil associations exert a great influence on the course of academic evaluation, a monopoly of a power that must only be exercised by the Executive and Legislative Branches.

5 The General Law of Education that clearly states, in its Article 29, that: "The evaluation of the national educational system corresponds to the Secretariat (of Education), without prejudice to what the local educational authorities carry out in their respective competences. Said evaluation, and that of the local educational authorities, will be systematic and permanent. Their results will be taken as a basis for the educational authorities, within the scope of their competence, to adopt the appropriate measures. And it continues: "The educational authorities will inform teachers, students, parents, and society in general of the results of the evaluations they carry out, as well as other global information that allows measuring the development and advances of education in each federative entity" (Articles 30 and 31 of the same Law).

6 The aforementioned article establishes that: "Universities and other higher education institutions to which the law grants autonomy, will have the power and responsibility to govern themselves; they will carry out their aims of educating, researching and disseminating culture in accordance with the principles of this article, respecting the freedom of academic and research and of free examination and discussion of ideas; they will determine their plans and programs; they will set the terms of entry, promotion and permanence of their academic staff and will manage their patrimony" (*Idem*).

7 Part of the ANUIES agenda has to do with the idea that: "For the future development of higher education it is imperative to have an adequate legal framework (...) and the establishment of an accreditation scheme for academic organizations and programs with official validity" (ANUIES, 2000: 250).

8 In its Article 2670, the Federal Civil Code establishes: "When several individuals agree to meet, in a way that is not entirely transitory, to carry out a common purpose that is not prohibited by law and that is not of a predominantly economic nature, they constitute an association".

9 As can be, onerous salaries, negligent administration in financial control, purchase of unnecessary material resources in exchange for a "bite", nepotism, personal favors such as the issuance of professional titles, among others (López, 1998: 20, 24, 29 and 30).

of a civil association (CENEVAL, AC) with functions that are exclusive to the institutions¹⁰. The issue of legality is important in terms of the construction of a different political culture framed not only by government purposes, but by the rights of individuals - academic workers, students, education seekers, parents, communities and organizations - to have a guarantee that the actions of the Executive Power are not surprising, arbitrary, harmful and unappealable for preponderant sectors of the population. And it is precisely that the private nature allows civil associations to be outside of any public scrutiny and regulation that seeks to regulate their functions.

Therefore, in Mexico, another feature of the evaluation culture has to do with the absence of a legal scheme for the current evaluation system, precisely, which contributes precisely to the weaknesses of said system.

8.2.1.4. Lack of Transparency in Evaluation

A fourth feature establishes an evaluation with a lack of transparency: the evaluation culture in Mexico shows little concern for informing citizens of the arguments that justify the design of mechanisms, the transparency of results, and the decisions that will be made before the inefficiencies¹¹.

Kent reports that there is “very little reliable information on the procedures and results of the institutional self-assessments (CIEES). The decision to disclose these results was left in the hands of the rectors, most of whom preferred not to do so (...) without having any details about the effects of these evaluations on decision-making in universities. [And, regarding the meta-evaluation, it maintains that] CONAEVA did not distinguish itself by publishing the results of its evaluations, except for information of a general nature, it can be affirmed that this organism was not appreciated by the academic communities as a legitimate instance of evaluation” (Kent, 2002: 287). It must be noted here that such discrediting of CONAEVA finally caused its disappearance.

¹⁰ In a letter delivered to the SEP on July 24, 1996, addressed to its owner, it is established that: “The decision to place in the hands of CENEVAL, the core part of conducting the process has represented that in fact a private entity perform functions that are the responsibility of the institutions and the secretariat itself (exam design, validation, registration organization, collection, exam grading, school assignment, resolution of disputes about the process, such as certificates, among others). With this, applicants are disadvantageously subject to acts whose authority is not clearly established or strictly linked to the proposed purposes” (Aboites, 2002: 130).

¹¹ For example, in the case of CENEVAL, the SEP does not explain why the single exam as an evaluation mechanism excludes the certificate of studies, vocational guidance interviews, propaedeutic courses, among others. In addition, the results of said evaluation are not reported, as well as the proposed solutions to the exposed inefficiencies. The final assignment of students to IESPs depends on the combination of correct answers and order of preferences (*Idem*). Due to arguments such as the above, it is seriously questioned whether the multiple choice *test* is an instrument capable of predicting the future performance of the student and if it is not an abuse to use it as the main or as the only indicator to determine admission to an institution, the granting of a scholarship, among others. And Hugo Aboites refers that the use of the school average as part of a selection mechanism coincides with a trend already present in other countries that seeks to leave standardized exams behind, replacing them with other forms of evaluation. At the same time, the idea that multiple choice *tests are not reliable is gaining social consensus* (Aboites, 2002: 136). And this same author considers that the culture of evaluation is one of the most powerful factors -as much or more than the administration of financing- capable of guiding education in one direction or another. Thus, “more than the philosopher, the teacher or the organizer of study plans and curricula, the evaluator is capable of sending a very clear message of what is important in the educational process. In fact, it is also capable of saying what is important to build the future of the country” (*Idem*).

In the case of the evaluation of institutions, the CIEES do not publish the results of the evaluations, since it is exclusive information of the rectors. In the case of COPAES, said body carries out evaluations based on a manual similar to a *check list*, but does not argue its design that justifies qualifying study programs or institutions as quality.

Thus, in Mexico the culture of evaluation is presented as removed from a proposal of clarity, transparency and accountability. And this, finally, is one of the weaknesses of the current evaluation system.

8.2.1.5. Lack of a Meta-evaluation

And to the critical points already referred to, the following is added: in Mexico there is a *meta-evaluation*, that is, the evaluation of external evaluators. Evaluators have a professional obligation that proposed or completed evaluations are subject to a competent evaluation, the meta-evaluation.

The rationale for meta-evaluation is that evaluation is a particularly self-referential subject, since it applies to all serious human endeavours, and consequently to evaluation itself; that is, that the evaluation begins at home. The objective of the meta-evaluation is, likewise, to ensure the quality of evaluation services, avoid or deal with illegal practices or services that are not of public interest, point the way for the improvement of the profession and promote a greater understanding of the evaluative enterprise (Stufflebeam & Skinkfield, 1987).

The meta-evaluation allows assessing the quality with which the evaluation process was developed and the adequacy of the evaluation system; ratifies the qualities or defects of the programs that have been evaluated; and determines the strengths and weaknesses that were not detected by the primary evaluation. In addition, it ratifies -or not- the principles on which the disseminated evaluation policy is inspired, that is, the relevance, fairness and participatory nature of the evaluation.

Finally, in Mexico the evaluation scheme is presented without meta-evaluation, that is, there is a lack of a process *that investigates the weaknesses and strengths that mark the evaluation processes, and compliance with the ethical, methodological, regulatory and technical aspects that govern each process and whose results are likely to be considered for the projection of the further improvement of the evaluative practice in general, and of the evaluated programs, in particular, with the aim of raising their quality.*

8.2.1.6. Evaluation as Deficient Social Policy

In general, in the Latin American educational system there are very few academic evaluation experiences that start from a broad conception of the political, academic, and theoretical dimensions that underlie the practice of evaluation. Current evaluation programs promote competition in the region, but do not promote collaborative actions between

students, teachers and educational institutions.

The formative evaluation starts from another conception of the pedagogical processes and seeks to detect the difficulties and deficiencies of the educational work in the process itself, so that the improvement and modification occur before the end of the educational task. For this reason, formative evaluation seeks to generate certain participatory processes, or at least seeks an evaluation practice in which users are the main recipients of the results; promotes elements that allow a better understanding of its operation; believes that, in life, subjects need to develop models of analysis in the face of diverse information; and at no time does it classify teachers (good or bad) or students, on the contrary, it proposes to work on the deficiencies in various school processes. The idea of this perspective has been to contribute to the improvement of the educational process, showing how it works and allowing the members of an educational institution to have access to that information (Díaz, 2002: 28).

However, international organizations and educational policy designers distrust formative evaluation and, consequently, avoid promoting it because their moral, political and scientific commitment links them much more to evaluation processes as judgments (of quality and not of quality), which shows to a certain degree its disconnection with educational planning. And the existence of suspicion and mistrust in trials due to lack of participation and information even provoke statements by academics about adverse behaviors in the functioning of the educational system. Not all programs that pass an academic certification deserve their accreditation, nor do the excluded ones deserve their exclusion. The same happens with the rating given to researchers or professors¹².

The evaluation schemes adopted by Mexico, far from promoting experimentation to generate their own proposals, have accepted only formal strategies that allow the quantification of educational results, adequate for accountability, but that prevent knowing the process and the academic quality of the process. Thus, the Mexican evaluation *rates* people (students-teachers) and institutions, but does not rate the academic process that underlies educational processes.

Therefore, an error of the Mexican educational policies has been to link inefficiently, between mixing objectives, the results of the evaluation to a budget allocation¹³. The programs for teachers (teaching career or incentives for academic performance), for researchers (SNI) and for institutional development (Fund for the Modernization of Higher Education, National Program for Quality Postgraduate Studies, among others), sooner or later culminate in a budget bag Although people and institutions make an effort to display

12 The improvement of the educational system calls for the adoption and development of an evaluation paradigm linked to formative evaluation, without renouncing accountability.

13 And it is that, according to Kent, on the one hand "they sought to put an end to the anarchic bureaucratization: rationalize the school administration, improve financial and human resources management, make planning effective and adapt the legal system of the institutions. On the other hand, the evaluation programs tried, at least on paper, to introduce the norm of external guarantee (*accountability*) and to establish the habit of continuous improvement. However (...) the two purposes seemed to be intermingled, with which the principle of evaluation ended up diluted" (Kent, 2002: 289).

the requirements that allow them to access such economic resources, their effort does not mean that they take consistent steps to improve academic work processes¹⁴. The design of these incentives has a purpose that is not easy to achieve: to align the interests of the teachers, researchers and administrators of the IESP with the public interest or the State (Hamilton, 1998: 220 and 308).

Therefore, it is insisted that education is a complex process; A student not only learns knowledge in the classroom, he also develops ways of thinking, of valuing, he also integrates as a person and as a citizen¹⁵. And, therefore, an absence of evaluation conceived as an efficient social policy can be seen. A culture of evaluation and accountability in education would mean that all members of the educational community (students, teachers, administrators, representatives, parents) or other sectors of society find valuable access to information about educational performance, as well as see the evaluative actions naturally. Acquiring a culture of evaluation means, for example, gladly accepting the visit of supervisors to schools, not fearing the application of exams at any time and gladly carrying out self-evaluations. This would only be achieved if instead of justifying or seeking and finding guilty, the analysis focuses on resolving the deficiencies found. It must be clarified that the accountability structures are not incompatible with formative evaluation, but they do express the need to make a link with educational planning, in order not to fall into contradictions¹⁶.

The need for accountability expresses, ultimately, the distrust of citizens towards public officials. Thus, given the mistrust of representatives and other public officials, rules (institutions) must be established so that trust is recovered. In the absence of this basic regulatory structure, any evaluation will be linked to suspicion and discretion in the management of public money, which would mean polarization in society, expressions of grievance, and in the worst scenario, radicalization.

Lastly, the description and analysis of the main limitations, formal and informal, of the IESP evaluation and accreditation system, as well as the definition of accountability in the institutions, have provided important elements for the design of a outline of a proposal for academic evaluation as a public policy instrument in favor of educational quality and accountability.

14 In this regard, Kent observes that: "The creation of an evaluation system always faces a fundamental dilemma. It can be helped by linking funding to evaluation results in order to ensure that the evaluation is effectively introduced. The risk is that the evaluation procedures become a game for power (incentives to academic performance). If, on the contrary, it is decided that the fundamental objective is to promote interest in the evaluation freely assumed by the actors, it will be thought that the evaluations must not have financial consequences. The probable cost of these strategies is that quality assessment is not effectively incorporated into institutional and individual practices (CONAEVA failure)" (*Ibidem.*, 287).

15 In this regard, Díaz affirms that "the school must open up to the world of work, but it must also attend to what has been its historical function: to bring culture closer, to bring national knowledge closer, to make human encounter and development possible" (Díaz, 2002 :30).

16 According to the SEP: "Good quality implies evaluation. Evaluation is conceived as an indispensable means for continuous improvement and quality assurance, as well as for accountability. In addition to evaluating, it is essential to make the results known and use them for decision-making. And it continues with the vision for 2025: "equity with quality, quality with evaluation, evaluation with accountability, and accountability with social participation" (SEP, 2001: 236).

8.2.2. The Academic Evaluation of Institutions of Public Higher Education of Mexico: A Proposal with an Assurance Focus Quality and Accountability

8.2.2.1. Academic Evaluation, Quality and Accountability

As has been reiterated here, the quality of teaching and research has become one of the most important issues for governments. The world is changing rapidly, as it is increasingly competitive and uncertain. For this reason, all institutions, including universities, have increased their efforts to respond to the needs of society in an efficient and timely manner.

One of the main reasons for this trend is the *value of money*, a perspective of both representatives (governors) and taxpayers (citizen-consumer), reason, which motivates citizen demand for accountability in terms of quality and public sector efficiency.

For the above reasons, it is legitimate to require those responsible for universities and research and development centers to render accounts and make their management transparent. They are required to meet a minimum quality standard, in addition to making a constant effort to improve education. It is clear that the second objective must be a permanent concern of the universities, if they want to be in a good position to compete.

Basically, any evaluation effort can be implemented from two points of view. The first, which is external, is normally carried out by governments and by national and autonomous agencies, where the purpose is to control and/or measure. It can be generated in different ways: accreditation¹⁷, institutional evaluation and *benchmarking*¹⁸.

The second point of view is internal, and is carried out by the organization of the university. The internal evaluation seeks that the government and quality improvement systems of an institution concentrate their efforts to improve the quality of teaching, research, and specific policies (internationalization, resource management, and student support). Such a process is normally articulated by a self-evaluation in collaboration with external visitors (external evaluation) and the evaluation of courses or programs.

In the immediately following spaces, a proposal will be presented that responds to the approach of quality assurance and institutional accountability that has been proposed here as an imperative.

17 External accreditation in most institutions is intended to assess whether a higher level school meets the minimum requirements to teach a study program; otherwise, its official validity is denied, that is, it cannot issue certificates and/or titles endorsed by the State; An example of this type of monitoring is the Chilean accreditation (Kent, 2002: 266-269), European Union countries such as Finland, France, the Netherlands, Denmark and England (Center for Quality Assurance an Evaluation of Higher Education and Comité National d'Evaluation, 1998: 8). In the case of Mexico, it is the SEP that grants permits for a higher education school to offer its programs with official validity. Regarding the term " *accreditation*", it is used when a study program is accredited as *quality* by a civil association accredited by COPAES; If the school programs are not accredited by COPAES, they do not lose their official validity recognized by the SEP at any time.

18 Anglo-Saxon word meaning point of reference (Goldsmith & Pérez, 1997: 342). The evaluation institutions do not carry out *benchmarking*, it is usually developed by specialized magazines (Weber, 2003: 2).

8.2.2.2. Outline of the Proposal

Below are some suggestions for the academic evaluation of IESPs in Mexico, based on efficiency (quantitative methods)¹⁹ and formative or pedagogical evaluation (quantitative and qualitative methods)²⁰, linked to accountability structures²¹. The proposal focuses on a national evaluation system based on the powers of the H. Congress of the Union to supervise the work of the Executive. The Evaluating Institution (IE) proposed here must first have commissions made up of specialists in the different areas of knowledge, in order to maintain scientific parity.

In addition, it will be necessary to design an Organic Law²² that governs EI, and that *voluntarily involves*²³ IESPs in internal and external evaluations. The results of the evaluations must be published so that citizens know the performance of the IESP, which would help new students to choose the career and institution that meet their expectations.

EI must make public the institutional goals and objectives, the selection procedures for directors and commissioners, the methodologies used in the evaluation, the scientific and pedagogical foundations for the design of indexes, the results, the recommendations issued, the institutional financial statements, as well as the response of the IESP to their recommendations.

Transparency must be a primary characteristic of EI in order to generate a reputation that builds authority in the academic environment. Thus, being an institution to which responsibilities are delegated from the Honorable Congress of the Union, the directors of the institution (coordinators of the same) must be accountable to it. It is proposed that the EI council be elected by the Legislative Branch, through a shortlist (of advisers) that could be proposed by the SEP and ANUIES, as long as they are citizens without partisan affiliation or minister of any religion. And it is of vital importance that the directors remain in their posts continuously, at least until Congress considers their removal, since this would give continuity to institutional planning around the task of evaluation.

19 According to Puente "the efficiency approach (quantitative method), understood as system efficiency in terms of spending and performance (...) society does not dispute that it is spent on education, it does question how. For this reason, direct or indirect factors of the efficiency of the educational system are evaluated, such as the management of the centers, teacher training or the incidence of the media. There is consensus that efficacy does not guarantee quality: it is a necessary condition, but not a sufficient one" (Puente, 2004: 3).

20 And the formative or pedagogical evaluation (quantitative and qualitative method), for its part, "focuses directly on improving the quality of the evaluation. Under this approach, it seeks to know the quality of the educational service, monitoring for this the role played by the different components of the system: the educational administration, the management and organization of the centers, the teachers, the students, the curriculum, the didactic methodologies., among others. This approach is always present with a question for controversy: the different opinion that the administration, teachers, family, among others have on the concept of quality" (*Idem*).

21 The agent must not only report the results of his management, he must also report on the decisions made in this regard (Ugalde, 2002: 14).

22 The law will describe, among other aspects: objectives, ends and goals; organizational structure, own resources; and information and transparency (Detailed Reports and General Reports).

23 It is essential to continue with the allocation of additional financing linked to the evaluation, otherwise there will be a risk that the institution will disappear, as was the case with CONAEVA (Kent, 2002: 287). However, said financing will be conditioned on compliance with the recommendations issued by the Evaluating Institution, through audits carried out by the Superior Audit of the Federation (ASF) or the Secretariat of Public Function.

On the other hand, it is proposed to continue with economic incentives from the government. However, the evaluation must be aimed at defining training programs as well as deficiencies in the infrastructure of the schools. Evaluations must not be used to violate the right to education, discredit the work of IESPs, or to generate monopolies such as COPAES and CENEVAL. The evaluation with a diagnostic approach is adequate, since an *accredited (quality) and non-accredited (non-quality)* solution is not sought, which could well harm the IESPs, before benefiting them.

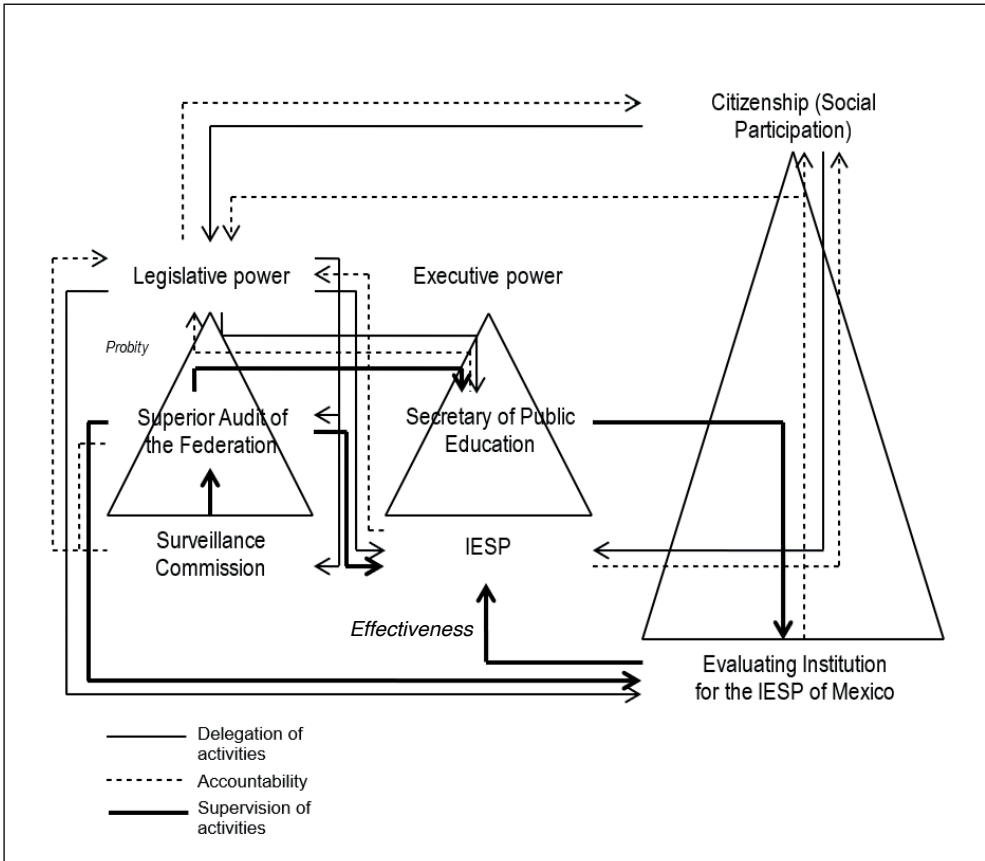
Also, in order to reduce evaluation costs, it is suggested that each of the IESPs have a Social Council (SC), which would be in charge of carrying out the internal evaluation under the supervision of the IE, this way institutionalizes the Internal Evaluation/External Evaluation relationship. Another of the functions of these councils will be to express their universities' disagreements with possible recommendations. Appeals are valuable instruments, as long as they have scientific and pedagogical bases, to improve the evaluation methodology. And, in the event that the appeals proceed, EI would be obliged to rectify its recommendation.

Table 8.1 outlines the outline of the evaluation proposal for IESPs in Mexico, considering a quality assurance and accountability approach.

Likewise, the answer to the question, *who watches the watchman?*, is currently in the Superior Audit Office of the Federation (ASF), which in turn is supervised by the Congressional Surveillance Commission. And, additionally, it is proposed that the supervision or monitoring be carried out, also, by the SEP²⁴. Therefore, both the probity and the performance of the evaluation institution for IESPs will be monitored.

24 The education commissions of the Chambers of Deputies and Senators have the power to call to account the President, the Secretary of Public Education, and for the proposal to the Council of the Evaluating Institution, according to the Organic Law of the General Congress of the United States Mexicans. According to Montesquieu, Congress must not have powers of execution, since "when the Legislative Power and the Executive Power meet in the same person or the same body, there is no freedom; confidence is lacking, because it may be feared that the monarch or the senate will make tyrannical laws and execute them themselves tyrannically (...) The representative body is not elected (...) to take any active resolution, which it would not do well, but to do laws and to supervise the faithful execution of those that exist" (Montesquieu, 1998: 104 and 106).

Table 8.1 Academic Evaluation of the IESP of Mexico with Quality Assurance and Accountability Approach



Source: self made.

The proposed accountability mechanism through academic evaluation coincides with the definition described by Crespo (2000)²⁵ and Ugalde (2002)²⁶.

25 According to Crespo, accountability must meet certain assumptions, in such a way that one can speak of the existence of an effective political democracy: a) that all rulers, at all levels, are subject to accountability. In a democracy, whoever has more power has greater political responsibility. That is to say, the most powerful must be able to be called to account for their decisions; b) accountability must flow from the bottom up, that is, it is the representative institutions themselves, the citizens and the courts, which must be able to call rulers to account at different levels, including the head of government. If accountability does not flow from the bottom up, but vice versa, then the head of government would go unpunished; and c) in a democracy, political institutions will have the capacity to call rulers to account, but peacefully. Accountability provides information to the interested citizen about the efficiency of public organizations that must meet explicit objectives of the institutions (laws). Therefore, accountability is made up of three elementary institutional figures: 1) evaluation (internal and external) of public organizations; 2) publication of the evaluation results; and 3) mechanisms for rewarding and punishing citizens towards the public administrator. The three institutional figures for accountability are formed in a circular system of powers, a system that has been called counterweights. In the case of Mexico, there are three important powers, the executive, the legislative and the judicial, each of which has surveillance mechanisms towards the other two powers. Accountability is aimed at evaluating the honesty of public administrators, as well as the effectiveness of their work. There, the types of governmental responsibility that have been described are synthesized: the legal, related to honesty, and the political, associated with efficiency (*Vid.*, Crespo, 2000: 6-55).

26 Under the institutional approach, Ugalde provides, in his definition of accountability, a synthesis of work carried out by various researchers: "Accountability is defined as the permanent obligation of the representatives or agents to inform their principals or principals of the acts that they carry out as a result of a delegation of authority that is carried out

Thus, accountability is carried out vertically, that is, the citizenry is informed, so that their decision-making at the time of voting for their representatives is carried out with greater certainty. In addition, it complies with its complement, horizontal accountability, that is, under a system of mutual surveillance based on the division of powers.

8.2.2.2.1. Elements and Objectives of the Proposal

In general, the elements of accountability include: monitoring the probity (legal responsibility) and the effectiveness (political responsibility) of public servants; the publication of the results derived from the presentation of information by the public servant or by the monitoring (audits and evaluation) and the assignment of a punishment (criminal and administrative sanctions, electoral punishment, among others) or a prize (recognitions, incentives economic, electoral prize, among others), depending on the results.

Thus, the elements of accountability are built vertically and horizontally, that is, in the division of powers and in the consideration of a system of democratic representation.

In the case of public higher education in Mexico, accountability is not exempt from meeting the two objectives attributable to it: probity and effectiveness. As far as probity or legal responsibility is concerned, in Mexico there is the ASF, in addition to the institutions of budget control by the Executive (Secretary of Public Function, Secretariat of Finance and Public Credit, among others). And, in the case of performance, effectiveness or political responsibility, there is only the evaluation of the SEP as an institutional figure. The SEP (Executive Branch) and the ANUIES, as has been pointed out in advance in these spaces, have created a series of private organizations that have been called the evaluation and accreditation system, although none of these organizations can be considered within the rendering of accounts, since being private, the State cannot impose the interests of the nation and, therefore, cannot demand that they render accounts to the citizens.

In summary, Mexico does not have horizontal accountability to ensure the effectiveness of higher education, it must even be added that the other levels of education do not have horizontal accountability either.

In the context of the scheme proposed here, when carrying out an approach to the objectives that academic evaluation would have as an instrument of accountability and quality assurance in public higher education, three sources are identified for the description of the objectives: 1) those of a legal and constitutional nature; 2) those originated by scientific, technological and pedagogical arguments (Pacheco & Díaz, 2002: 90-109) ; and 3) those derived from the agent-principal relationship (Ortmann & Squire, 1996: 9-25).

In the first place, through the objectives of legal and constitutional origin, it is necessary to seek to evaluate or monitor the performance of the IESPs regarding the objectives of education that are described, mainly, in Article 3 of the Constitution and in the General

through a formal or informal contract and that implies sanctions in case of non-compliance. The principals or principals also supervise the representatives or agents to guarantee that the information provided is reliable" (Ugalde, 2002: 14).

Law of Education²⁷. Secondly, the objectives derived from the scientific, technological and pedagogical arguments identify that the evaluation of the training of university professionals materializes in light of the set of modifications in the institutional, cultural, scientific processes involved and in the labor market²⁸. And, in third position, the objectives originated by the agent-principal link²⁹, must be aimed at evaluating the reputation of the IESP related to a culture in science and technology, in order to increase the economic value of the certificate or title of the graduates. and to improve the dissemination of university culture (science, technology, fine arts, sports, among others)³⁰.

27 For the Legislative Power, the Constitution dictates the responsibility of issuing the necessary laws, destined to distribute the educational social function between the Federation, the States and the Municipalities; set economic contributions; and indicate the sanctions applicable to officials who do not comply or do not enforce the relative provisions, as well as to all those who violate them. In addition, the Constitution dictates to the Executive an education based on human, secular, scientific and cultural rights with full subsidy in education provided by the State and specific powers for universities and autonomous higher education institutions. On the other hand, it dictates to Congress the allocation of budgets and the monitoring of both the honesty and the efficiency of the public servants who administer the educational system.

28 In neo-institutional political science, an analytical framework has been developed called the *principal-agent model* that implies the delegation process and the accountability that accompanies it (Ugalde, 2002: 19). This model has been studied by several academic specialists in game theory (*Cfr.* Rasmusen, 1996: 195; and Shubik, 1992: 613 and 1996: 367). This game deals with a relationship between a subject (called *principal*) that delegates to another subject (called *agent*) authority to execute acts on his behalf. In exchange for this delegation, the agent agrees to render accounts (signals) to the principal, who has the power to penalize him in case of non-compliance or to remove him from office in case of poor performance. One of the most important aspects in this game is that of the asymmetric information generally existing between the principal and the agent (Rasmusen, 1996: 195-199). Asymmetric information can cause problems in the relationship between the principal and the agent, since the agent has incentives to deviate from the principal's mandate and act for his own benefit. To solve *opportunistic* behavior problems, some responses have been developed that seek to mitigate the opportunism of agents towards their principals, of which the most important for its effectiveness is accountability (*Ibidem.*, 171-185; and Ayala, 2003: 167-172). In order for the principal to be able to offer incentives to his agents when they fulfill their mandate and sanction them when they do not, it is necessary to have accountability systems that, on the one hand, oblige the agent to report in detail to the principal on their actions and results. and, on the other hand, provide the principal with mechanisms to monitor the agent's performance. Finally, the principal must have punishments to penalize the agents who did not adequately fulfill their mandate. Without sanctions, the principals are powerless against their agents. In political matters, punishments (formal and informal) include penal and administrative sanctions, lawlessness, and electoral punishment at the polls during the next election.

29 Ortmann and Squire (1996) present a game-theoretic approach to the internal organization of Universities, suggesting that higher-level learning institutions can be conceptualized as a *principal-agent cascade*, which describes a set of games in a vertical structure of agents (subordinates) who are hired by principals. Accountability allows the last principal (student/student) to reward or punish the first agent (supervisor/representative) of the cascade (Ortmann & Squire, 1996: 9). And, for his part, Shubik (1992) has described public administration as a *game of games* (Shubik, 1992: 614).

30 The Ortmann and Squire cascade runs through four levels, and each level takes the form of a player who represents one of the four IESP constituents. Students/Students play the role of last principal, Teachers take the role of last agent, and Supervisors/Props and Administrators take roles of both agents and principals, depending on their position in the cascade. In order to detect the goals and interest of each player, Ortmann and Squire carry out a brief analysis of each player: 1) *student/student*: the player is interested in improving the real and perceived value of the IESP diploma, for which reason he demands your agent (supervisor/representative) increase the reputation of the EES and hire efficient administrators and teachers. 2) *Supervisor/Representative*: The player's goals are to maintain and improve the reputation of the school, maintain the trust of the student/student through the hiring of efficient administrators and teachers. Demand of his agent (administrator) to maintain the confidence of the Student / student, primarily by a responsible administration of the finances of the IESP. 3) *administrator*: the administrator's goals are: to increase the reputation of the IESP, increase income and delegate administrative duties to teachers or support people or *staff*. Demands his agent (teacher) to increase the reputation of the school through publishing and teaching; as well as sharing administrative duties with him. 4) *professor*: his goals are to increase his professional reputation; his permanence in the position; use your time in activities of the IESP, time that you consider as free time; increase foreign income through marketing, consulting and conferences. Finally, from this cascade the following games can be obtained: 1) student/student-supervisor/representative; 2) supervisor/representative-administrator; and 3) administrator-teacher. One of the solutions to the asymmetric and incomplete information that could exist in any of these games is accountability. Accountability, in addition to being a right, is a technological solution for directing tensions, reducing conflicts, and at the same time improving the performance of government organizations.

8.2.2.2.2. Accountability in the Proposed Approach

Accountability is a global concept that accepts classifications according to various criteria. One of the most suggestive classifications of accountability occurs in the one elaborated by O'Donnell (2000: 7), who divides this concept into *horizontal* accountability and *vertical* accountability.

Horizontal accountability refers to the existence of state agencies with legal authority to undertake punitive actions, in relation to illegal acts or omissions of other state agents or agencies (Ugalde, 2002: 27)³¹. Accountability is horizontal insofar as it takes place between institutions of the same hierarchical level, but independent of each other³².

Similarly, the vote of the voters, as well as the work of citizen groups and the media are instruments that complement horizontal accountability for the purpose of holding the government accountable. It is a second aspect, *vertical accountability*. This describes a relationship between unequals: bureaucratic surrender in which a hierarchical superior tries to control his subordinates, or electoral surrender in which voters judge and monitor representatives.

And, according to O'Donnell's (2000: 7) classification, vertical accountability is divided into two, the electoral and the social vertical. The first refers to elections as a mechanism to stimulate the responsibility of governments³³. The other side of vertical accountability, called *vertical social*, is made up of citizen groups and the media. Unlike electoral suffrage, this mechanism relies on measures based on moral and public criticism³⁴.

31 This way of rendering accounts supposes the surveillance of the organs of the State by other institutions, also state, endowed with autonomy to exercise control functions. The Executive, Legislative and Judicial powers, in the different levels of government, must be accountable to each other and to other autonomous institutions whose task is to review their behavior.

32 In horizontal accountability, the Executive, Legislative and Judicial powers, in addition to fulfilling their own functions (executing laws and carrying out a government program; creating and modifying laws, and ensuring the legality of acts and compliance with laws, respectively), they also have the responsibility to monitor each other based on the principle of checks and balances. If any power, theoretically and constitutionally, had powers to regulate the exercise of other powers, the principle of checks and balances would be weakened and horizontal accountability would be unidirectional and would end up facilitating the arbitrariness and discretion of the strongest power, which same in the case of the Executive as well as the Legislative. And, mutual surveillance between the Executive and Legislative powers sometimes requires the intervention of the Judiciary, which is constitutionally empowered to intercede when conflicts arise between powers.

33 Although the citizen vote lacks binding effects and sanctions in the event that a ruler does not fulfill his campaign promises, it serves to warn rulers and legislators that an incorrect exercise of public function has consequences and this tends to stimulate the responsibility of the government. Electors (voters-consumers) can exercise sanctions by not re-electing the party in government or punishing a representative by denying him a second term (Ugalde, 2002: 31). This well-established mechanism is constituted by regular, universal, impartial, credible and competitive electoral elections. *Who watches the watchman?*, an expression that synthesizes the theoretical problem of accountability, finds part of its answer in electoral suffrage. The vertical and rigid structure of the bureaucracy explains how obligations are delegated and accounts are asked for actions related to job performance. But the pyramidal structure of the government ends up depositing the ultimate command in a single person, in which there is no subsequent boss. That position is the head of government, entrusted to a president or prime minister. The question then arises as to who watches over that boss. The answer, in addition to the checks and balances of the separation of powers, rests on the citizen vote. If the president or prime minister acts irresponsibly, the voter has the power to place another party in government in the next election. And if re-election as head of government is a constitutional possibility, the vote is strengthened as a negative incentive to force the government to abide by the legal framework. The elector is the ultimate watchman.

34 Exposing and disqualifying the government for certain actions constitute the body of the sanction. These sanctions can be transformed into a punishment at the polls. Or, they can trigger control processes by Congress or the Judiciary until they even conclude in a criminal or administrative sanction, typical of horizontal accountability (*Ibidem*, 2002: 32).

This scheme of accountability applied to the process of academic evaluation of the IESP in Mexico, will try to be reproduced in the following spaces.

8.2.2.2.1. Horizontal and Vertical Accountability

The proposal complies with horizontal accountability, since an institutional figure based on the division of powers is formed. The Legislative Power has the institutional powers to establish the course of higher education, as well as to monitor the Executive Power on compliance with the law issued in this regard; these attributions are not held by the SEP, ANUIES, COPAES or CENEVAL. Congress is the power of representation par excellence, it is through this power that society must send its institutional proposals.

In Mexico, there is a distrust of the educational system on the part of SEP officials³⁵. Additionally, it creates with ANUIES a system of evaluation and accreditation with civil associations, which obtain income directly, since additional financing from the treasury is implemented to encourage evaluation and accreditation through these organizations.

It has been pointed out that private organizations cannot be subjected to public scrutiny, much less if they are civil associations, for the simple fact that they are private (at least while the current Federal Civil Code remains). It is the SEP that has exceeded its powers; however, the responsibility is not only of the Executive Branch; the Legislative Power and the Judicial Power are also responsible for this deviation of powers, since their indifference or inefficiency is what has allowed the Executive Power to be the only one that dictates the scientific-cultural course of higher education in the country.

In addition, the proposal that is expressed here also complies with vertical accountability by indicating the provision for the publication of the evaluation results (diagnostic type); as well as the recommendations issued by EI. In such a way that the student can have more elements to make his decisions with greater certainty in his choice of the study program and educational institution.

It is sought, therefore, that the citizen (voter and consumer) have information on the performance of public servants in higher education and, therefore, can exercise their

Vertical social accountability includes various actions, exhibits the mismanagement of the government, introduces legal reforms through its representatives, or influences certain public policy decisions implemented by the government. To promote these actions, the media, organizations, and social movements promote legal mechanisms to monitor public policy. This way, vertical accountability mechanisms can stimulate the subsequent activation of horizontal accountability mechanisms. Unlike horizontal accountability, in which control has criminally or administratively binding sanctions, vertical accountability only counts, in the first instance, with moral or symbolic sanctions. There are no economic fines or imprisonment. Social organizations and the media carry out investigations, pronouncements and trials aimed at exposing the public servant who has lacked honesty, transparency, or has attempted against freedom. However, both accountability systems, the horizontal and the vertical, are complementary. Legal and administrative actions are essential to prevent, punish and, eventually, repair the damage caused by an illegal or corrupt act. And vertical accountability actions can trigger horizontal surveillance at a later period.

³⁵ For example, it is the SEP itself that rules out the possibility of using the average of the study certificate, which it itself issues for admission to the upper secondary and higher education level. According to Noguez, "secondary school teachers complain about how poorly prepared primary school graduates are. At the baccalaureate and professional level, the deficiencies of first-year students are also criticized. It seems that the educators are to blame, right? Because nobody can blame them anymore, except the family" (Noguez, 2004: 29).

right with greater certainty, to punish or reward (electorally) the representatives and political parties (Shubik, 1992: 607). It is clear that this type of accountability is only in the form of pulses, that is, it does not originate until after a long period of power administration; however, the influence it can generate is as high or greater than horizontal accountability.

And it is that it is essential that Mexican society once again trust the institutions. In this sense, North (2001: 139-152), winner of the 1993 Nobel Prize in Economics, has warned of the consequences of not paying attention to the design of institutions that seek dynamism in stability. The difference between the countries of the North and the South, according to this author, is the responsible design of the institutions. Indifference to knowledge and design of formal and informal limitations produce social costs that cause uncertainty, distrust, low cooperation, acts of corruption such as the protection of monopolies, inequality and injustice.

The institutional proposal has demonstrated its effectiveness in northern (central) countries, and it is not an innovative proposal in Latin America. On the contrary, it has been developed by scholars such as Friedman for the case of Chile (Kent, 2002: 265-274), for example.

8.2.2.2.2. The Link with Citizenship

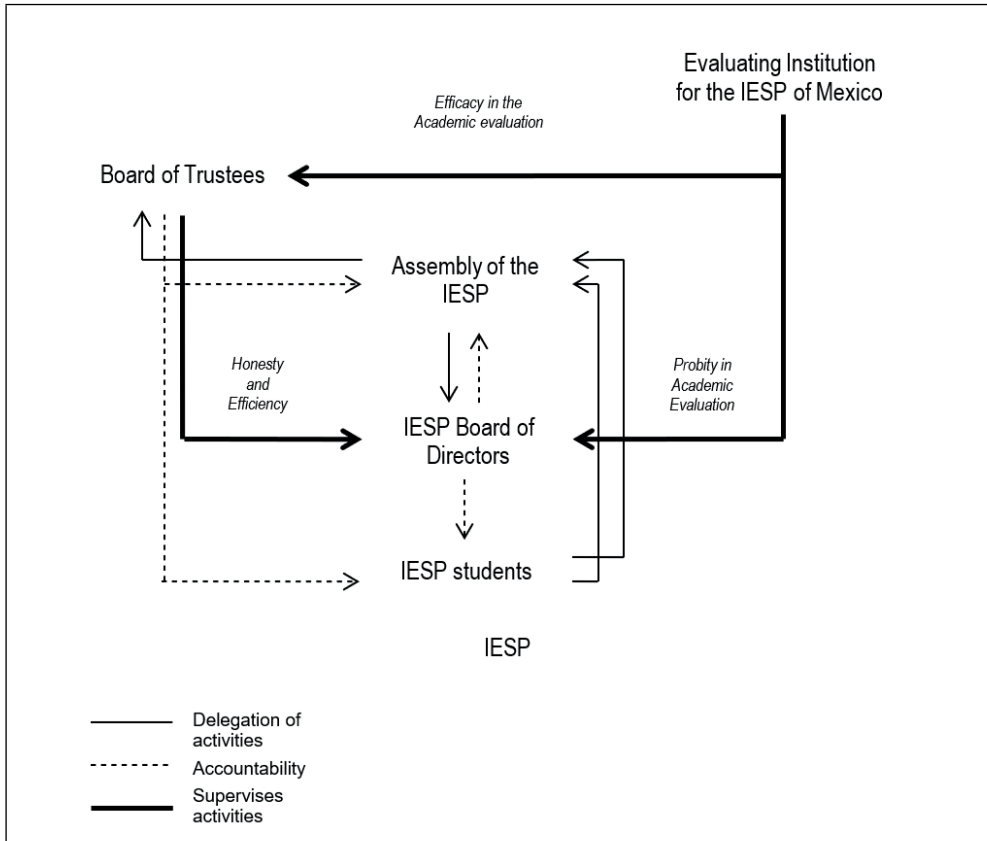
In addition, the internal evaluation of the current proposal conceives a Social Council (SC), whose objectives are monitoring for the accountability of IESP administrators and academic evaluation that provides information for the continuous improvement of the teaching process. -learning (see Table 8.2). The social councils are usually made up of citizens (not affiliated with a political party or ministers of any religious cult) who are not part of the organization of the Board of Directors (Technical Council, University Council, etc.) or of the student community; and, generally, they are citizens (with a particular interest in improving the efficiency of the school), graduates, retired teachers and researchers, among others. And, the evaluating institutions, the social councils and the administrators of the IESPs must generate efforts to improve the performance of higher education in Mexico.

It is not enough for educational evaluation organizations to be autonomous³⁶. If citizens do not have mechanisms that inform them about the performance of IESPs, it will be difficult for them to participate actively with their representatives or in civil associations, in order to convey their demands to those responsible for higher education. And, on the other hand, finally, it must be noted that said mechanisms must always start from the definition of accountability that allow the monitoring of honesty and efficiency in public administration, including evaluation institutions, with the purpose of reducing the distrust and uncertainty

36 The ANUIES argues that the evaluation system with civil associations ensures autonomy, since "international experience shows that it is not convenient for the evaluation of higher education to fall directly on the State, but rather on independent and intermediate organizations between the Universities and the public authorities, with the necessary technical competence and social legitimacy. In the most diverse countries, the distinction between autonomous and non-autonomous Universities is giving way to a common status, according to which all Universities enjoy a wide margin of academic and administrative autonomy and, at the same time, all are subject to evaluations. external in the spirit of the obligation of accountability to society" (ANUIES, 2000: 229-230).

perceived by the citizen towards the work of officials.

Table 8.2 Institutionalization of the Academic Evaluation of IESPs of Mexico and the Link with the Citizenship



Source: Self made.

8.2.2.2.3. Final Considerations of the Proposal

The approach around the academic evaluation of IESPs in Mexico with a focus on quality assurance and accountability that has been presented here, has had the purpose of identifying social participation in higher education through transparency and accountability schemes. Such schemes, in light of what has been reviewed, would facilitate the feasibility of ensuring educational quality (Uemara, 1999). And it is that, in order that the IESP can impact continuously and with greater breadth the social reality of their environment, it is imperative that they adapt their organic structures to be able to provoke a greater citizen participation, taking care at all times of the principle of autonomy.

Then, the IESP must build horizontal government schemes *ad hoc* to the social context in which they are involved, and they must also develop effective evaluation systems

that guarantee their quality and relevance. Thus, the coherence of public action does not go through the isolated action of a relatively homogeneous and centralized political-administrative group, but rather through the choice of multi-actor and coordination schemes at different levels, the result of which is derived from the capacity of public actors. and private to determine a common space where responsibility and legitimacy of decisions are promoted (Ruano, 2002).

Therefore, IESPs, as organizations with a high social commitment, must begin to become models of good governance, since the government schemes of the institutions account, to a large extent, for the forms of government of the societies in question. those found (Ruíz, Martínez & Valladares, 2010). Therefore, the *Proposal with a Quality Assurance and Accountability Approach* to address the *Academic Evaluation of IESPs in Mexico*, which has been discussed here, constitutes an exercise in identifying social participation in higher education through schemes of transparency and accountability, as an element that contributes to the assurance of educational quality, in the context of IESPs in Mexico.

CONCLUSIONS

The situation of educational quality in the Public Higher Education Institutions of Mexico can be explained by the development that is registered, fundamentally, in the tasks of teaching, scientific research, administration/management and extension and dissemination in the academic units of the IESPs. Given this, the purpose of this study was to distinguish the main conditioning factors of the quality of the educational service provided by the academic units of the IESP in Mexico. And, specifically, it was interesting to distinguish the main conditioning factors of the quality of the educational service provided in the school program of the Law Degree of the Faculty of Law and Social Sciences of the Universidad Michoacana de San Nicolás de Hidalgo, in order to define its current situation.

The explanatory variables of educational quality that were considered in this study were thus estimated from an extensive analysis of the specialized literature; taking into account its frequency of mention in the bibliographic review; and carrying out an exercise of classification and concentration of dimensions or categories. In addition, the Analytical Hierarchy technique was used to establish the relevance of the variables in this research; and from the instrumentation of this technique it was derived that the global importance of the variables occurred in the following order: teaching, research, administration/management and extension and diffusion.

The theoretical foundations of quality in the educational field, specifically in higher education, exposed in this study through an extensive tour of the contributions made by different authors and from different perspectives, all of them useful, valuable and, generally, complementary to each other, they oriented the investigation towards the conception that quality constitutes a multidimensional¹ and relative concept².

Developing a culture of quality in IESPs has to do with promoting the participation of teachers, students, administrative staff, workers, managers and citizens in a new way of thinking and acting in accordance with certain benchmarks of effectiveness³, efficiency⁴, relevance⁵, internationally recognized relevance⁶, equity⁷ and transparency⁸, defined multi-

1 According to Márquez (2004), educational quality accounts for a normative concept defined by five dimensions, namely: the philosophical, the pedagogical, the economic, the cultural and the social.

2 Quality is a relative concept, as it is closely linked to issues of ideology and power. Thus, for example, when it comes to understanding the concept, it is necessary to determine who or who defines quality, in what sense it is conceptualized and with what objective(s).

3 The referent of effectiveness has to do with the effective coverage of the goals proposed in the educational plans and programs.

4 The referent of efficiency refers to the economic dimension of educational quality, and has to do with the ideal use of the resources allocated to education.

5 The referent of relevance has to do with the fact that the contents and methods of teaching are adequate for the learning possibilities of the individuals and social conglomerates to whom they are directed; and is associated with the cultural dimension of educational quality.

6 Relevance is linked to the philosophical definition of educational quality; and it is recorded when the contents are relevant to the social group for which they are intended, as they respond to their needs and aspirations.

7 The referent of equity is associated with the social dimension of educational quality; And it occurs when the opportunities for access, permanence and completion of the school cycles are equally distributed, as well as those of obtaining similar results in the learning of individuals from the different strata that make up society.

8 Transparency has to do with the possibility of social participation through the promotion of accountability. And it is that,

stakeholder and accepted by IESPs. For this reason, the research methodology implemented in this research focused its attention on evaluating the development of higher education in the academic unit in question (FDyCS), considering the participation of all its members (students, teachers, managers, administrative workers and graduates) as a fundamental element to support both the processes of evaluation and diagnosis of the current state, as well as the strategies of continuous improvement of the educational quality proposed. Thus, an experience of reflection on the educational process and improvement of its quality was given; and to the materialization of a participatory, representative and legitimized process, with a focus on perceived educational quality that considered the points of view of the actors involved in the educational process.

The development of the work materialized an important participation of professors, students, graduates, managers and workers, mainly in the two stages that preceded the design of the improvement plan for the academic unit under study. Likewise, the verification of the results related to the evaluation criteria and the results of the evaluation process were specified in each phase.

Thus, the data derived from the aforementioned processes have provided useful information to specify the objectives set out in the investigation, in relation to which the conclusions reached are presented in these spaces.

In the first place, the present investigation identified teaching, research, administration/management and extension and diffusion as the main conditioning factors of the quality of the educational service provided in the school program of Law Degree of the Faculty of Law and Social Sciences from the Universidad Michoacana de San Nicolás de Hidalgo; and, regarding the current situation of the aforementioned academic unit, the following data can be established: 1) The teaching of the FDyCS of the UMSNH, in light of the analysis carried out, was classified as *teaching of medium high quality* both by professors and by students and graduates (see Table A.64, Table A.69 and Table A.74 of Annex 65); 2) the research was classified as *medium-high quality research by both professors and graduates* (see Table A.65 and Table A.75 of Annex 65), and was classified as *low-medium quality research* by the FDyCS students of the UMSNH (see Table A.70 of Annex 65); 3) The administration/management activity of the academic unit of study was found to be of *medium-high quality administration/management* by both professors and students and graduates (see Table A.66, Table A.71 and Table A.76 of the Annex 65); 4) the extension and diffusion of the culture of the FDyCS of the UMSNH, based on the research carried out, was found as *extension and diffusion of medium high quality* by professors as well as by students and graduates (see Table A.67, Table A.72 and Table A.77 of Annex 65); 5) according to the materialized analysis, it is feasible to state that the quality of the educational services that are taught in the FDyCS of the UMSNH, in global terms, turned out to be located at the level of medium-

social participation in education, based on the requirement of accountability, unequivocally affects educational quality (Uemara, 1999).

high educational quality (see Table A.63, Table A.68 and Table A.73 of Annex 65); and 6) as can be seen from the groups consulted, a broad coincidence is evident in terms of the perceptions, opinions and responses of professors, students and graduates of the FDyCS of the UMSNH, specifically with regard to teaching, research, administration/management, and extension and dissemination. This way, the general objective of the thesis presented here was satisfied.

Secondly, through chapters 1, 2 and 3 of this study, the first two particular objectives of the research materialized: to describe the theoretical foundations of quality in the educational field, specifically in higher education; and characterize Higher Education Institutions, considering the international, national and Michoacán contexts.

Thirdly, it can be pointed out that the consultation of the criteria that made up the units of analysis of the first stage of the research strategy represented an opportunity to generate a favorable climate towards the evaluation and improvement of educational quality in the academic unit in exam. It can be noted that during this phase the members of the FDyCS of the UMSNH showed greater awareness of their role in the processes of improving educational quality. And, as a result of the consultation carried out in the first stage, the criteria were established that made the analysis of teaching, research, administration/management and extension and dissemination feasible, as the determining factors of educational quality in the FDyCS of the UMSNH (chapters 4 and 5).

This way, the third specific objective of this study was fully fulfilled: to establish in a consensual manner with the members of the university academic unit under study the elements to be considered in determining the quality of the higher education taught in the program UMSNH Law Degree Academician.

Subsequently, the second phase of the research strategy made it possible to obtain a diagnosis of the reality of educational quality in the FDyCS, through the participation of its main actors. And this way, two more particular objectives set out in the research were met, namely: to carry out a consensual self-assessment of the quality of the educational service that makes possible the analysis of the FDyCS in terms of its substantive and adjectival functions of teaching, research scientific, administration/management and extension and diffusion; and apply a self-assessment exercise of educational quality in the school system of the Law Degree in the FDyCS of the UMSNH, in order to generate a diagnosis of the current state of the concept in question in the academic unit of reference (chapters 5 and 6 of the investigation).

Fifth, with regard to the units of analysis, the investigation allowed us to determine that the independent variables (teaching, scientific research, administration/management, and extension and dissemination) considerably and strongly affected and determined the quality of educational services in the FDyCS of the UMSNH (dependent variable), since a broad positive link was verified between the exogenous variables and the endogenous factor, both in the consideration of the perceptions of both teachers and students and

graduates (see Tables 7.1, 7.2 and 7.3; also Tables 7.4, 7.5 and 7.6; and Tables 7.7, 7.8 and 7.9). Consequently, it is affirmed that the impact registered by the previously described variables, in the consideration of an average assessment of the perception of the professors, the students and the graduates of the FDyCS of the UMSNH, was the following: teaching affected the educational quality in 87.30%, research in 72.26%, administration/management in 82.03% and extension and diffusion in 79.30%, from which it can be deduced that teaching is the factor that presented the highest correlation with quality. education, and that all the independent variables presented a concept of strong positive correlation with educational quality, with the exception of the administration/management that presented a considerable positive correlation level (see Table A.40 of Annex 43; Table A.49 of Annex 52 and Table A.58 of Annex 61). And this way, the functional relationship between the dependent and independent variables of the study was deduced and, consequently, the antepenultimate specific objective outlined in this investigation was fulfilled (chapter 7).

Sixthly, it is considered appropriate to point out the importance of verifying the results of the second phase of the field study, which was called *Determination of the Situation (Self-assessment)*, since by allowing the identification of strengths and weaknesses around the educational quality of the FDyCS of the UMSNH, it was possible to formulate a plan to improve the educational quality for the school system of the Law Degree in the FDyCS. And, this way, the seventh specific objective of this inquiry was fulfilled (chapter 8 of the study).

Likewise, as a result of the theoretical investigation, the qualitative criteria used, the empirical exercise implemented and a critical vision around the schemes for determining educational quality, the current work proposes some useful considerations for the self-assessment of IESPs in Mexico. considering quality assurance and the principle of accountability. Thus, it is assumed that there is no single quality criterion applicable to all Universities equally, nor a single model of excellence. In the case of the IESPs in Mexico, the previous sentence applies and, faced with reality, either they continue to deceive themselves and the public by offering what they will never be able to fulfill, or they begin to accept that their mission is not the same as that of foreign institutions, and that they need to look in other directions to find the criteria of excellence that are applicable to them. In other words, the evaluation benchmark must be what each IESP is reasonably capable of achieving given its specific mission and current reality. Therefore, it is reiterated that there cannot be a standard pattern of quality applicable to all IESPs and that the evaluation system must be capable of handling various criteria of excellence and, with this, guarantee an effective evaluative methodological soundness. This way, consequently, the eighth and last specific objective of this study was fulfilled (chapter 8).

Eighth, the general hypothesis of the investigation, in light of the findings derived from the study, was valid and acceptable, for which the following thesis is formulated:

Teaching, scientific research, administration/management and extension and dissemination are the factors that determine to a greater extent the quality of

the educational service provided in the university career of Law Degree of the Faculty of Law and Social Sciences (academic unit). from the Michoacana Universidad de San Nicolás de Hidalgo (Institution of Public Higher Education).

Add to what has been pointed out that having provoked a debate on the educational quality imparted within the FDyCS of the UMSNH, represented an opportunity to understand the state of quality in the academic unit of reference from within, from its actors, *with* a critical vision of the schemes of the evaluation of the educational quality from outside; and with a participatory and non-standardized approach, oriented towards the demands of the academic unit of the IESP in question, and not towards the requirements of the evaluating body. It is noted that determining the educational quality of an HEI cannot be confused with a bureaucratic perspective consisting of filling out forms and generating documentation proving the content of such formats. The information that is produced cannot have an end in itself, rather, it must be considered as a means to improve educational work. And a procedure for determining the educational quality associated (in practice, almost exclusively) to technical acts with recurrent neglect of analysis, debate and improvement on the different currents or schools of thought that have been reproduced in the context of practice is questioned. of the evaluation. And, due to the above, it is an urgent imperative to clarify the theoretical and methodological foundations around the determination of educational quality (evaluation and accreditation), to make its consequences transparent in relation to its usefulness to regulate the educational system (assurance of the quality) and its financial implications (accountability).

In conclusion, the theoretical-documentary work and the field research have responded to the general objective, the specific objectives and the main assumption that were raised in the sense of providing concrete results backed by the perspectives, perceptions and points of view of the specialist theorists, as well as of the fundamental actors of the educational process in the FDyCS of the UMSNH (teachers, students, graduates, managers and workers) who contributed in a participatory way in this research. Finally, it is expected that the result of this work will lead to questioning, reconsidering and strengthening the conventional practices of determining educational quality (evaluation and accreditation) that have been developed in our country; question, reconsider and strengthen from recognizing excesses, formalisms and other deformations that have arisen; that enables the educational authorities to ponder the orientation and form that these programs must have, and that also allows Universities to develop strategies to establish a pedagogical approach to determine educational quality (evaluation and accreditation) and conduct their results with a feedback character; an approach to determine educational quality that involves all sectors to participate in the achievement of quality teaching, research, administration/management and extension and dissemination, and that the results derived from this educational quality improve both the conditions of competitiveness of both the faculty and the students, within the framework of the teaching-learning process.

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ANNEXES

ANNEX 1. APPLICATION OF THE ANALYTICAL HIERARCHY PROCESS IN THE WEIGHTING OF VARIABLES

1. Fundamentals of the Analytical Hierarchical Process in the Weighting of Variables

The Analytic Hierarchy Process (AHP) is a method that was developed by Dr. Thomas L. Saaty of the Universidad de Pennsylvania during the 1970s. The purpose of this methodology is to provide a formal instrument for the evaluation and selection of alternatives, with the attributes of solidity in its mathematical foundations; useful in decision making; and simplicity in its application.

Thus, the Analytical Hierarchy is traditionally classified as a multi-attribute technique for decision-making, which can be carried out in a group or individually, preferably applied to complex problems, and in which it is considered that the decision-maker can solve a problem. It must go through three phases: the first consists of formulating the problem; later, it carries out an evaluation; and, in a third stage, finally, the decision-maker selects the course of action that best contributes to achieving the stated objective.

According to Gass and Rapesak (2004), the Analytical Hierarchical Process (AHP) conceives a problem by stating that the alternatives and objectives constitute a set that can be sectioned into different subsets and separated from each other, and also assuming that among these In the latter there is an order or priority, that is, a hierarchy scheme.

Using systems theory, PJA breaks down a complex problem into hierarchies, where each level is broken down into specific elements. The main objective is placed at the first level, the criteria, sub-criteria and decision alternatives are listed in the descending levels of the hierarchy. The PJA analyzes the factors that intervene in the decision process without requiring that these be found on a common scale, making it one of the decision techniques most used to solve socioeconomic problems; as it incorporates social, cultural, and other non-economic considerations into the decision-making process.

The levels of importance or weighting of the criteria are estimated through adjusted comparisons between them. This comparison is carried out using a scale, which appears in the following equation:

$$S = \left\{ \begin{array}{cccccccc} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \frac{1}{9} & \frac{1}{8} & \frac{1}{7} & \frac{1}{6} & \frac{1}{5} & \frac{1}{4} & \frac{1}{3} & \frac{1}{2} \end{array} \right\} \quad (1)$$

Now, the meaning of each of the values presented in the aforementioned equation

(1), is found in the table shown below:

Table A.1 Scale of Relative Importance or Rating of Activities

Importance	Definition	Explanation
1	Equal importance.	Two elements contribute equally to the goal.
3	Weak dominance.	Experience shows that there is a weak dominance of one element over another.
5	Strong dominance.	Experience shows a strong dominance of one element over another.
7	Demonstrated dominance.	The dominance of one element over another is fully demonstrated.
9	Absolute dominance.	The evidence shows that one element is absolutely dominated by another.
2,4,6,8	Intermediate values between two adjacent ratings.	They are intermediate decision values.
Reciprocal of the numbers above	If element i was assigned any of the above numbers when compared to element j , then j has the reciprocal value when compared to element i .	

Source: Market, 1991: 89.

In the case of n attributes, the adjusted comparison of element i with element j is placed in the position of a_{ij} of the matrix A of adjusted comparisons, as illustrated below:

$$A = \begin{pmatrix} a_{11} & a_{12} & \cdot & a_{1n} \\ a_{21} & a_{22} & \cdot & a_{2n} \\ \cdot & \cdot & \cdot & \cdot \\ a_{n1} & a_{n2} & \cdot & a_{nn} \end{pmatrix} \quad (2)$$

The reciprocal values of these comparisons are placed in the aji position of A , in order to preserve the consistency of the judgment. The participating decision maker must compare the relative importance of one item with respect to a second, using the 9-point scale shown in Table A.1.

According to Saaty (1992), once the corresponding judgments have been entered into the paired comparisons matrix, the problem is reduced to calculating eigenvalues (eigenvalues) and eigenvectors (eigenvectors or eigenvectors), which represent the priorities and the consistency of the process respectively. Thus, in general the following equation has to be solved:

$$A * w = \lambda * w \quad (3)$$

where:

A = Reciprocal Matrix of Fitted Comparisons

(judgments of importance/preference of one criterion over another).

λ = Maximum Eigenvalue of A.

w= Eigenvector corresponding to λ .

Finally, according to the reports by Beyon (2002), Harker and Vargas (1987), Condon (2003) and Tung and Tang (1998), the advantages of using the PJA technique have to do with the following: 1) Evaluations in which there are factors of a qualitative order are allowed; 2) weights assigned to each of the elements are obtained, which are used as decision criteria; 3) the use of computers makes it possible to conduct sensitivity analysis on the results; 4) this technique makes consensus possible among the people who act as decision makers, when working in groups, by facilitating communication between them; 5) the PJA makes it possible to identify and take into account the inconsistencies of the decision makers, since they are rarely consistent in their judgments regarding qualitative factors; and 6) the methodology in question has the ability to handle complex real-life problems.

3. Analytical Hierarchical Procedure

The PJA, as a method, is treated by Mercado (1991) through the Saaty algorithm, proposing the following procedure: 1) The first objective is selected at the immediate level of the alternatives and, using the scale referred to in Table A. 1, a comparison is made between the alternatives as follows; 2) it starts with the element located on the extreme left in a given level -and it is possible to start with the last or the second level of the hierarchy-, which is called pivot, and it is compared against each one of the positioned elements on its far right on the same level. And such a comparison is made in relation to the first element in the immediately higher stratum; 3) in a similar way, the comparison of the second element is made against all those that are located to its right; 4) Thus, based on the above, a comparison matrix is generated where three situations can be observed, namely: a) The derived data is positioned by line -horizontally- from the main diagonal; b) the totality of the elements located in the main diagonal is equal to the unit, which accounts for the comparison of an element against it, and that according to Table A.1 is equal to the unit; and c) the elements located below the main diagonal turn out to be the reciprocals of their symmetrical ones; and 5) the continuation of the process is now directed with the objectives, following a similar treatment, until the global relevance of the alternatives is obtained; and with the relevance derived, the decision-maker is faced with a more comprehensive perspective

and, consequently, counting on a potentially greater systemic criterion, is in a position to support the most appropriate alternative.

4. Application of the Analytical Hierarchy

Applying the PJA, in this study the different segments where the objectives and estimated variables were positioned were initially established. Likewise, the relationships between the strata were established based on the principles of the PJA, and this way an analysis with three levels was configured, where the first corresponds to educational quality as the main objective of study; At the second level, three objectives were located that for the application of this technique were considered the (educational) service, its supply and the academic unit of the IESP. And in the third layer, the variables considered in the study were positioned (see *problem section* in Table A.2).

Following the specific aspects of Satty's algorithm, we proceeded to solve the matrix system to derive the integral or global relevance of the alternatives (variables located in the third level, in this case), with respect to all the objectives (located in the second levels). and first). And, in the same way, the estimations of importance between the variables and the objectives are applied, using for this purpose, the rating scale of the activities in Table A.1. And the scheme of the result derived from this procedure is displayed through Tables A.3, A.4 and A.5.

From the *solution section* of Table A.3, it follows that the total relevances add up to one hundred percent. In addition, it is noteworthy that the global importance of the variables was recorded in the following order: Teaching, research, administration/management, and extension and dissemination. Likewise, in the context of the objectives, the educational service stands out with 65.1%, followed by the sub-minister (22.3%) and the academic unit of the IESP with 12.7%. Finally, these results account for the hierarchical order of objectives and alternatives with their respective global and relative relevance, as well as the importance of the estimated variables in the study of educational quality in this research work (teaching with 47.3%, research with 31.5%, administration/management with 16.7% and extension and dissemination with 4.5%).

Table A.2 Application of the Analytical Ranking Process in the Weighting of Variables

<i>Problem:</i>					
General objective	Educational quality				
Specific objectives	Service	Supply		IESP Academic Unit	
Alternatives / Variables	Teaching	Investigation	Administration/ Management	Extension and Dissemination	
<i>Solution:</i>					
	Educational quality				
	Service	Supply	IESP Academic Unit		
	65.1%	22.3%	12.7%		
Variables / Specific Objectives	Teaching	Investigation	Administration/ Management	Extension and Dissemination	Total
Service	45.8%	34.8	15.5%	3.9%	
Supply	61%	22.1%	12%	4.9%	
Academic unit from the IESP	31.3%	31.3%	31.3%	6.3%	
Global Relevance	47.3%	31.5%	16.7%	4.5%	100%
<i>Elaboration:</i>					
<i>Activities Rating Scale</i>					
Importance	Definition		Explanation		
1	Equal importance.		Two activities contribute equally to an objective.		
3	Slight importance of one over another.		There is evidence that favors one activity over the other, but it is not conclusive.		
5	Essential or strong importance.		There is evidence and logical criteria to show that one activity is more important than the other.		
7	Demonstrated importance.		There is conclusive evidence to show the importance of one activity over the other.		
9	Absolute importance		The evidence in favor of one activity over the other is the highest possible order of affirmation.		
2,4,6,8	Intermediate values between two adjacent ratings.		There is a compromise between two values.		

Source: Own elaboration, based on Market, 1991.

Table A.3 Activity Rating Scale

A. Service							
<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>
A ₁ → A ₂	1,0	A ₂ → A ₃	3,0	A ₃ → A ₄	9,0	A ₄ → A ₅	3,0
A ₁ A ₃	5,0	A ₂ A ₄	5,0	A ₃ A ₅	3,0		
A ₁ A ₄	9,0	A ₂ A ₅	3,0				
A ₁ A ₅	1,0						
B. Supply							
<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>
A ₁ → A ₂	5,0	A ₂ → A ₃	5,0	A ₃ → A ₄	9,0	A ₄ → A ₅	3,0
A ₁ A ₃	7,0	A ₂ A ₄	3,0	A ₃ A ₅	3,0		
A ₁ A ₄	5,0	A ₂ A ₅	3,0				
A ₁ A ₅	1,0						
C. IESP Academic Unit							
<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>	<u>Alternatives</u>	<u>Cal.</u>
A ₁ → A ₂	1,0	A ₂ → A ₃	1,0	A ₃ → A ₄	5,0	A ₄ → A ₅	3,0
A ₁ A ₃	1,0	A ₂ A ₄	5,0	A ₃ A ₅	1,0		
A ₁ A ₄	5,0	A ₂ A ₅	1,0				
A ₁ A ₅	1,0						
D. Objectives							
	<u>Alternatives</u>	<u>Cal.</u>		<u>Alternatives</u>	<u>Cal.</u>		
	O ₁ → O ₂	5,0		O ₂ → O ₃	3,0		
	O ₁ O ₃	3,0					
A ₁	Teaching						
A ₂	Research						
A ₃	Administration / Management						
A ₄	Dissemination and Extension						
O ₁	Service						
O ₂	Subminister						
O ₃	IESP Academic Unit						

Source: Self made.

Table A.4 Matrix Exposure

A. Service									
1.0	1.0	5.0	9.0	=	45.0	=	2.6	45.8%	A ₁
1.0	1.0	3.0	5.0		15.0		2.0	34.8%	A ₂
0.2	0.3	1.0	9.0		0.6		0.9	15.5%	A ₃
0.1	0.2	0.1	1.0		0.0		0.2	3.9%	A ₄
							<u>5.7</u>	<u>100.0%</u>	
B. Supply									
1.0	5.0	7.0	5.0	=	175.0	=	3.6	61.0%	A ₁
0.2	1.0	5.0	3.0		3.0		1.3	22.1%	A ₂
0.1	0.2	1.0	9.0		0.3		0.7	12.0%	A ₃
0.2	0.3	0.1	1.0		0.0		0.3	4.9%	A ₄
							<u>6.0</u>	<u>100.0%</u>	
C. IESP Academic Unit									
1.0	1.0	1.0	5.0	=	5.0	=	1.5	31.3%	A ₁
1.0	1.0	1.0	5.0		5.0		1.5	31.3%	A ₂
1.0	1.0	1.0	5.0		5.0		1.5	31.3%	A ₃
0.2	0.2	0.2	1.0		0.0		0.3	6.3%	A ₄
							<u>4.8</u>	<u>100.0%</u>	
D. Objectives									
1.0	5.0	3.0	=	15.0	=	2.5	65.1%	O ₁	
0.2	1.0	3.0		0.6		0.8	22.3%	O ₂	
0.3	0.3	1.0		0.1		0.5	12.7%	O ₃	
							<u>3.8</u>	<u>100.0%</u>	
A ₄	Dissemination and Extensic								
O ₁	Service								
O ₂	Subminister								
O ₃	IESP Academic Unit								

Source: Self made.

Table A.5 Global Relevance of Variables

	45.8%	61.0%	31.3%		65.1%		47.3%	A ₁
	34.8%	22.1%	31.3%				31.5%	A ₂
	15.5%	12.0%	31.3%	X	22.3%	=	16.7%	A ₃
	3.9%	4.9%	6.3%		12.7%		4.5%	A ₄
							<u>100.0%</u>	
A ₁	Teaching							
A ₂	Research							
A ₃	Administration / Management							
A ₄	Dissemination and Extension							
O ₁	Service							
O ₂	Subminister							
O ₃	IESP Academic Unit							

Source: Self made.

ANNEX 2. DETERMINATION OF THE STUDY SAMPLE SIZE

Table A.6 Determination of Study Sample Size

$$n = \frac{Z^2 * P * (1 - P) * N}{e^2 * (N - 1) + Z^2 * P * (1 - P)}$$

Nomenclature:

n = Representative sample size.

Z = Confidence level = 1.96 = 95%.

N = Population size.

P = Probability of success = 0.50.

e = Expected error = 0.1

Source: Devore, 2006.

Formula to obtain sample size in finite populations.

ANNEX 3. PRELIMINARY SCHEME FOR THE OPERATIONALIZATION OF THE TEACHING STUDY VARIABLE

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Teaching	Teaching effectiveness	<ul style="list-style-type: none"> - Entry efficiency. - Terminal efficiency. - Degree index. - Tutorials.
		Didactic strategies	<ul style="list-style-type: none"> - Oral presentation. - Master class. - Problem resolution. - Teamwork. - Team work. - Question answer. - Debate. - Discovery.
		Learning assessment	<ul style="list-style-type: none"> - Diagnostic evaluation. - Partial evaluation. - Continuous assessment. - Sporadic evaluation. - Oral evaluation. - Scheduled evaluation. - Written evaluation. - Surprise evaluation. - Evaluation of question/answer dynamics. - Bibliographic works.
		Curriculum	<ul style="list-style-type: none"> - Curriculum structure. - Program content. - Goals. - Teaching-learning activities. - Programs of the subjects. - Incorporation of new information and communication technologies.
		Didactic interactions	<ul style="list-style-type: none"> - Teacher-student relations. - Teacher-teacher relations. - Teacher-manager relations. - Student-student relations. - Student-manager relations.
		University education planning	<ul style="list-style-type: none"> - Goals. - Goals. - Schedules-subjects-school year. - Career entry policies. - Graduation policy.
		Teacher training	<ul style="list-style-type: none"> - Initial training. - Permanent education. - Professional development.

		Inputs or physical resources	<ul style="list-style-type: none"> - Classrooms. - Library. - Information centers. - Computer laboratory. - Tutoring centers. - Audience. - Workshops. - Recreation area. - Sports area. - Café. Teacher's lounge. - Parking lot. - Teaching materials. - Technological material.
		Internal environment	<ul style="list-style-type: none"> - Communication and human relations (mission). - Organizational climate (academic freedom). - Shared spaces to think and make decisions.
Quality of educational service	Teaching	Training processes	<ul style="list-style-type: none"> - Educational model. - Teaching models. - Curriculum model.
		Academic staff regulations	<ul style="list-style-type: none"> - Regulation or statute of the entrance of the academic personnel. - Regulations or statutes for the promotion of academic staff. - Regulation or statute for the permanence of the academic staff.
		Regulations for students	<ul style="list-style-type: none"> - Student regulations governing their admission. - Regulations for students that regulate exams. - Regulations for students that regulate their promotion and graduation. - Degree regulation. - Regulation of social service. - Regulation of academic scholarships.

Source: Self made.

ANNEX 4. PRELIMINARY SCHEME FOR THE OPERATIONALIZATION OF THE RESEARCH STUDY VARIABLE

Table A.8 Preliminary Scheme for the Operationalization of the Study *Research Variable*

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Investigation	Legal framework of the investigation	<ul style="list-style-type: none"> - Regulation of the investigation. - Contest policies for research. - Research project evaluation policies. - Economic support policies for research.
		Research organization	<ul style="list-style-type: none"> - Authorities and organizational units of the investigation. - Researchers. - Academic bodies.
		Research modalities	<ul style="list-style-type: none"> - Research areas. - Lines of investigation.
		Research Interactions	<ul style="list-style-type: none"> - Resources assigned to investigation with supervision.
		Results of the investigation	<ul style="list-style-type: none"> - Internal research projects. - External research projects. - Mixed research projects.
			<ul style="list-style-type: none"> - Teaching-research relationship (materials); - Participation of students in research (thesis, research assistants).
			<ul style="list-style-type: none"> - Work documents. - Thesis. - Monographs. - Theses. - Books. - Chapters of books. - Articles. - Presentations. - Conferences.

Source: Self made.

ANNEX 5. PRELIMINARY SCHEME FOR OPERATIONALIZATION OF THE STUDY VARIABLE *ADMINISTRATION/MANAGEMENT*

Administration/Management Study Variable

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Administration/ Management	Personnel administration.	<ul style="list-style-type: none"> - Academic management. - Research management. - Economic management. - Administrative management.
		Management of administrative and financial processes.	<ul style="list-style-type: none"> - Efficient coordination and decision-making to support the academic program. - Academic staff related to the needs of the program. - Non-academic staff related to the needs of the program. - Management and use of financial resources in support of the academic program. - Evaluation and monitoring. - Accountability.
		Academic-administrative management of the program.	<ul style="list-style-type: none"> - Executive authorities. - Collegiate academic bodies for the development of the program. - Academic institutionalization.
		Quality improvement management.	<ul style="list-style-type: none"> - Motivation and satisfaction. - Performance evaluation. - Improvement mechanisms.
		Institutional organization and structure.	<ul style="list-style-type: none"> - Organization model. - Clarity of the mission. - Distribution of functions. - Exercise of academic leadership authority.
		Regulations for employees.	<ul style="list-style-type: none"> - Regulations governing the functions of non-academic staff of Support program development. - Regulations for entry of non-academic staff. - Regulations for the promotion of non-academic staff.
		Regulatory guidelines for administration.	<ul style="list-style-type: none"> - Regulations for authorities. - Rules for the management and control of institutional finances.

Source: Self made.

ANEXO 6. EXTENSION AND DIFFUSION STUDY VARIABLE

Extension and Diffusion Study Variable

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Extension and Diffusion	Legal framework	<ul style="list-style-type: none"> - Regulation of extension or link. - Dissemination regulation. - Extension or link policy. - Diffusion policy.
		Organization	<ul style="list-style-type: none"> - Authorities and organizational units of the investigation (Organization chart). - Program(s) of extension or linkage. - Dissemination program(s). - Resources assigned to extension and diffusion.
		Formats	<ul style="list-style-type: none"> - Inter-institutional agreements. - Research stays. - Academic exchange. - Inter-institutional collaboration. - Social service. - Follow-up of graduates. - Conferences. - Conferences. - Workshops. - Graduates. - Edition of periodicals. - Exhibitions. - Continuous training courses and programs. - Social activities. - Sport activities. - Other cultural activities.
		Interactions	<ul style="list-style-type: none"> - Teaching-extension and diffusion relationship. - Administration-extension and diffusion relationship.
		Products	<ul style="list-style-type: none"> - Leading promoters of change and social progress from extension and diffusion. - Contribution to the environment.
Quality of educational service	Extension and Diffusion	Relations with the context	<p>Through teaching, research and administration activities:</p> <ul style="list-style-type: none"> - Bonding with families. - Links with companies. - Linkage with the community. - Links with the government. - Links with other educational institutions and/or research (national). - Links with other educational institutions and/or research (international).

Source: Self made.

ANNEX 7. LIST OF FACTORS ASSOCIATED WITH EDUCATIONAL QUALITY PROPOSED (CHECK LIST)

Table A.11 List of Factors Associated with Educational Quality Proposed (*Check List*)

Instructions: Review the concepts and later choose and underline ONE element (of the 155) for each indicator (of the 30) of the four proposed factors that are related to the educational quality of the academic units of the Institutions of Public Higher Education.

	TEACHING		INVESTIGATION		ADMIN. / MANAGEMENT		EXTENSION AND DISSEMINATION
—	TEACHING EFFECTIVENESS:	—	LEGAL FRAMEWORK OF THE INVESTIGATION:	—	PERSONNEL MANAGEMENT:	—	LEGAL FRAMEWORK:
1__	- Entry efficiency.	—	—	—	- Academic management.	122__	- Regulation of extension or linkage.
2__	- Terminal efficiency.	72__	- Regulation of the investigation.	96__	- Research management.	123__	- Dissemination regulation.
3__	- Degree index.	73__	- Contest policies for the investigation.	97__	- Economic management.	124__	- Extension policy or linkage.
4__	- Tutorials.	74__	- Evaluation policies research projects.	98__	- Administrative management.	125__	- Diffusion policy.
—	TEACHING STRATEGIES:	75__	- Economic support policies to the investigation.	—	MANAGEMENT OF ADMINISTRATIVE AND FINANCIAL PROCESSES:	—	ORGANIZATION:
5__	- Oral presentation.	—	RESEARCH ORGANIZATION:	—	—	126__	- Authorities and units organization of the investigation (Organization chart).
6__	- Master class.	—	—	100__	- Coordination and decision making efficient decisions for program support academic.	127__	- Outreach program(s) or linkage.
7__	- Resolution of issues.	76__	- Authorities and units organization of the investigation.	101__	- Related academic staff to the needs of program.	128__	- Dissemination program(s).
8__	- Teamwork.	77__	- Researchers.	102__	- Non-academic staff related to the needs of the program.	129__	- Resources assigned to the extension and diffusion.
9__	- Team work.	78__	- Academic bodies.	103__	- Management and use of financial resources in program support academic.	—	FORMATS:
10__	- Question answer.	79__	- Research areas.	104__	- Evaluation and monitoring.	130__	- Agreements interinstitutional.
11__	- Debate.	80__	- Lines of investigation.	105__	- Accountability.	131__	- Stays of investigation.
12__	- Discovery.	81__	- Resources assigned to the research with inspection.	—	ACADEMIC-ADMINISTRATIVE MANAGEMENT OF THE PROGRAM:	132__	- Academic exchange.
—	LEARNING ASSESSMENT:	—	INVESTIGATION MODALITIES:	—	—	133__	- Collaboration interinstitutional.
13__	- Diagnostic evaluation.	82__	- Research projects internal.	106__	- Executive authorities.	134__	- Social service.
14__	- Partial evaluation.	83__	- Research projects external.	107__	- Collegiate bodies academics for the Development of the program.	135__	- Tracking graduates.
15__	- Continuous assessment.	84__	- Research projects mixed.	108__	- Institutional academic.	136__	- Conferences.
16__	- Sporadic evaluation.	—	INTERACTIONS IN RESEARCH:	—	QUALITY IMPROVEMENT MANAGEMENT:	137__	- Conferences.
17__	- Oral evaluation.	85__	- Teaching relationship-research (materials);	109__	—	138__	- Workshops.
18__	- Scheduled evaluation.	86__	- Participation of students in research (thesis, research assistants).	110__	- Motivation and satisfaction.	139__	- Graduates.
19__	- Written evaluation.	—	RESULTS OF THE INVESTIGATION:	111__	- Evaluation of performance.	140__	- Edition of publications periodic.
20__	- Surprise evaluation.	87__	- Work documents.	—	- Improvement mechanisms.	141__	- Exhibitions.
21__	- Dynamic evaluation question answer.	88__	- Thesis.	—	—	142__	- Courses and programs continuous training.
22__	- Bibliographic works.	89__	- Monographs.	—	—	143__	- Social activities.
23__	—	90__	- Theses.	—	—	144__	- Sport activities.
—	CURRICULUM:	91__	- Books.	—	—	145__	- Other activities cultural.
24__	- Curriculum structure.	92__	- Chapters of books.	—	—	—	—
25__	Contents programmatic.	93__	- Articles.	—	—	—	—
26__	- Goals.	94__	- Presentations.	—	—	—	—
27__	- Activities of teaching-learning.	95__	- Conferences.	—	—	—	—
28__	- Programs of the subjects.	—	—	—	—	—	—
29__	- Incorporation of new technologies of the information and communication.	—	—	—	—	—	—
—	DIDACTIC INTERACTIONS:	—	—	—	—	—	—
30__	- Teacher relations-student.	—	—	—	—	—	—
31__	- Teacher relations-teacher.	—	—	—	—	—	—
32__	- Teacher relations-managers.	—	—	—	—	—	—
33__	- Student relations-student.	—	—	—	—	—	—
34__	- Student relations-managers.	—	—	—	—	—	—

—	PLANNING FOR UNIVERSITY EDUCATION:			—	INSTITUTIONAL ORGANIZATION AND STRUCTURE:	—	INTERACTIONS:
35__	- Goals.			112__	- Organization model.	146__	- Teaching relationship-extension and diffusion.
36__	- Goals.			113__	- Clarity of the mission.	147__	- Management relationship-extension and diffusion.
37__	- Schedules-subjects-cycle school.			114__	- Distribution of functions.	—	- Exercise of authority academic leadership.
38__	- Income policies the race.			115__	- Exercise of authority academic leadership.	148__	PRODUCTS:
39__	- Graduation policy career.				REGULATIONS FOR EMPLOYEES:	149__	- Leading promoters of change and social progress from the extension and diffusion.
—	TEACHER TRAINING:					—	- Contribution to the environment.
40__	- Initial training.			116__	- Regulations governing the staff functions not support academic Development of the program.	150__	RELATIONS WITH THE CONTEXT:
41__	- Permanent education.			117__	- Entry regulations of the staff not academic.	151__	Through teaching, research and administration activities:
42__	- Professional development.			118__	- Regulation of staff promotion not academic.	152__	- Bonding with families.
—	INPUTS OR PHYSICAL RESOURCES:			119__	REGULATORY GUIDELINES FOR THE ADMINISTRATION:	153__	- Links with companies.
43__	- Classrooms.			—	- Regulations for authorities.	154__	- Link with the community.
44__	- Library.			120__	- Rules for handling and control of finances institutional.	155__	- Link with the government.
45__	- Information centers.			121__			- Linking with others educational institutions and/or of research (national).
46__	- Computer laboratory.						- Linking with others educational institutions and/or of investigation (international).
47__	- Tutoring centers.						
48__	- Audience.						
49__	- Workshops.						
50__	- Recreation area.						
51__	- Sports area.						
52__	- Café.						
53__	- Teacher's lounge.						
54__	- Parking lot.						
55__	- Teaching materials.						
56__	- Technological materials.						
—	INTERNAL ENVIRONMENT:						
57__	- Communication and human relations (mission).						
58__	- Organizational climate (academic freedom).						
59__	- Shared spaces to think and drink decisions.						
—	TRAINING PROCESSES:						
60__	- Educational model.						
61__	- Teaching models.						
62__	- Curriculum model.						
—	ACADEMIC STAFF REGULATIONS:						
63__	- Regulation or statute of staff income academic.						
64__	- Regulation or statute for the promotion of academic staff.						
65__	- Regulation or statute for the permanence of staff academic.						
—	STUDENT REGULATIONS:						
66__	- Student regulations that regulates its admission.						
67__	- Student regulations that regulates exams.						
68__	- Student regulations regulate your promotion and exit.						
69__	- Regulation of Title.						
70__	- Service regulation social.						
71__	- Scholarship Regulation academic.						

Source: Own elaboration based on the results of the theoretical framework of this study.

ANNEX 8. SCHEME OF FREQUENCY IN THE SELECTION OF THE INDICATORS OF THE *TEACHING STUDY VARIABLE*

Table A.12 Scheme of Frequency in the Selection of the Indicators of the *Teaching Study Variable*

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Teaching effectiveness	<ul style="list-style-type: none"> - Entry efficiency. - Terminal efficiency. - Degree index. - Tutorials. 	<p>7 0 2 1</p>	<p>2 2 2 4</p>	<p>3 5 2 0</p>
Didactic strategies	<ul style="list-style-type: none"> - Oral presentation. - Master class. - Problem resolution. - Teamwork. - Team work. - Question answer. - Debate. - Discovery. 	<p>3 2 0 3 0 0 3 0</p>	<p>1 2 1 2 1 1 2 0</p>	<p>1 1 1 3 1 1 2 0</p>
Learning assessment	<ul style="list-style-type: none"> - Diagnostic evaluation. - Partial evaluation. - Continuous assessment. - Sporadic evaluation. - Oral evaluation. - Scheduled evaluation. - Written evaluation. - Surprise evaluation. - Evaluation of question/answer dynamics. - Bibliographic works. 	<p>0 1 0 0 1 3 3 0 2 0</p>	<p>1 1 2 0 1 1 1 1 0 2</p>	<p>0 3 1 0 1 1 1 1 0 3</p>
Curriculum	<ul style="list-style-type: none"> - Curriculum structure. - Program content. - Goals. - Teaching-learning activities. - Programs of the subjects. - Incorporation of new information and communication technologies. 	<p>2 5 1 1 1 0</p>	<p>5 2 1 0 1 1</p>	<p>3 4 1 1 0 1</p>
Didactic interactions	<ul style="list-style-type: none"> - Teacher-student relations. - Teacher-teacher relations. - Teacher-manager relations. - Student-student relations. - Student-manager relations. 	<p>4 2 2 1 1</p>	<p>5 1 1 3 0</p>	<p>6 1 1 2 0</p>
University education planning	<ul style="list-style-type: none"> - Goals. - Goals. - Schedules-subjects-school year. - Career entry policies. - Graduation policy. 	<p>4 3 0 2 1</p>	<p>1 2 5 2 0</p>	<p>0 2 2 3 3</p>
Teacher training	<ul style="list-style-type: none"> - Initial training. - Permanent education. - Professional development. 	<p>2 6 2</p>	<p>2 4 4</p>	<p>5 0 5</p>

Inputs or physical resources	- Classrooms.	3	3	1
	- Library.	3	0	1
	- Information centers.	0	0	0
	- Computer laboratory.	0	3	1
	- Tutoring centers.	1	0	1
	- Audience.	0	0	1
	- Workshops.	0	0	1
	- Recreation area.	0	0	1
	- Sports area.	0	2	1
	- Café.	0	2	1
	- Teacher's lounge.	2	0	0
	- Parking lot.	0	0	1
	- Teaching materials.	1	0	0
- Technological materials.	0	0	0	
Internal environment	- Communication and human relations (mission).	4	5	2
	- Organizational climate (academic freedom).	4	0	5
	- Shared spaces to think and make decisions.	2	5	3
Training processes	- Educational model.	3	3	4
	- Teaching models.	3	4	4
	- Curriculum model.	4	3	2
Academic staff regulations	- Regulation or statute of the entrance of the academic personnel.	4	5	6
	- Regulations or statutes for the promotion of personnel academic.	4	3	2
	- Regulations or statutes for the permanence of personnel academic.	2	2	3
Regulations for students	- Student regulations governing their admission.			
	- Regulations for students that regulate exams.	2	0	1
	- Regulations for students that regulate their promotion and graduation.	2	0	1
	- Degree regulation.	0	4	2
	- Regulation of social service.	4	1	1
	- Regulation of academic scholarships.	2	1	1
	0	4	4	

Source: Self made.

ANNEX 9. SCHEME OF FREQUENCY IN THE SELECTION OF THE INDICATORS OF THE *RESEARCH STUDY VARIABLE*

Table A.13 Scheme of Frequency in the Selection of the Indicators of the Variable of Study *Research*

Dimensions	Indicators	<i>Frequency Teachers</i>	<i>Frequency Students</i>	<i>Frequency Graduates</i>
Legal framework of the investigation	- Regulation of the investigation.	3	4	3
	- Contest policies for research.	3	1	3
	- Research project evaluation policies.	3	1	3
	- Economic support policies for research.	1	4	1
Research organization	- Authorities and organizational units of the investigation.	0	0	0
	- Researchers.	1	4	3
	- Academic bodies.	3	2	2
	- Research areas.	0	0	0
	- Lines of investigation.	3	1	1
	- Resources assigned to investigation with supervision.	3	3	4
Research modalities	- Internal research projects.	5	5	6
	- External research projects.	3	2	2
	- Mixed research projects.	2	3	2
Research interactions	- Teaching-research relationship (materials);	5	4	3
	- Participation of students in research (thesis, research assistants).	5	6	7
Results of the investigation	- Work documents.	0	0	0
	- Thesis.	1	1	1
	- Monographs.	0	0	0
	- Theses.	1	1	0
	- Books.	2	3	3
	- Chapters of books.	1	1	4
	- Articles.	2	2	2
	- Presentations.	2	1	0
- Conferences.	1	1	0	

Source: Self made.

ANNEX 10. SCHEME OF FREQUENCY IN THE SELECTION OF THE INDICATORS OF THE STUDY VARIABLE *ADMINISTRATION/MANAGEMENT*

Table A.14 Scheme of Frequency in the Selection of the Indicators of the Study Variable *Administration/Management*

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Academic staff administration.	- Academic management.	3	2	1
	- Research management.	2	2	2
	- Economic management.	3	4	4
	- Administrative management.	2	2	3
Management of administrative and financial processes.	- Efficient coordination and decision-making to support the academic program.	1	1	0
	- Academic staff related to the needs of the program.	2	0	0
	- Non-academic staff related to the needs of the program.	1	1	1
	- Management and use of financial resources in support of the academic program.	2	3	4
Academic-administrative management of the program.	- Evaluation and monitoring.	2	3	4
	- Accountability.	1	1	1
Quality improvement management.	- Executive authorities.	3	3	4
	- Collegiate academic bodies for the development of the program.	5	4	5
Institutional organization and structure.	- Academic institutional.	2	3	3
	- Motivation and satisfaction.	4	5	4
	- Performance evaluation.	4	5	4
Regulations for employees.	- Improvement mechanisms.	2	0	2
	- Organization model.	4	5	6
	- Clarity of the mission.	2	2	1
	- Distribution of functions.	2	1	2
Regulatory guidelines for administration.	- Exercise of academic leadership authority.	2	2	1
	- Regulations governing the functions of non-academic staff to support the development of the program.	3	4	4
Regulatory guidelines for administration.	- Regulations for entry of non-academic staff.	4	4	5
	- Regulations for the promotion of non-academic staff.	3	2	1
	- Regulations for authorities.	4	3	5
	- Rules for the management and control of institutional finances.	6	7	5

Source: Self made.

ANNEX 11. SCHEME OF FREQUENCY IN SELECTION OF THE INDICATORS OF THE STUDY VARIABLE *EXTENSION AND DIFFUSION*

Table A.15 Scheme of Frequency in the Selection of the Indicators of the Study Variable *Extension and Diffusion*

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Legal framework	- Regulation of extension or link.	2	2	1
	- Dissemination regulation.	2	1	1
	- Extension or link policy.	4	5	7
	- Diffusion policy.	1	0	0
Organization	- Authorities and organizational units of the investigation (organizational chart).	1	2	2
	- Program(s) of extension or linkage.	2	3	3
	- Dissemination program(s).	2	1	1
	- Resources assigned to extension and diffusion.	4	4	4
Formats	- Inter-institutional agreements.	1	1	0
	- Research stays.	2	1	3
	- Academic exchange.	1	3	3
	- Inter-institutional collaboration.	0	0	0
	- Social service.	1	1	3
	- Follow-up of graduates.	1	1	0
	- Conferences.	0	0	0
	- Conferences.	0	0	0
	- Workshops.	0	0	0
	- Graduates.	0	0	0
	- Edition of periodicals.	0	0	0
	- Exhibitions.	0	0	0
	- Continuous training courses and programs.	1	0	0
	- Social activities.	2	0	0
	- Sport activities.	1	3	1
- Other cultural activities.	0	0	0	
Interactions	- Teaching-extension and diffusion relationship.	5	5	6
	- Administration-extension and diffusion relationship.	5	5	4
Products	- Leading promoters of change and social progress based on extension and diffusion.	5	5	5
	- Contribution to the environment.	5	5	5
Relations with the context	Through teaching, research and administration activities:			
	- Bonding with families.	1	1	0
	- Links with companies.	1	1	0
	- Linkage with the community.	2	1	0
	- Links with the government.	3	4	5
	- Links with other (national) educational and/or research institutions.	0	1	1
	- Links with other educational and/or research institutions (international).	3	4	5

Source: Self made.

ANNEX 12. LIST OF FACTORS ASSOCIATED WITH EDUCATIONAL QUALITY SELECTED BY TEACHERS (*CHEK LIST*)

Table A.16 List of Factors Associated with Educational Quality Selected by Teachers (*Chek List*)

	TEACHING		INVESTIGATION		ADMIN. OR MANAGEMENT		EXTENSION AND DISSEMINATION
—	TEACHING EFFECTIVENESS:	—	LEGAL FRAMEWORK OF THE INVESTIGATION:	—	PERSONNEL MANAGEMENT:	—	LEGAL FRAMEWORK:
1__	- Entry efficiency.	72__	- Regulation of the investigation.	96__	- Academic management.	124__	- Extension policy or linkage.
—	TEACHING STRATEGIES:	73__	- Contest policies for the investigation.	98__	- Economic management.	—	ORGANIZATION:
5__	- Oral presentation.	74__	- Evaluation policies research projects.	—	MANAGEMENT OF ADMINISTRATIVE AND FINANCIAL PROCESSES:	129__	- Resources assigned to the extension and diffusion.
8__	- Teamwork.	—	RESEARCH ORGANIZATION:	—	—	—	FORMATS:
11__	- Debate.	78__	- Academic bodies.	101__	- Related academic staff to the needs of program.	—	—
—	LEARNING ASSESSMENT:	80__	- Lines of investigation.	103__	- Management and use of financial resources in program support academic.	131__	- Stays of investigation.
18__	- Scheduled evaluation.	81__	- Resources assigned to the research with inspection.	104__	- Evaluation and monitoring.	143__	- Social activities.
19__	- Written evaluation.	—	INVESTIGATION MODALITIES:	—	ACADEMIC-ADMINISTRATIVE MANAGEMENT OF THE PROGRAM:	—	INTERACTIONS:
—	CURRICULUM:	82__	- Research projects internal.	—	—	146__	- Teaching relationship-extension and diffusion.
24__	- Contents programmatic.	—	INTERACTIONS IN RESEARCH:	107__	- Collegiate bodies academics for the Development of the program.	147__	- Management relationship-extension and diffusion.
—	DIDACTIC INTERACTIONS:	85__	- Teaching relationship- research (materials);	—	QUALITY IMPROVEMENT MANAGEMENT:	—	PRODUCTS:
30__	- Teacher relations- student.	86__	- Participation of students in research (thesis, research assistants).	109__	- Motivation and satisfaction.	148__	- Leading promoters of change and social progress from the extension and diffusion.
—	PLANNING FOR UNIVERSITY EDUCATION:	—	RESULTS OF THE INVESTIGATION:	110__	- Evaluation of performance.	149__	- Contribution to the environment.
35__	- Goals.	91__	- Books.	—	INSTITUTIONAL ORGANIZATION AND STRUCTURE:	—	RELATIONS WITH THE CONTEXT:
—	TEACHER TRAINING:	93__	- Articles.	—	—	—	Through teaching, research and administration activities:
41__	- Permanent education.	94__	- Presentations.	112__	- Organization model.	153__	- Link with the government.
—	INPUTS OR PHYSICAL RESOURCES:	—	—	—	REGULATIONS FOR EMPLOYEES:	155__	- Linking with others educational institutions and/ or of investigation (international).
43__	- Classrooms.	—	—	118__	- Entry regulations of the staff not academic.	—	—
44__	- Library.	—	—	—	REGULATORY GUIDELINES FOR THE ADMINISTRATION:	—	—
—	INTERNAL ENVIRONMENT:	—	—	121__	- Rules for handling and control of finances institutional.	—	—
57__	- Communication and human relations (mission).	—	—	—	—	—	—
58__	- Organizational climate (academic freedom).	—	—	—	—	—	—
—	TRAINING PROCESSES:	—	—	—	—	—	—
62__	- Curriculum model.	—	—	—	—	—	—
—	ACADEMIC STAFF REGULATIONS:	—	—	—	—	—	—
63__	- Regulation or statute of staff income academic.	—	—	—	—	—	—
64__	- Regulation or statute for the promotion of academic staff.	—	—	—	—	—	—
—	STUDENT REGULATIONS:	—	—	—	—	—	—
69__	- Regulation of Title.	—	—	—	—	—	—

Source: Own elaboration based on the results of field research.

ANNEX 14. LIST OF FACTORS ASSOCIATED WITH EDUCATIONAL QUALITY SELECTED BY GRADUATES (CHEK LIST)

Table A.18 List of Factors Associated with Educational Quality Selected by Graduates (Chek List)

	TEACHING		INVESTIGATION		ADMIN. OR MANAGEMENT		EXTENSION AND DISSEMINATION
—	TEACHING EFFECTIVENESS:	—	LEGAL FRAMEWORK OF THE INVESTIGATION:	—	PERSONNEL MANAGEMENT:	—	LEGAL FRAMEWORK:
2__	- Terminal efficiency.			98__	- Economic management.	125__	- Diffusion policy.
—	TEACHING STRATEGIES:	72__	- Regulation of the investigation.		ADMINISTRATIVE AND FINANCIAL PROCESSES:	—	ORGANIZATION:
8__	- Teamwork.	73__	- Contest policies for the investigation.	—		129__	- Resources assigned to the extension and diffusion.
—	LEARNING ASSESSMENT:	74__	- Evaluation policies research projects.	103__	- Management and use of financial resources in program support academic.	—	FORMATS:
14__	- Partial evaluation.	—	RESEARCH ORGANIZATION:	104__	- Evaluation and monitoring.	131__	- Stays of investigation.
23__	- Bibliographic works.	81__	- Resources assigned to the research with inspection.		ACADEMIC-ADMINISTRATIVE MANAGEMENT OF THE PROGRAM:	132__	- Academic exchange.
—	CURRICULUM:	—	INVESTIGATION MODALITIES:	—		134__	- Social service.
25__	- Contents programmatic.					—	INTERACTIONS:
—	DIDACTIC INTERACTIONS:	82__	- Research projects internal.	107__	- Collegiate bodies academics for the Development of the program.	146__	- Teaching relationship- extension and diffusion.
30__	- Teacher relations- student.	—	INTERACTIONS IN RESEARCH:	—	QUALITY IMPROVEMENT MANAGEMENT:	—	PRODUCTS:
—	PLANNING FOR UNIVERSITY EDUCATION:	86__	- Participation of students in research (thesis, research assistants).	109__	- Motivation and satisfaction.	148__	- Leading promoters of change and social progress from the extension and diffusion.
38__	- Income policies the race.		RESULTS OF THE INVESTIGATION:	110__	- Evaluation of performance.	149__	- Contribution to the environment.
39__	- Graduation policy career.	—		—	INSTITUTIONAL ORGANIZATION AND STRUCTURE:	—	RELATIONS WITH THE CONTEXT:
—	TEACHER TRAINING:	92__	- Chapters of books.	—		153__	Through teaching, research and administration activities:
40__	- Initial training.			112__	- Organization model.	—	- Link with the government.
42__	- Professional development.			—	REGULATIONS FOR EMPLOYEES:	155__	- Linking with others educational institutions and/ or of investigation (international).
—	INPUTS OR PHYSICAL RESOURCES:			117__	- Entry regulations of the staff not academic.		
43__	- Classrooms.			—	REGULATORY GUIDELINES FOR THE ADMINISTRATION:		
—	INTERNAL ENVIRONMENT:			120__	- Regulations for authorities.		
58__	- Organizational climate (academic freedom).			121__	- Rules for handling and control of finances institutional.		
—	TRAINING PROCESSES:						
60__	- Educational model.						
61__	- Teaching models.						
—	ACADEMIC STAFF REGULATIONS:						
63__	- Regulation or statute of staff income academic.						
—	STUDENT REGULATIONS:						
71__	- Scholarship Regulation academic.						

Source: Own elaboration based on the results of field research.

ANNEX 15. DEFINITIVE SCHEME FOR THE OPERATIONALIZATION OF THE TEACHING STUDY VARIABLE

Table A.19 Definitive Scheme for the Operationalization of the *Teaching Study Variable*

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Teaching	Teaching effectiveness	<ul style="list-style-type: none"> - Entry efficiency. - Terminal efficiency. - Tutorials.
		Didactic strategies	<ul style="list-style-type: none"> - Oral presentation. - Master class. - Teamwork. - Debate.
		Learning assessment	<ul style="list-style-type: none"> - Partial evaluation. - Continuous assessment. - Scheduled evaluation. - Written evaluation. - Bibliographic works.
		Curriculum	<ul style="list-style-type: none"> - Program content. - Curriculum structure.
		Didactic interactions	<ul style="list-style-type: none"> - Teacher-student relations.
		University education planning	<ul style="list-style-type: none"> - Goals. - Timetables-subject-school cycle. - Career entry policies. - Graduation policy.
		Teacher training	<ul style="list-style-type: none"> - Permanent education. - Professional development.
		Inputs or physical resources	<ul style="list-style-type: none"> - Classrooms. - Library. - Computer Laboratory.
		Internal environment	<ul style="list-style-type: none"> - Communication and human relations (mission). - Organizational climate (academic freedom). - Shared spaces to think and make decisions.
		Training processes	<ul style="list-style-type: none"> - Teaching models. - Curriculum model.
Academic staff regulations	<ul style="list-style-type: none"> - Regulation or statute of the entrance of the academic personnel. - Regulations or statutes for the promotion of personnel academic. 		
Regulations for students	<ul style="list-style-type: none"> - Regulations for students that regulate their promotion and graduation. - Degree regulation. - Regulation of academic scholarships. 		

Source: Self made.

ANNEX 16. DEFINITIVE SCHEME FOR THE OPERATIONALIZATION OF THE RESEARCH STUDY VARIABLE

Table A.20 Definitive Scheme for the Operationalization of the Study *Research Variable*

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Investigation	Legal framework of the investigation	<ul style="list-style-type: none"> - Regulation of the investigation. - Contest policies for research. - Research project evaluation policies. - Economic support policies for research.
		Research organization	<ul style="list-style-type: none"> - Researchers. - Academic bodies. - Lines of investigation. - Resources assigned to investigation with supervision.
		Research modalities	<ul style="list-style-type: none"> - Internal research projects.
		Research interactions	<ul style="list-style-type: none"> - Teaching-research relationship (materials). - Participation of students in the research. (thesis, research assistants).
		Results of the investigation	<ul style="list-style-type: none"> - Books. - Chapters of books. - Articles. - Presentations.

Source: Self made.

ANNEX 17. DEFINITIVE OPERATIONAL SCHEME OF THE ADMINISTRATION/ MANAGEMENT STUDY VARIABLE

Table A.21 Definitive Scheme for Operationalization of the Study Variable *Administration/Management*

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Administration/ management	Personnel administration.	<ul style="list-style-type: none"> - Academic management. - Economic management. - Administrative management.
		Management of administrative and financial processes.	<ul style="list-style-type: none"> - Academic staff related to the needs of the program. - Management and use of financial resources in support of the program academic. - Evaluation and monitoring.
		Academic-administrative management of the program.	<ul style="list-style-type: none"> - Collegiate academic bodies for the development of the program.
		Quality improvement management.	<ul style="list-style-type: none"> - Motivation and satisfaction. - Performance evaluation.
		Institutional organization and structure.	<ul style="list-style-type: none"> - Organization model.
		Regulations for employees.	<ul style="list-style-type: none"> - Regulations governing the functions of non-academic staff to support the Development of the program. - Regulations for entry of non-academic staff.
Regulatory guidelines for administration.	<ul style="list-style-type: none"> - Regulations for authorities. - Rules for the management and control of institutional finances. 		

Source: Self made.

ANEXO 18. EXTENSION AND DIFFUSION STUDY VARIABLE

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Dimensions</i>	<i>Indicators</i>
Quality of educational service	Extension and diffusion	Legal framework	<ul style="list-style-type: none"> - Extension or link policy. - Diffusion policy.
		Organization	<ul style="list-style-type: none"> - Resources assigned to extension and diffusion.
		Formats	<ul style="list-style-type: none"> - Research stays. - Academic exchange. - Social service. - Social activities. - Sport activities.
		Interactions	<ul style="list-style-type: none"> - Teaching-extension and diffusion relationship. - Administration-extension and diffusion relationship.
		Products	<ul style="list-style-type: none"> - Leading promoters of change and social progress from extension and diffusion. - Contribution to the environment.
		Relations with the context	<p>Through teaching, research and administration activities:</p> <ul style="list-style-type: none"> - Links with the government. - Links with other educational institutions and/or research (international).

Source: Self made.

ANNEX 19. CORRESPONDENCE SCHEME DIMENSIONS-INDICATORS-ITEM OF THE STUDY VARIABLE *TEACHING*

Table A.23 Scheme of Frequency in the Selection of the Indicators of the Teaching Study Variable

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Teaching effectiveness	<ul style="list-style-type: none"> - Entry efficiency. - Terminal efficiency. - Degree index. - Tutorials. 	1	1	1
Didactic strategies	<ul style="list-style-type: none"> - Oral presentation. - Master class. 	2	2	
	<ul style="list-style-type: none"> - Problem resolution. - Teamwork. - Team work. 	3	3	2
	<ul style="list-style-type: none"> - Question answer. - Debate. - Discovery. 	4	4	
Learning assessment	<ul style="list-style-type: none"> - Diagnostic evaluation. - Partial evaluation. 			
	<ul style="list-style-type: none"> - Continuous assessment. - Sporadic evaluation. - Oral evaluation. 		5	3
	<ul style="list-style-type: none"> - Scheduled evaluation. - Written evaluation. - Surprise evaluation. 	5		
	<ul style="list-style-type: none"> - Evaluation of question/answer dynamics. - Bibliographic works. 	6	6	4
Curriculum	<ul style="list-style-type: none"> - Curriculum structure. - Program content. - Goals. 	7	7	5
	<ul style="list-style-type: none"> - Teaching-learning activities. - Programs of the subjects. - Incorporation of new information and communication technologies. 			
Didactic interactions	<ul style="list-style-type: none"> - Teacher-student relations. - Teacher-teacher relations. 	8	8	6
	<ul style="list-style-type: none"> - Teacher-manager relations. - Student-student relations. - Student-manager relations. 			
University education planning	<ul style="list-style-type: none"> - Goals. 	9		
	<ul style="list-style-type: none"> - Goals. - Schedules-subjects-school year. 		9	
	<ul style="list-style-type: none"> - Career entry policies. 			7
	<ul style="list-style-type: none"> - Graduation policy. 			8
Teacher training	<ul style="list-style-type: none"> - Initial training. - Permanent education. 	10	10	9
	<ul style="list-style-type: none"> - Professional development. 		11	10

Inputs or physical resources	- Classrooms.	11	12	11
	- Library.	12		11
	- Information centers.			
	- Computer laboratory.		13	11
	- Tutoring centers.			11
	- Audience.			11
	- Workshops.			11
	- Recreation area.			11
	- Sports area.			11
	- Café.			11
	- Teacher's lounge.			
	- Parking lot.			11
	- Teaching materials.			
- Technological materials.				
Internal environment	- Communication and human relations (mission).	13	14	
	- Organizational climate (academic freedom).	14		12
	- Shared spaces to think and make decisions.			
Training processes	- Educational model.			13
	- Teaching models.		16	14
	- Curriculum model.	15		
Academic staff regulations	- Regulation or statute of the entrance of the academic personnel.	16	17	15
	- Regulations or statutes for the promotion of personnel academic.	17		
	- Regulations or statutes for the permanence of personnel academic.			
Regulations for students	- Student regulations governing their admission.			
	- Regulations for students that regulate exams.			
	- Regulations for students that regulate their promotion and graduation.		18	
	- Degree regulation.	18		
	- Regulation of social service.			
- Regulation of academic scholarships.		19	16	

Source: Self made.

ANNEX 20. CORRESPONDENCE SCHEME DIMENSIONS-INDICATORS-ITEM OF THE VARIABLE OF STUDY RESEARCH

Table A.24 Scheme of Frequency in the Selection of the Indicators of the Study Research Variable

Dimensions	Indicators	<i>Frequency Teachers</i>	<i>Frequency Students</i>	<i>Frequency Graduates</i>
Legal framework of the investigation	- Regulation of the investigation.	19	20	17
	- Contest policies for research.	20		18
	- Research project evaluation policies.	21		19
	- Economic support policies for research.		21	
Research organization	- Authorities and organizational units of the investigation.			
	- Researchers.			
	- Academic bodies.		22	
	- Research areas.	22		
	- Lines of investigation.			
Research modalities	- Resources assigned to investigation with supervision.	23		20
		24		
Research modalities	- Internal research projects.	25	23	21
	- External research projects.			
	- Mixed research projects.			
Research interactions	- Teaching-research relationship (materials);	26		
	- Participation of students in research (thesis, research assistants).	27	24	22
Results of the investigation	- Work documents.			
	- Thesis.			
	- Monographs.			
	- Theses.			
	- Books.	28	25	
	- Chapters of books.			
	- Articles.			23
	- Presentations.	29		
- Conferences.	30			

Source: Self made.

ANNEX 21. CORRESPONDENCE SCHEME DIMENSIONS-INDICATORS-ITEM OF THE STUDY VARIABLE *ADMINISTRATION/MANAGEMENT*

Table A.25 Scheme of Frequency in the Selection of the Indicators of the Study Variable *Administration/Management*

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Academic staff administration.	- Academic management.	31		
	- Research management. - Economic management. - Administrative management.	32	26	24
Management of administrative and financial processes.	- Efficient coordination and decision-making to support the academic program.	33		
	- Academic staff related to the needs of the program.			
	- Non-academic staff related to the needs of the program.	34	27	25
	- Management and use of financial resources in support of the academic program.	35	28	26
Academic-administrative management of the program.	- Evaluation and monitoring. - Accountability.			
	- Executive authorities. - Collegiate academic bodies for the development of the program. - Academic institutionalism.	36	29	27
Quality improvement management.	- Motivation and satisfaction.	37	30	28
	- Performance evaluation. - Improvement mechanisms.	38	31	29
Institutional organization and structure.	- Organization model.	39	32	30
	- Clarity of the mission. - Distribution of functions. - Exercise of academic leadership authority.			
Regulations for employees.	- Regulations governing the functions of non-academic staff to support the development of the program.	40	34	31
	- Regulations for entry of non-academic staff. - Regulations for the promotion of non-academic staff.			
Regulatory guidelines for administration.		41	35	33
	- Regulations for authorities. - Rules for the management and control of institutional finances.			

Source: Self made.

ANNEX 22. SCHEME OF FREQUENCY IN THE SELECTION OF THE INDICATORS OF THE STUDY VARIABLE *EXTENSION AND DIFFUSION*

Table A.26 Scheme of Frequency in the Selection of the Indicators of the Study Variable *Extension and Diffusion*

Dimensions	Indicators	Frequency Teachers	Frequency Students	Frequency Graduates
Legal framework	<ul style="list-style-type: none"> - Regulation of extension or link. - Dissemination regulation. - Extension or link policy. - Diffusion policy. 	42	36	34
Organization	<ul style="list-style-type: none"> - Authorities and organizational units of the investigation (organizational chart). - Program(s) of extension or linkage. - Dissemination program(s). - Resources assigned to extension and diffusion. 	43	37	35
Formats	<ul style="list-style-type: none"> - Inter-institutional agreements. - Research stays. - Academic exchange. - Inter-institutional collaboration. - Social service. - Follow-up of graduates. - Conferences. - Conferences. - Workshops. - Graduates. - Edition of periodicals. - Exhibitions. - Continuous training courses and programs. - Social activities. - Sport activities. - Other cultural activities. 	44	38	36 37 38
	<ul style="list-style-type: none"> - Teaching-extension and diffusion relationship. - Administration-extension and diffusion relationship. 	45	39	39
Interactions	<ul style="list-style-type: none"> - Teaching-extension and diffusion relationship. - Administration-extension and diffusion relationship. 	46 47	40 41	39
Products	<ul style="list-style-type: none"> - Leading promoters of change and social progress based on extension and diffusion. - Contribution to the environment. 	48 49	42	40
	<p>Through teaching, research and administration activities:</p> <ul style="list-style-type: none"> - Bonding with families. - Links with companies. - Linkage with the community. - Links with the government. - Links with other (national) educational and/or research institutions. - Links with other educational and/or research institutions (international). 	50 51	44	42 43

Source: Self made.

ANNEX 23. CONFIGURATION OF THE TEACHER QUESTIONNAIRE AND ITS RELIABILITY* (FOR DATA PROCESSING)

1	In the Faculty of Law and Social Sciences (FDyCS) ordinary admission of students is carried out based on a selection exam as the reference academic criterion.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
2	Oral presentation is a didactic strategy used in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
3	Teamwork is a didactic dynamic instrumented in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
4	The debate or discussion of ideas is a didactic strategy used in class in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
5	In the learning evaluation process, the FDyCS teacher carries out a scheduled evaluation with the students of the groups in which he teaches a subject.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
6	In the learning evaluation process, the FDyCS teacher performs a written evaluation.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
7	In the study plan of this Degree there is an adequate combination of theoretical and practical contents.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
8	At FDyCS there is fluid communication between teachers and students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
9	In the FDyCS the number of students per class is adequate for teaching.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
10	At FDyCS, faculty participate in events such as academic conferences on their area of knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
11	The classroom conditions are adequate for teaching at the FDyCS of the Michoacana Universidad de San Nicolás de Hidalgo (UMSNH).	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
12	At FDyCS, the library equipment responds to the needs of the user.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
13	The UMSNH FDyCS has clearly defined its mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*

14	In the FDyCS of the UMSNH, academic freedom is respected, which promotes an adequate work environment for teaching work.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
15	At the UMSNH FDyCS, professors participate in a periodic review of the Law Degree curriculum.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
16	In the FDyCS of the UMSNH, the only institutional way for faculty to enter is the Open Opposition Contest.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
17	In the FDyCS of the UMSNH, professors are stimulated for their promotion due to their academic productivity based on the corresponding regulations.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
18	In the graduation process of the students of the FDyCS of the UMSNH, the faculty participates based on their professional profiles.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
19	In accordance with its legal framework, the FDyCS of the UMSNH has institutional regulations for the development and promotion of research.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
20	For FDyCS professors there is at least one annual call to participate in institutional research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
21	In the FDyCS of the UMSNH there are institutional policies and procedures for the evaluation of research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
22	At the FDyCS, the faculty involved in the research task is organized into academic bodies.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
23	In the FDyCS of the UMSNH, the research proposals of the academics correspond to their research lines.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
24	The financial support received for the research work by the FDyCS faculty is supervised by the corresponding university authorities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
25	At the FDyCS, the faculty immersed in research develops research projects evaluated and supported solely by the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
26	Teachers immersed in research relate the latter to teaching through the production of an ex-professional work manual for their subject.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
27	UMSNH FDyCS researchers involve students in research by incorporating them into their projects as research assistants.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*

28	At the UMSNH FDyCS, professor-researchers publish books to make their research contributions known.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
29	At the FDyCS of the UMSNH, the faculty immersed in research publish scientific articles as a result of their investigative work.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
30	The results of the research at the FDyCS are translated into papers presented at academic events by the research professors.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
31	The UMSNH FDyCS offers support programs for the training and permanent updating of its teaching staff.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
32	At the UMSNH FDyCS, teachers are provided with material for the proper development of their work.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
33	In the FDyCS of the UMSNH, the current profile of the personnel in charge of teaching and research tasks corresponds to the ideal profile proposed.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
34	In the FDyCS of the UMSNH there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
35	In the UMSNH FDyCS there are procedures and mechanisms for evaluating the performance of administrative personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
36	The UMSNH FDyCS has collegiate bodies defined within its organizational structure and duly installed for academic and administrative decision-making.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
37	At the UMSNH FDyCS, teachers are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*
38	At the UMSNH FDyCS, academics are periodically evaluated on their professional performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
39	In the FDyCS of the UMSNH there is coherence in the organizational structure of the university unit.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
40	In the case of the FDyCS of the UMSNH, a specific regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
41	The FDyCS of the UMSNH complies with the regulations for the management of institutional finances	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*

42	In accordance with its legal framework, the FDyCS of the UMSNH has institutional policies for the development of the dissemination of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
43	In the FDyCS of the UMSNH, special funds are applied for the development of the extension function.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
44	FDyCS professors have access to research stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
45	The professors of the FDyCS of the UMSNH participate in the social activities of the institution.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.899*
46	FDyCS professors link teaching to knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
47	The UMSNH FDyCS constitutes a factor of social mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.901*
48	The FDyCS faculty contributes to the formation of opinion leaders who fight for the progress of the social change of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.903*
49	The FDyCS faculty develop social service activities of legal advice in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.900*
50	Through teaching, the FDyCS is linked to the government sector, which it trains through specialization and updating courses.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.904*
51	Through research activities, the FDyCS is part of an international network of universities that share teaching mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.902*

* / Reliability level from the calculation of the Cronbach's Alpha statistic, if the preceding element is eliminated from the total elements. Likewise, considering all the variables of the procedure, the Cronbach's Alpha statistic that indicates the general reliability of the instrument, was located at 0.903 from the processing of the 51 cases.

Source: Own elaboration based on the results of the theoretical framework obtained from documentary research, as well as the first phase of field research.

ANNEX 24. STUDENT QUESTIONNAIRE CONFIGURATION AND ITS RELIABILITY* (FOR DATA PROCESSING)

1	The Law Degree from the Faculty of Law and Social Sciences (FDyCS) has institutional academic tutoring programs for student development.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
2	The magisterial class constitutes a didactic strategy used in the FDyCS of the Michoacana Universidad de San Nicolás de Hidalgo (UMSNH).	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
3	Teamwork is a didactic dynamic implemented in the UMSNH Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.880*
4	The debate is a didactic dynamic instrumented in the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
5	In the learning evaluation process, the FDyCS teacher makes an evaluation on a permanent basis.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.881*
6	In the FDyCS, the teacher considers the bibliographic research works as part of the learning assessment.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
7	In the study plan of this Degree there is an interesting offer of optional subjects for the student.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
8	At FDyCS, the faculty is available to guide the student when necessary.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
9	In the FDyCS of the UMSNH, the class schedules are adapted to the needs of the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.880*
10	At the UMSNH FDyCS, the professors are constantly updating their knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
11	In the FDyCS of the UMSNH, the teaching staff is capable of adequately transmitting their knowledge to the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
12	The conditions of the classrooms are adequate for the studies in the FDyCS of the UMSNH,	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
13	In the FDyCS of the UMSNH, the equipment of the computer center responds to the needs of the student.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*

14	The UMSNH FDyCS makes its mission known effectively among its students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
15	The UMSNH FDyCS promotes student participation.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
16	With the knowledge and skills imparted by the professors in the FDyCS of the UMSNH, the interest of the students in the subjects is motivated.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
17	The students participate as a consulted audience in the Open Opposition Contests, mechanisms by which the teaching staff makes their institutional entrance to the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
18	At the UMSNH FDyCS, students with high academic performance are encouraged with academic scholarships.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.879*
19	In the UMSNH FDyCS, graduation occurs only after the student has taken their professional exam, in accordance with the institution's regulatory standards.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.879*
20	The FDyCS has institutional regulations for undergraduate students to be incorporated into research coordinated by the faculty.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
21	The FDyCS promotes scholarships for research assistants, which are accessed through institutional mechanisms.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
22	At the FDyCS, the student involved in the research task is organized into research projects led by the teacher-researchers.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
23	At FDyCS, research assistant students are incorporated into research sponsored by UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.882*
24	Through research projects coordinated by professors, FDyCS students have the opportunity to write their theses.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.880*
25	The results of the research at the FDyCS are translated into teachers' books, from which students expand their knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
26	At the UMSNH FDyCS, teachers are provided with material for the proper development of their class work.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
27	In the FDyCS of the UMSNH, there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.879*

28	In the FDyCS of the UMSNH, procedures are applied for the evaluation of the performance of administrative personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
29	The FDyCS has collegiate bodies defined within its organizational structure, which are duly installed for academic and administrative decision-making.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
30	At FDyCS, students are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
31	In the FDyCS, students periodically evaluate the performance of their teachers.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.879*
32	The FDyCS of the UMSNH has an Academic Secretary for the management of the academic affairs of the dependency.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
33	In the case of the FDyCS of the UMSNH, the functions of the non-academic staff are delimited by regulation.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.879*
34	In the case of the FDyCS of the UMSNH, a regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.880*
35	The FDyCS has and complies with the corresponding regulations for the management of institutional finances.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.877*
36	In accordance with its legal framework, the FDyCS has institutional policies for the promotion and development of the dissemination of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
37	In the FDyCS special funds are promoted and applied for the development of extension.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.878*
38	FDyCS students participate in the institution's sports activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
39	FDyCS students have access to academic exchange stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
40	FDyCS students link their academic activities with knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.880*
41	The UMSNH FDyCS constitutes a factor of social mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*

42	The students of the FDyCS contribute with their point of view to the solution of the problems that stop social progress.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*
43	FDyCS students carry out free legal advice activities in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
44	Through the social service, the students of the FDyCS of the UMSNH are linked to the government sector, in which a large part is inserted to work later.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.876*
45	Through research activities, the FDyCS is part of an international network of universities that share student mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.875*

*/ Reliability level from the calculation of the Cronbach's Alpha statistic, if the preceding element is eliminated from the total elements. Likewise, considering all the variables of the procedure, the Cronbach's Alpha statistic that indicates the general reliability of the instrument, was located at 0.880 from the processing of the 45 cases.

Source: Own elaboration based on the results of the theoretical framework obtained from documentary research, as well as the first phase of field research.

ANNEX 25. CONFIGURATION OF THE ALUMNI QUESTIONNAIRE AND ITS RELIABILITY* (FOR DATA PROCESSING)

1	In my experience, the UMSNH FDyCS has actions aimed at increasing terminal efficiency.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
2	During my stay at the FDyCS, the didactic strategy of teamwork was applied in the classes.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
3	In the FDyCS the partial evaluations were adequate to know what the students have learned.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
4	Regarding the evaluation of learning, I consider it convenient to incorporate research work in said evaluation for students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
5	The contents of the subjects of the FDyCS study plan were adapted to the present reality of the national and regional context.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.914*
6	According to my personal experience in the FDyCS, the teaching staff is permanently concerned about the learning of the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
7	According to my experience, the admission policy to the FDyCS of the UMSNH is pertinent.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
8	In my experience, the UMSNH FDyCS graduation policy is adequate.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.908*
9	In the Law Degree of the FDyCS of the UMSNH, the teaching staff have a sufficient level of theoretical knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
10	From my experience, in the FDyCS of the UMSNH, the teaching staff have an acceptable level of practical knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
11	The physical facilities of the FDyCS are comfortable and welcoming.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.911*
12	The performance of managers, teachers and students was framed in a climate of mutual respect.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
13	As for my appreciation, the education received at the FDyCS allowed me to develop a personality with a critical attitude.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*

14	The knowledge and skills acquired in my training at the FDyCS have application in my current professional performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
15	In the FDyCS, the regulations referring to the entry of academic staff were applied with the necessary rigor.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
16	During my stay at FDyCS I had timely access to information on scholarships offered to students with high academic performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.911*
17	The FDyCS has specific regulations for the development and promotion of research.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.911*
18	During my stay at the FDyCS I had access to the calls to participate as a student in institutional research projects coordinated by the faculty.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
19	During my stay at FDyCS, the faculty actively participated in institutional research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
20	During my stay at the FDyCS, I appreciated that funds are applied for the development of research, which include professors and students, who are accessed through institutional mechanisms and are supervised.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.907*
21	The research projects coordinated by professors and assisted by students were supported by the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.908*
22	The research activities carried out by the assistant professors-researchers allowed the students to carry out their undergraduate thesis.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
23	The results of the research generated in the FDyCS were translated into chapters of thematic books that accounted for the institutional level of scientific and technological innovation.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
24	In the FDyCS, teachers are provided with material for the proper development of their work in the classroom.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
25	In the FDyCS there is a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
26	From my perspective, the FDyCS applies procedures for evaluating the performance of administrative staff.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.908*
27	During my stay at the FDyCS of the UMSNH, it had the proper installation of the collegiate bodies defined within its organizational structure.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*

28	From my experience, at FDyCS, the faculty and students are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
29	In the FDyCS, the role of the teacher and the directors is evaluated in each school year.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.911*
30	From my stay at the FDyCS, I noticed the correspondence between the organizational structure and the nature of the university dependency.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
31	From my perspective, in the case of the FDyCS a regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.911*
32	In the FDyCS there is a regulatory framework for the authorities and the exercise of their actions.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
33	In consideration of my permanence in the FDyCS of the UMSNH, I realized that it complies with the regulations for the management of institutional finances.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.912*
34	From my stay at the FDyCS, I appreciated that, in accordance with its legal framework, the university dependency had institutional policies for the development of the extension and diffusion of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.913*
35	During my stay at the FDyCS of the UMSNH, the professors and students received financial support for extension activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
36	During my stay at the FDyCS, the professors had access to research stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
37	During my stay at the FDyCS, the students had access to academic exchanges with other national and foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*
38	During my stay at the FDyCS of the UMSNH, the students participated in community social service activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
39	In my view, the students of the FDyCS of the UMSNH link research to knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.907*
40	From my experience, the faculty of the FDyCS of the UMSNH contributes with their points of view to the debate on the solution of the problems that stop the progress of society.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.914*
41	From my experience, FDyCS students develop free legal advice activities in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.908*

42	The FDyCS is linked to the government sector through teaching and social service.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.909*
43	During my stay at the FDyCS I verified that, through research activities, this university unit is part of an international network of universities that share student mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]	.910*

*/ Reliability level from the calculation of the Cronbach's Alpha statistic, if the preceding element is eliminated from the total elements. Likewise, considering all the variables of the procedure, the Cronbach's Alpha statistic that indicates the general reliability of the instrument, was located at 0.912 from the processing of the 43 cases.

Source: Own elaboration based on the results of the theoretical framework obtained from documentary research, as well as the first phase of field research.

ANNEX 26. QUESTIONNAIRE FOR TEACHERS (VERSION FOR INSTRUMENT APPLICATION)

Dear Teacher:

Receive a greeting and our communication about carrying out an investigation on the state of the quality of higher education kept by the Faculty of Law and Social Sciences of our Michoacana Universidad de San Nicolás de Hidalgo. In this sense, I request your support and collaboration so that you spend a few minutes answering this questionnaire, since your participation and opinion will allow us to obtain first-hand, relevant and valid information about our academic unit.

This questionnaire is anonymous to guarantee the confidentiality of your data. Your sincere and objective opinion will be very useful for the development of a proposal to improve the educational quality that we provide.

I thank you without reservation for your invaluable collaboration.

Prof. Miguel Angel Medina Romero.

(A questionnaire for teachers is attached).

I. Classification data.

Instructions: Place an X in the box for the answer of your choice.

1	Sex:	Male Female <input type="checkbox"/> <input type="checkbox"/>	1 2
2	Age:	less than 30 years 30 to 40 years 40 to 50 years 50 to 60 years over 60 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5
3	Seniority in the University:	less than 5 years from 5 to 10 years from 10 to 15 years from 15 to 20 years 20 to 25 years more than 25 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6
4	Contract condition:	final contract Temporal agreement <input type="checkbox"/> <input type="checkbox"/>	1 2
5	Category:	Associate Professor Associate professor teacher by subject <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3
6	Hiring time:	Full time Halftime For hours <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3
7	Level of studies completed:	Degree Specialty master's degree Doctorate <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4
9	In what area(s) of Law do you teach?	Civil D. D. Penalty. commercial law D. Constitutional D. International D. Economic D. Notary D. Administrative <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6 7 8
10	Do you have an administrative position?	Yeah No <input type="checkbox"/> <input type="checkbox"/>	1 2
11	Do you carry out research at the University?	Yeah No <input type="checkbox"/> <input type="checkbox"/>	1 2
12	In which area(s) of law do you carry out your research?	Civil D. D. Penalty. commercial law D. Constitutional D. International D. Economic D. Notary D. Administrative Other(s): <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6 7 8 9
13	Which of the following jobs have you done?	presentations Books/monographs Thesis Projects <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4

II. Respondent opinion thematic data.

Instructions: Place an X over the number of the answer of your choice.

FDyCS: Faculty of Law and Social Sciences.
UMSNH: Michoacan Universidad de San Nicolás de Hidalgo.

1	In the FDyCS the ordinary admission of students is carried out based on a selection exam as the reference academic criterion.	Always Frequently Sometimes Never	[4] [3] [2] [1]
2	Oral presentation is a didactic strategy used in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]
3	Teamwork is a didactic dynamic instrumented in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]
4	The debate or discussion of ideas is a didactic strategy used in class in the FDyCS Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]
5	In the learning evaluation process, the FDyCS teacher carries out a scheduled evaluation with the students of the groups in which he teaches a subject.	Always Frequently Sometimes Never	[4] [3] [2] [1]
6	In the learning evaluation process, the FDyCS teacher performs a written evaluation.	Always Frequently Sometimes Never	[4] [3] [2] [1]
7	In the study plan of this Degree there is an adequate combination of theoretical and practical contents.	Always Frequently Sometimes Never	[4] [3] [2] [1]
8	At FDyCS there is fluid communication between teachers and students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
9	In the FDyCS the number of students per class is adequate for teaching.	Always Frequently Sometimes Never	[4] [3] [2] [1]
10	At FDyCS, faculty participate in events such as academic conferences on their area of knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]
11	The classroom conditions are adequate for teaching at the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
12	At FDyCS, the library equipment responds to the needs of the user.	Always Frequently Sometimes Never	[4] [3] [2] [1]

13	The UMSNH FDyCS has clearly defined its mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]
14	In the FDyCS of the UMSNH, academic freedom is respected, which promotes an adequate work environment for teaching work.	Always Frequently Sometimes Never	[4] [3] [2] [1]
15	At the UMSNH FDyCS, professors participate in a periodic review of the Law Degree curriculum.	Always Frequently Sometimes Never	[4] [3] [2] [1]
16	In the FDyCS of the UMSNH, the only institutional way for faculty to enter is the Open Opposition Contest.	Always Frequently Sometimes Never	[4] [3] [2] [1]
17	In the FDyCS of the UMSNH, professors are stimulated for their promotion due to their academic productivity based on the corresponding regulations.	Always Frequently Sometimes Never	[4] [3] [2] [1]
18	In the graduation process of the students of the FDyCS of the UMSNH, the faculty participates based on their professional profiles.	Always Frequently Sometimes Never	[4] [3] [2] [1]
19	In accordance with its legal framework, the FDyCS of the UMSNH has institutional regulations for the development and promotion of research.	Always Frequently Sometimes Never	[4] [3] [2] [1]
20	For FDyCS professors there is at least one annual call to participate in institutional research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]
21	In the FDyCS of the UMSNH there are institutional policies and procedures for the evaluation of research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]
22	At the FDyCS, the faculty involved in the research task is organized into academic bodies.	Always Frequently Sometimes Never	[4] [3] [2] [1]
23	In the FDyCS of the UMSNH, the research proposals of the academics correspond to their research lines.	Always Frequently Sometimes Never	[4] [3] [2] [1]
24	The financial support received for the research work by the FDyCS faculty is supervised by the corresponding university authorities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
25	At the FDyCS, the faculty immersed in research develops research projects evaluated and supported solely by the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
26	Teachers immersed in research relate the latter to teaching through the production of an ex-professional work manual for their subject.	Always Frequently Sometimes Never	[4] [3] [2] [1]

27	UMSNH FDyCS researchers involve students in research by incorporating them into their projects as research assistants.	Always Frequently Sometimes Never	[4] [3] [2] [1]
28	At the UMSNH FDyCS, professor-researchers publish books to make their research contributions known.	Always Frequently Sometimes Never	[4] [3] [2] [1]
29	At the FDyCS of the UMSNH, the faculty immersed in research publish scientific articles as a result of their investigative work.	Always Frequently Sometimes Never	[4] [3] [2] [1]
30	The results of the research at the FDyCS are translated into papers presented at academic events by the research professors.	Always Frequently Sometimes Never	[4] [3] [2] [1]
31	The UMSNH FDyCS offers support programs for the training and permanent updating of its teaching staff.	Always Frequently Sometimes Never	[4] [3] [2] [1]
32	At the UMSNH FDyCS, teachers are provided with material for the proper development of their work.	Always Frequently Sometimes Never	[4] [3] [2] [1]
33	In the FDyCS of the UMSNH, the current profile of the personnel in charge of teaching and research tasks corresponds to the ideal profile proposed.	Always Frequently Sometimes Never	[4] [3] [2] [1]
34	In the FDyCS of the UMSNH there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]
35	In the UMSNH FDyCS there are procedures and mechanisms for evaluating the performance of administrative personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]
36	The UMSNH FDyCS has collegiate bodies defined within its organizational structure and duly installed for academic and administrative decision-making.	Always Frequently Sometimes Never	[4] [3] [2] [1]
37	At the UMSNH FDyCS, teachers are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]
38	At the UMSNH FDyCS, academics are periodically evaluated on their professional performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]
39	In the FDyCS of the UMSNH there is coherence in the organizational structure of the university unit.	Always Frequently Sometimes Never	[4] [3] [2] [1]
40	In the case of the FDyCS of the UMSNH, a specific regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]

41	The FDyCS of the UMSNH complies with the regulations for the management of institutional finances	Always Frequently Sometimes Never	[4] [3] [2] [1]
42	In accordance with its legal framework, the FDyCS of the UMSNH has institutional policies for the development of the dissemination of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]
43	In the FDyCS of the UMSNH, special funds are applied for the development of the extension function.	Always Frequently Sometimes Never	[4] [3] [2] [1]
44	FDyCS professors have access to research stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]
45	The professors of the FDyCS of the UMSNH participate in the social activities of the institution.	Always Frequently Sometimes Never	[4] [3] [2] [1]
46	FDyCS professors link teaching to knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]
47	The UMSNH FDyCS constitutes a factor of social mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]
48	The FDyCS faculty contributes to the formation of opinion leaders who fight for the progress of the social change of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]
49	The FDyCS faculty develop social service activities of legal advice in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
50	Through teaching, the FDyCS is linked to the government sector, which it trains through specialization and updating courses.	Always Frequently Sometimes Never	[4] [3] [2] [1]
51	Through research activities, the FDyCS is part of an international network of universities that share teaching mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]

ANNEX 27. STUDENT QUESTIONNAIRE (VERSION FOR INSTRUMENT APPLICATION)

Dear Student:

Receive a greeting and our communication about the realization of an investigation on the state of the quality of higher education kept by the Faculty of Law and Social Sciences of our Michoacana Universidad de San Nicolás de Hidalgo. In this sense, I request your support and collaboration so that you spend a few minutes answering this questionnaire, since your participation and opinion will allow us to obtain first-hand, relevant and valid information about our academic unit.

This questionnaire is anonymous to guarantee the confidentiality of your data. Your sincere and objective opinion will be very useful for the development of a proposal to improve the educational quality that we share.

I thank you, without reservation, for your invaluable collaboration.

Prof. Miguel Angel Medina Romero.

(A questionnaire for students is attached).

I. Classification data.

Instructions: Place an X in the box for the answer of your choice.

1	Sex:	Male Female <input type="checkbox"/> <input type="checkbox"/>	1 2
2	Age:	Under 18 years From 18 to 23 years From 23 to 30 years From 31 to 35 years more than 35 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5
3	Time in the FDyCS:	Less than 1 year from 1 to 2 years 2 to 3 years from 3 to 4 years 4 to 5 years More than 5 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6
4	Grade you are in:	First Second Third Room Fifth <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5
5	Do you have any representation position?	Yeah No <input type="checkbox"/> <input type="checkbox"/>	1 2
6	If how much with representation charge, what is it?	college counselor technical adviser Student advisor Group leader <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4

II. Respondent opinion thematic data.

Instructions: Place an X over the number of the answer of your choice.

FDyCS: Faculty of Law and Social Sciences.
UMSNH: Michoacan Universidad de San Nicolás de Hidalgo.

1	The FDyCS Law Degree has institutional academic tutoring programs for student development.	Always Frequently Sometimes Never	[4] [3] [2] [1]
2	The magisterial class constitutes a didactic strategy used in the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
3	Teamwork is a didactic dynamic implemented in the UMSNH Law Degree academic program.	Always Frequently Sometimes Never	[4] [3] [2] [1]
4	The debate is a didactic dynamic instrumented in the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
5	In the learning evaluation process, the FDyCS teacher makes an evaluation on a permanent basis.	Always Frequently Sometimes Never	[4] [3] [2] [1]
6	In the FDyCS, the teacher considers the bibliographic research works as part of the learning assessment.	Always Frequently Sometimes Never	[4] [3] [2] [1]
7	In the study plan of this Degree there is an interesting offer of optional subjects for the student.	Always Frequently Sometimes Never	[4] [3] [2] [1]
8	At FDyCS, the faculty is available to guide the student when necessary.	Always Frequently Sometimes Never	[4] [3] [2] [1]
9	In the FDyCS of the UMSNH, the class schedules are adapted to the needs of the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
10	At the UMSNH FDyCS, the professors are constantly updating their knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]
11	In the FDyCS of the UMSNH, the teaching staff is capable of adequately transmitting their knowledge to the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
12	The conditions of the classrooms are adequate for the studies in the FDyCS of the UMSNH,	Always Frequently Sometimes Never	[4] [3] [2] [1]

13	In the FDyCS of the UMSNH, the equipment of the computer center responds to the needs of the student.	Always Frequently Sometimes Never	[4] [3] [2] [1]
14	The UMSNH FDyCS makes its mission known effectively among its students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
15	The UMSNH FDyCS promotes student participation.	Always Frequently Sometimes Never	[4] [3] [2] [1]
16	With the knowledge and skills imparted by the professors in the FDyCS of the UMSNH, the interest of the students in the subjects is motivated.	Always Frequently Sometimes Never	[4] [3] [2] [1]
17	The students participate as a consulted audience in the Open Opposition Contests, mechanisms by which the faculty makes their institutional entrance to the FDyCS of the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
18	At the UMSNH FDyCS, students with high academic performance are encouraged with academic scholarships.	Always Frequently Sometimes Never	[4] [3] [2] [1]
19	In the UMSNH FDyCS, graduation occurs only after the student has taken their professional exam, in accordance with the institution's regulatory standards.	Always Frequently Sometimes Never	[4] [3] [2] [1]
20	The FDyCS has institutional regulations for undergraduate students to be incorporated into research coordinated by the faculty.	Always Frequently Sometimes Never	[4] [3] [2] [1]
21	The FDyCS promotes scholarships for research assistants, which are accessed through institutional mechanisms.	Always Frequently Sometimes Never	[4] [3] [2] [1]
22	At the FDyCS, the student involved in the research task is organized into research projects led by the teacher-researchers.	Always Frequently Sometimes Never	[4] [3] [2] [1]
23	At FDyCS, research assistant students are incorporated into research sponsored by UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
24	Through research projects coordinated by professors, FDyCS students have the opportunity to write their theses.	Always Frequently Sometimes Never	[4] [3] [2] [1]
25	The results of the research at the FDyCS are translated into teachers' books, from which students expand their knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]
26	At the UMSNH FDyCS, teachers are provided with material for the proper development of their class work.	Always Frequently Sometimes Never	[4] [3] [2] [1]

27	In the FDyCS of the UMSNH, there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]
28	In the FDyCS of the UMSNH, procedures are applied for the evaluation of the performance of administrative personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]
29	The FDyCS has collegiate bodies defined within its organizational structure, which are duly installed for academic and administrative decision-making.	Always Frequently Sometimes Never	[4] [3] [2] [1]
30	At FDyCS, students are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]
31	In the FDyCS, students periodically evaluate the performance of their teachers.	Always Frequently Sometimes Never	[4] [3] [2] [1]
32	The FDyCS of the UMSNH has an Academic Secretary for the management of the academic affairs of the dependency.	Always Frequently Sometimes Never	[4] [3] [2] [1]
33	In the case of the FDyCS of the UMSNH, the functions of the non-academic staff are delimited by regulation.	Always Frequently Sometimes Never	[4] [3] [2] [1]
34	In the case of the FDyCS of the UMSNH, a regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]
35	The FDyCS has and complies with the corresponding regulations for the management of institutional finances.	Always Frequently Sometimes Never	[4] [3] [2] [1]
36	In accordance with its legal framework, the FDyCS has institutional policies for the promotion and development of the dissemination of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]
37	In the FDyCS special funds are promoted and applied for the development of extension.	Always Frequently Sometimes Never	[4] [3] [2] [1]
38	FDyCS students participate in the institution's sports activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
39	FDyCS students have access to academic exchange stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]
40	FDyCS students link their academic activities with knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]

41	The UMSNH FDyCS constitutes a factor of social mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]
42	The students of the FDyCS contribute with their point of view to the solution of the problems that stop social progress.	Always Frequently Sometimes Never	[4] [3] [2] [1]
43	FDyCS students carry out free legal advice activities in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
44	Through the social service, the students of the FDyCS of the UMSNH are linked to the government sector, in which a large part is inserted to work later.	Always Frequently Sometimes Never	[4] [3] [2] [1]
50	Through research activities, the FDyCS is part of an international network of universities that share student mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]

ANNEX 28. QUESTIONNAIRE FOR GRADUATES (VERSION FOR INSTRUMENT APPLICATION)

Dear colleague:

Receive a greeting and our communication about the realization of an investigation on the state of the quality of higher education kept by the Faculty of Law and Social Sciences of our Michoacana Universidad de San Nicolás de Hidalgo. In this sense, I request your support and collaboration so that you spend a few minutes answering this questionnaire, since your participation and opinion will allow us to obtain first-hand, relevant and valid information about our academic unit.

This questionnaire is anonymous to guarantee the confidentiality of your data. Your sincere and objective opinion will be very useful for the development of a proposal to improve the educational quality that is taught at our Faculty of Law and Social Sciences.

I thank you, without reservation, for your invaluable collaboration.

Prof. Miguel Angel Medina Romero.

(A questionnaire for graduates is attached).

I. Classification data.

Instructions: Place an X in the box for the answer of your choice.

1	Sex:	Male Female <input type="checkbox"/> <input type="checkbox"/>	1 2
2	Age:	less than 30 years 30 to 40 years 40 to 50 years 50 to 60 years over 60 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5
3	Graduate time:	Less than 1 years from 1 to 5 years from 6 to 10 years from 11 to 15 years from 16 to 20 years More than 20 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6
4	Form of admission to the FDyCS of the UMSNH:	Exam Other, which one? <input type="checkbox"/> <input type="checkbox"/>	1 2
5	Length of stay at the FDyCS:	5 years More than 5 years <input type="checkbox"/> <input type="checkbox"/>	1 2
6	Time elapsed to get your first job:	Less than 1 years from 1 to 2 years from 3 to 4 years more than 4 years <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4
7	Sector in which you work:	Public Private <input type="checkbox"/> <input type="checkbox"/>	1 2
8	In what area(s) of Law do you work professionally?	Civil D. D. Grief. commercial law D. Constitutional D. International D. Economic D. Notary D. Administrative <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 2 3 4 5 6 7 8

II. Respondent opinion thematic data.

Instructions: Place an X over the number of the answer of your choice.

FDyCS: Faculty of Law and Social Sciences.
UMSNH: Michoacan Universidad de San Nicolás de Hidalgo.

1	In my experience, the UMSNH FDyCS has actions aimed at increasing terminal efficiency.	Always Frequently Sometimes Never	[4] [3] [2] [1]
2	During my stay at the FDyCS, the didactic strategy of teamwork was applied in the classes.	Always Frequently Sometimes Never	[4] [3] [2] [1]
3	In the FDyCS the partial evaluations were adequate to know what the students have learned.	Always Frequently Sometimes Never	[4] [3] [2] [1]
4	Regarding the evaluation of learning, I consider it convenient to incorporate research work in said evaluation for students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
5	The contents of the subjects of the FDyCS study plan were adapted to the present reality of the national and regional context.	Always Frequently Sometimes Never	[4] [3] [2] [1]
6	According to my personal experience in the FDyCS, the teaching staff is permanently concerned about the learning of the students.	Always Frequently Sometimes Never	[4] [3] [2] [1]
7	According to my experience, the admission policy to the FDyCS of the UMSNH is pertinent.	Always Frequently Sometimes Never	[4] [3] [2] [1]
8	In my experience, the UMSNH FDyCS graduation policy is adequate.	Always Frequently Sometimes Never	[4] [3] [2] [1]
9	In the Law Degree of the FDyCS of the UMSNH, the teaching staff have a sufficient level of theoretical knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]
10	From my experience, in the FDyCS of the UMSNH, the teaching staff have an acceptable level of practical knowledge.	Always Frequently Sometimes Never	[4] [3] [2] [1]
11	The physical facilities of the FDyCS are comfortable and welcoming.	Always Frequently Sometimes Never	[4] [3] [2] [1]
12	The performance of managers, teachers and students was framed in a climate of mutual respect.	Always Frequently Sometimes Never	[4] [3] [2] [1]

13	As for my appreciation, the education received at the FDyCS allowed me to develop a personality with a critical attitude.	Always Frequently Sometimes Never	[4] [3] [2] [1]
14	The knowledge and skills acquired in my training at the FDyCS have application in my current professional performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]
15	In the FDyCS, the regulations referring to the entry of academic staff were applied with the necessary rigor.	Always Frequently Sometimes Never	[4] [3] [2] [1]
16	During my stay at FDyCS I had timely access to information on scholarships offered to students with high academic performance.	Always Frequently Sometimes Never	[4] [3] [2] [1]
17	The FDyCS has specific regulations for the development and promotion of research.	Always Frequently Sometimes Never	[4] [3] [2] [1]
18	During my stay at the FDyCS I had access to the calls to participate as a student in institutional research projects coordinated by the faculty.	Always Frequently Sometimes Never	[4] [3] [2] [1]
19	During my stay at FDyCS, the faculty actively participated in institutional research projects.	Always Frequently Sometimes Never	[4] [3] [2] [1]
20	During my stay at the FDyCS, I appreciated that funds are applied for the development of research, which include professors and students, who are accessed through institutional mechanisms and are supervised.	Always Frequently Sometimes Never	[4] [3] [2] [1]
21	Research projects coordinated by professors and assisted by students were supported by the UMSNH.	Always Frequently Sometimes Never	[4] [3] [2] [1]
22	The research activities carried out by the assistant professors-researchers allowed the students to carry out their undergraduate thesis.	Always Frequently Sometimes Never	[4] [3] [2] [1]
23	The results of the research generated in the FDyCS were translated into chapters of thematic books that accounted for the institutional level of scientific and technological innovation.	Always Frequently Sometimes Never	[4] [3] [2] [1]
24	In the FDyCS, teachers are provided with material for the proper development of their work in the classroom.	Always Frequently Sometimes Never	[4] [3] [2] [1]
25	In the FDyCS there is a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.	Always Frequently Sometimes Never	[4] [3] [2] [1]
26	From my perspective, the FDyCS applies procedures for evaluating the performance of administrative personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]

27	During my stay at the FDyCS of the UMSNH, it had the proper installation of the collegiate bodies defined within its organizational structure.	Always Frequently Sometimes Never	[4] [3] [2] [1]
28	From my experience, at FDyCS, the faculty and students are committed to the institutional mission.	Always Frequently Sometimes Never	[4] [3] [2] [1]
29	In the FDyCS, the role of the teacher and the directors is evaluated in each school year.	Always Frequently Sometimes Never	[4] [3] [2] [1]
30	From my stay at the FDyCS, I noticed the correspondence between the organizational structure and the nature of the university dependency.	Always Frequently Sometimes Never	[4] [3] [2] [1]
31	From my perspective, in the case of the FDyCS a regime is applied for the hiring of non-academic personnel.	Always Frequently Sometimes Never	[4] [3] [2] [1]
32	In the FDyCS there is a regulatory framework for the authorities and the exercise of their actions.	Always Frequently Sometimes Never	[4] [3] [2] [1]
33	In consideration of my permanence in the FDyCS of the UMSNH, I realized that it complies with the regulations for the management of institutional finances.	Always Frequently Sometimes Never	[4] [3] [2] [1]
34	From my stay at the FDyCS, I appreciated that, in accordance with its legal framework, the university dependency had institutional policies for the development of the extension and diffusion of culture.	Always Frequently Sometimes Never	[4] [3] [2] [1]
35	During my stay at the FDyCS of the UMSNH, the professors and students received financial support for extension activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
36	During my stay at the FDyCS, the professors had access to research stays with other national and/or foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]
37	During my stay at the FDyCS, the students had access to academic exchanges with other national and foreign educational institutions.	Always Frequently Sometimes Never	[4] [3] [2] [1]
38	During my stay at the FDyCS of the UMSNH, the students participated in community social service activities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
39	In my view, the students of the FDyCS of the UMSNH link research to knowledge of the social needs of the population.	Always Frequently Sometimes Never	[4] [3] [2] [1]
40	From my experience, the faculty of the FDyCS of the UMSNH contributes with their points of view to the debate on the solution of the problems that stop the progress of society.	Always Frequently Sometimes Never	[4] [3] [2] [1]

41	From my experience, FDyCS students develop free legal advice activities in the marginal areas of the State's municipalities.	Always Frequently Sometimes Never	[4] [3] [2] [1]
42	The FDyCS is linked to the government sector through teaching and social service.	Always Frequently Sometimes Never	[4] [3] [2] [1]
43	During my stay at the FDyCS I verified that, through research activities, this university unit is part of an international network of universities that share student mobility.	Always Frequently Sometimes Never	[4] [3] [2] [1]

ANNEX 29. DATA MATRIX RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR TEACHERS*

TABLE A.27 DATA MATRIX OF THE QUESTIONNAIRE FOR TEACHERS (1/3)																																																						
S/S	TEACHING																	INVESTIGATION													ADMINISTRATION/ MANAGEMENT												EXTENSION AND DISSEMINATION					EC						
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51			
1	1	4	4	4	4	3	4	1	4	4	3	1	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	3	2	3	3	3	4	2	4	3	3	3	3	3	3	3	1	4	4	4	4	4	157	
2	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	2	2	3	1	4	4	3	1	2	2	3	3	2	4	4	143				
3	3	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	160			
4	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	2	2	3	3	1	4	3	3	3	4	4	3	1	3	4	3	3	4	3	3	3	3	3	2	1	3	4	2	4	4	152		
5	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	4	3	3	3	3	3	3	3	3	3	4	4	3	4	4	3	163		
6	1	4	4	3	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	4	3	1	4	2	3	2	2	1	3	4	4	3	3	3	3	1	1	4	4	2	1	1	4	3	1	4	4	3	4	144		
7	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	4	3	1	4	4	2	3	4	142		
8	2	3	4	3	4	3	2	3	4	3	3	4	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	2	3	3	2	3	1	1	4	3	2	3	4	3	4	3	147	
9	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	4	4	4	4	4	4	4	4	2	3	3	3	3	3	3	4	2	3	3	3	3	4	4	4	4	4	179		
10	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	3	1	3	3	4	2	4	4	159		
11	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	2	3	3	3	3	3	3	2	3	3	3	4	4	3	3	3	3	3	3	3	4	3	4	160	
12	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	4	4	3	4	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	3	3	3	4	4	4	4	4	179		
13	3	3	4	4	2	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	3	1	3	3	4	2	4	4	2	4	159	
14	3	4	4	3	4	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	1	1	3	4	4	3	4	4	129		
15	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	3	3	3	3	2	3	3	4	3	2	3	3	3	3	3	3	2	3	2	3	2	3	2	3	4	3	4	4	142		
16	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	4	3	4	3	4	3	4	4	2	4	2	4	4	3	1	3	2	3	4	3	2	3	4	3	4	3	4	4	2	4	4	4	175		
17	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	4	4	4	4	2	3	4	4	1	3	2	3	4	4	3	2	4	1	142		
18	3	4	3	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	4	4	2	4	4	4	3	4	3	4	3	4	4	4	4	3	4	3	4	3	4	3	2	4	4	180		
19	2	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	3	4	3	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	2	3	2	1	3	1	3	1	3	1	2	2	1	4	3	124		
20	1	3	3	4	4	3	4	1	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	1	1	1	3	4	4	3	118				
21	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	4	4	4	4	2	3	4	4	1	3	2	3	4	4	3	4	4	142			
22	3	4	3	2	4	4	4	4	4	4	4	3	4	4	4	3	4	4	3	4	4	4	4	3	3	3	3	4	3	4	2	4	4	3	4	3	4	4	4	3	3	4	4	4	3	4	3	3	4	3	2	4	4	180
23	2	3	3	1	4	4	2	2	4	3	3	2	4	3	2	2	2	4	2	1	3	2	2	2	2	2	3	3	4	4	4	2	3	4	4	2	3	4	3	4	2	3	3	3	2	1	1	2	3	1	4	4	139	
24	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	1	2	4	4	3	4	4	3	4	4	3	4	3	2	4	3	4	3	4	4	4	4	3	4	3	3	1	1	4	3	4	4	4	4	178		
25	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	3	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	3	2	4	4	4	4	4	4	186		
26	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	3	4	3	4	3	4	3	4	4	4	3	3	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	194		
27	3	2	3	2	3	4	3	3	4	3	3	2	4	2	2	2	2	3	2	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	4	97	
28	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3	4	3	3	3	4	1	1	1	1	1	1	1	3	1	3	3	4	2	3	3	1	3	3	2	3	3	2	1	4	2	3	3	3	3	4	4	140		
29	2	3	2	2	4	3	1	2	3	2	3	4	1	3	2	2	2	2	4	2	1	3	2	2	2	1	2	2	4	1	1	1	2	3	2	2	1	1	1	2	2	1	1	1	2	2	2	4	3	107				
30	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	3	2	1	3	3	4	2	3	4	3	4	3	4	4	2	3	3	2	3	1	1	4	3	2	3	4	3	4	3	147		
31	3	3	1	1	1	3	1	1	3	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	126		
32	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	4	4	3	3	3	3	3	3	3	3	3	4	4	3	4	3	163			
33	1	4	4	3	4	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	2	3	2	2	1	3	4	4	3	4	3	3	3	3	3	1	1	4	2	1	1	4	3	1	4	4	3	4	4	144		
34	1	4	4	2	3	4	4	3	4	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	4	3	1	4	4	2	3	4	142			
35	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	4	2	3	3	2	3	1	1	4	3	2	3	4	3	4	3	147			

ANNEX 29. MATRIX OF DATA RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR TEACHERS (CONTINUATION)*

TABLE A.27 DATA MATRIX OF THE QUESTIONNAIRE FOR TEACHERS (2/3)																																																					
S/S	TEACHING																		INVESTIGATION												ADMINISTRATION/ MANAGEMENT												EXTENSION AND DISSEMINATION					EC					
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51		
36	3	3	1	1	1	1	3	1	1	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	126			
37	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	2	3	3	3	3	3	2	3	3	3	3	3	4	4	3	3	3	3	3	3	3	4	3	4	160	
38	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	2	3	4	4	4	3	2	3	4	4	4	4	4	4	4	2	3	3	3	3	3	3	3	4	2	3	3	3	3	3	4	4	4	4	4	4	179	
39	3	3	4	4	2	4	4	4	4	4	3	2	3	3	4	2	4	4	4	4	2	3	4	4	4	4	2	4	4	4	3	1	1	2	4	4	1	3	3	1	3	1	3	1	3	3	4	4	2	4	159		
40	3	4	4	3	4	1	3	3	1	3	2	2	4	3	3	3	2	3	4	1	2	1	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	1	1	3	4	4	3	4	4	129		
41	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	3	3	3	2	3	3	3	4	3	2	3	3	3	3	2	3	2	3	2	2	3	4	3	4	4	4	142			
42	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	4	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	4	4	2	4	4	4	175			
43	3	3	4	2	4	4	3	2	3	2	1	2	2	3	3	1	1	4	1	1	1	1	3	1	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	2	4	4	138		
44	2	3	4	3	3	3	2	2	3	3	2	4	4	4	4	3	3	4	3	4	4	2	3	2	2	4	3	3	3	4	4	3	4	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	160		
45	2	3	4	3	4	4	3	3	2	3	3	3	4	4	4	4	1	3	3	3	1	3	4	3	3	1	3	3	4	3	4	3	2	2	3	3	3	3	4	2	3	2	3	3	4	2	3	4	3	4	4	155	
46	3	4	3	3	4	4	4	3	4	3	3	2	4	3	4	3	1	4	3	2	4	3	3	3	1	3	2	3	3	3	3	1	3	3	3	3	3	1	4	3	3	3	3	3	4	3	3	4	4	4	155		
47	2	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	4	3	3	3	2	3	2	1	3	2	1	3	3	1	3	3	1	3	3	2	1	3	1	3	1	3	1	2	2	1	4	3	124			
48	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	1	1	3	3	4	4	3	118		
49	1	4	4	4	4	3	4	1	4	4	3	1	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	3	2	3	3	3	4	2	4	3	3	3	3	3	1	4	4	4	4	4	157		
50	3	3	3	2	4	4	3	4	1	4	3	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	2	4	3	3	3	2	2	3	1	4	4	3	1	2	2	3	3	2	4	4	4	143			
51	3	4	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	4	160		
52	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	3	1	4	3	3	4	3	1	3	4	3	3	3	4	3	3	3	2	1	3	4	2	4	4	152		
53	4	3	4	2	4	2	3	1	3	3	4	4	4	4	4	3	2	4	4	1	2	4	1	2	2	1	2	1	4	4	1	4	3	1	2	2	3	4	3	2	3	1	2	2	4	3	4	2	4	4	142		
54	4	3	3	2	4	3	4	3	4	3	2	1	2	3	3	3	2	3	3	2	4	3	2	4	1	1	1	2	4	4	3	3	4	3	3	3	3	4	2	3	4	3	4	3	4	3	2	4	3	150			
55	3	3	4	3	3	4	4	3	4	3	4	2	4	3	4	3	3	4	4	3	3	4	3	3	4	3	3	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	2	2	3	3	4	3	3	4	165		
56	3	4	3	3	4	4	3	4	4	4	2	3	3	4	4	4	4	3	2	3	3	1	1	1	2	3	2	3	4	3	3	4	3	3	4	4	4	4	4	4	3	4	4	3	4	3	4	3	4	4	166		
57	4	3	4	4	4	1	4	4	2	3	1	3	3	4	4	1	4	4	3	1	4	4	3	4	4	4	1	4	3	4	4	2	1	4	2	1	1	4	2	3	2	3	2	2	4	3	4	4	4	155			
58	1	3	4	2	2	3	3	1	2	3	2	4	4	4	3	1	2	1	1	1	3	2	3	3	1	3	1	4	3	3	3	4	4	4	3	3	2	4	3	1	2	4	1	1	3	4	2	2	2	130			
59	4	4	3	4	4	3	4	4	3	4	4	3	4	3	4	1	2	4	4	1	4	2	1	1	4	4	3	4	3	4	3	4	3	4	4	3	3	1	3	3	4	3	3	3	4	4	3	4	4	3	167		
60	1	3	2	2	4	3	4	3	2	4	3	2	4	3	1	4	4	3	3	3	3	4	3	3	1	4	3	2	4	3	1	3	4	3	3	3	4	3	3	3	3	3	3	3	1	3	2	4	3	147			
61	3	3	4	3	4	4	2	4	3	3	4	3	3	3	3	1	3	4	1	1	3	1	3	1	3	3	3	3	4	3	4	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	4	154		
62	3	3	4	2	4	3	2	3	3	3	3	4	2	4	4	4	4	3	4	3	2	3	3	3	2	3	3	3	4	3	4	3	2	3	3	3	2	1	3	3	3	3	3	3	3	3	4	2	4	3	155		
63	4	4	2	3	4	4	4	2	4	2	3	2	4	4	4	4	4	4	2	2	4	2	3	4	1	2	4	4	4	4	4	1	3	4	4	3	4	4	4	4	4	4	4	3	3	4	2	3	4	4	172		
64	3	4	4	1	4	4	3	4	4	2	4	3	4	3	2	1	3	4	1	1	1	1	1	2	1	2	4	4	2	2	4	3	4	4	3	4	3	4	4	3	3	3	3	3	4	4	1	4	4	152			
65	4	4	2	3	4	4	4	4	3	3	2	2	4	2	3	2	1	4	4	1	1	3	1	3	2	2	2	4	4	1	4	1	2	4	3	3	3	3	4	3	4	3	2	4	4	2	3	4	4	148			
66	3	4	3	3	4	4	3	2	1	3	2	1	4	4	4	3	1	4	4	2	2	3	1	3	3	2	1	4	3	1	4	3	3	2	4	4	4	4	3	4	3	4	4	3	4	4	3	4	4	154			
67	3	4	4	4	4	3	2	2	3	3	2	2	3	4	4	3	4	4	3	3	3	1	1	3	1	1	1	4	3	3	4	3	1	3	4	4	4	3	2	3	2	2	3	1	3	4	4	4	4	151			
68	4	4	3	4	4	4	2	3	3	3	4	4	4	4	4	4	4	4	1	4	3	1	4	2	2	1	4	4	3	4	4	4	3	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	177			
69	4	4	4	4	4	4	2	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	2	2	1	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	186			
70	3	4	2	3	4	3	1	3	3	3	4	3	4	3	3	1	1	3	1	1	1	2	1	1	2	3	2	1	4	4	3	4	3	1	2	2	2	2	2	3	3	2	2	1	2	2	3	4	2	3	4	3	129

TABLE A.27 DATA MATRIX OF THE QUESTIONNAIRE FOR TEACHERS (3/3)

S/S	TEACHING																		INVESTIGATION												ADMINISTRATION/ MANAGEMENT												EXTENSION AND DISSEMINATION										EC	
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51			
71	4	3	3	3	4	4	4	3	4	3	2	4	4	4	2	2	1	4	4	1	2	2	1	2	3	3	1	2	3	4	3	3	3	2	2	3	3	3	4	4	3	3	3	3	2	4	3	3	3	4	4	150		
72	3	4	3	2	4	4	4	2	3	1	2	4	4	1	2	2	1	4	4	2	3	3	1	1	3	1	1	1	4	1	4	4	3	1	3	3	3	4	4	4	4	4	3	3	4	3	3	4	3	2	4	4	145	
73	4	4	3	2	4	4	4	3	3	2	2	3	3	3	2	3	2	2	4	2	1	3	1	1	2	1	1	2	3	4	3	3	3	2	2	3	2	3	2	3	4	3	3	3	2	4	4	3	2	4	4	140		
74	3	4	4	2	3	4	3	2	4	3	2	3	2	3	3	2	1	3	3	3	3	2	3	4	2	2	2	3	4	3	4	3	1	3	4	3	3	3	3	4	3	3	4	2	3	4	4	2	3	4	151			
75	3	4	3	2	4	4	2	4	3	3	2	1	3	3	4	3	1	2	4	3	3	4	1	2	4	2	2	2	4	4	3	4	3	2	3	2	1	4	4	4	4	4	4	4	4	4	2	3	4	3	2	4	4	154
Σ	211	259	255	219	276	270	234	228	238	236	227	206	213	246	261	226	146	235	268	196	147	232	184	178	216	184	187	178	255	238	230	267	210	184	215	234	214	231	202	230	228	206	175	224	187	211	259	255	219	276	270	11358		

Source: Own elaboration from the application of the Questionnaire for Professors (Annex 26) to 75 professors of the Faculty of Law and Social Sciences of the Michoacana University of San Nicolás de Hidalgo in the 2008/09 school year.

*/ In the preparation of this Matrix of Data Resulting from the Application of the Questionnaire for Teachers, the Questionnaire for Teachers (Version for Application of the Instrument), Annex 26, was initially considered; and in a second stage, these data were processed adopting the order and classification of questions from the Teacher Questionnaire in its version for Data Processing (Annex 23).

P/V: Professor / Variable.

CE: Educational Quality.

ANNEX 30. MATRIX OF DATA RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR STUDENTS*

TABLE A.28 DATA MATRIX OF THE QUESTIONNAIRE FOR STUDENTS (1/3)

E/V	TEACHING																	INVESTIGATION								ADMIN./ MANAGEMENT							EXTENSION AND DISSEMINATION								EC								
	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		40	41	42	43	44	45		
1	4	3	3	3	4	4	4	3	4	4	2	4	3	3	4	2	3	4	4	2	2	4	2	2	2	4	4	1	3	4	4	3	4	3	3	3	3	4	4	4	4	4	4	4	4	3	4	3	149
2	4	4	3	4	4	4	4	3	4	3	3	4	3	4	4	3	3	3	4	4	3	2	3	2	1	3	2	2	4	4	3	4	4	2	1	2	3	4	3	3	4	4	2	4	3	1	141		
3	3	3	3	3	4	4	3	1	4	3	2	3	2	2	3	3	2	1	3	4	1	2	3	3	3	2	1	2	2	2	3	3	4	3	2	3	3	4	3	3	4	3	4	3	4	3	126		
4	4	3	3	2	4	4	4	4	4	4	2	3	2	2	3	2	3	4	4	3	3	4	3	1	3	1	1	4	4	2	3	4	4	4	4	4	3	3	4	4	3	4	3	1	3	3	140		
5	4	4	4	4	4	4	3	4	4	3	2	3	4	3	3	3	3	1	4	3	1	1	2	1	1	2	3	3	1	3	4	3	4	4	3	3	4	4	3	3	2	3	2	4	4	4	136		
6	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3	4	4	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	4	3	157		
7	2	4	2	3	4	3	4	1	3	3	2	2	4	3	4	3	1	3	4	1	1	4	1	1	1	2	1	1	1	4	2	3	4	4	1	4	4	4	3	4	3	4	3	2	4	4	125		
8	4	4	4	4	4	3	4	2	4	3	4	3	4	3	3	3	1	4	4	3	2	4	1	2	3	2	2	4	4	4	3	4	3	4	3	4	3	3	3	3	2	3	4	2	1	2	140		
9	4	4	3	2	4	4	4	2	4	2	3	4	4	3	3	1	3	4	3	2	4	1	2	3	2	2	4	4	3	2	3	3	4	3	4	3	4	4	3	4	4	2	1	3	2	138			
10	4	4	3	2	4	4	3	4	2	4	2	1	4	3	3	3	1	4	4	1	3	2	1	1	3	1	1	1	4	4	1	4	3	3	4	4	3	4	4	4	4	4	2	1	4	130			
11	3	4	4	2	3	4	3	2	4	3	2	3	2	3	3	2	1	3	3	3	3	3	2	3	4	2	2	2	3	4	3	4	3	1	3	4	3	3	3	3	4	3	3	4	2	130			
12	3	4	3	2	4	4	2	4	3	3	2	1	3	3	4	3	1	2	4	3	3	4	1	2	4	2	2	2	4	4	3	4	3	2	3	2	1	4	4	4	4	4	4	4	4	2	134		
13	4	4	3	4	4	4	4	3	4	3	3	3	3	3	4	3	1	3	4	2	2	4	1	3	3	2	2	2	4	4	3	4	3	2	3	4	4	4	2	4	4	4	4	4	4	1	143		
14	3	2	3	3	4	2	4	1	4	2	3	3	4	2	4	3	1	4	4	1	1	1	1	1	2	4	1	1	4	4	4	4	3	1	1	4	4	4	2	4	4	4	4	4	3	2	125		
15	3	4	3	4	4	4	3	3	3	3	3	3	3	3	4	3	1	3	4	4	2	4	1	3	4	2	2	2	4	4	3	4	3	2	3	4	4	4	4	4	4	4	4	4	4	4	2	146	
16	1	4	3	4	4	4	3	4	4	3	4	4	4	2	4	3	3	3	3	1	1	3	2	2	2	3	4	1	3	4	3	4	3	3	4	4	4	3	3	4	3	3	3	3	4	141			
17	2	4	3	3	4	4	3	2	4	3	4	4	3	3	2	2	1	4	4	1	1	1	1	1	2	4	2	1	4	4	1	3	3	1	3	4	3	4	3	2	4	3	4	3	4	3	125		
18	4	4	3	4	4	4	4	4	4	3	3	4	4	4	4	2	4	3	4	1	1	4	1	2	2	2	3	4	4	4	1	4	3	4	3	4	3	4	3	4	4	2	4	4	4	4	150		
19	3	4	2	3	3	4	4	3	4	2	3	1	2	3	2	3	2	4	4	3	3	4	3	3	3	3	2	3	4	4	3	4	3	2	3	3	3	3	3	4	3	3	3	4	1	136			
20	4	4	3	2	4	4	4	3	4	3	3	3	3	3	2	2	3	4	4	3	4	3	2	3	2	1	3	3	3	3	2	4	2	3	2	3	3	3	3	2	1	3	2	1	1	126			
21	4	4	4	2	4	3	4	3	3	3	3	3	4	4	4	4	3	4	4	2	1	4	1	1	4	1	1	4	4	4	1	4	3	4	3	4	4	4	4	4	4	4	4	4	4	3	126		
22	4	4	2	3	4	4	4	2	4	2	3	2	4	4	4	4	4	4	4	2	2	4	2	3	4	1	2	4	4	4	4	4	1	3	4	4	3	4	4	3	4	4	4	4	4	3	151		
23	3	4	4	1	4	4	3	4	4	2	4	4	3	4	3	2	1	3	4	1	1	1	1	1	2	1	2	4	4	2	2	4	3	4	4	3	3	4	4	3	4	3	3	3	4	132			
24	4	4	2	3	4	4	4	3	3	2	2	4	2	3	2	1	4	4	1	1	3	1	1	3	2	2	2	4	4	1	4	1	2	4	3	3	3	3	4	3	4	3	4	3	2	127			
25	3	4	3	3	4	4	3	2	1	3	2	1	4	4	4	3	1	4	4	2	2	3	1	3	3	2	1	1	4	3	1	4	3	3	2	4	4	4	4	3	4	3	4	4	4	133			
26	3	4	4	4	4	3	2	3	3	3	2	2	3	4	4	3	4	3	4	3	3	3	1	1	3	1	1	1	4	3	3	4	3	1	3	4	4	4	3	2	3	2	3	1	128				
27	4	4	3	4	4	4	4	2	3	3	3	4	4	4	4	4	4	4	4	1	4	3	1	4	2	2	1	4	4	3	4	4	4	3	4	4	3	4	1	4	4	4	4	4	4	3	154		
28	4	4	4	4	4	4	2	3	4	3	4	4	4	4	4	4	4	4	4	3	4	4	2	4	4	2	2	1	4	4	4	4	3	3	3	4	4	4	4	4	4	4	4	4	4	162			
29	3	4	2	3	4	3	1	3	3	3	4	3	4	3	3	1	3	1	3	1	1	2	1	1	2	3	2	1	4	4	3	4	3	1	2	2	2	2	3	3	2	2	1	2	2	4	110		
30	4	3	3	3	4	4	4	3	4	3	2	4	4	4	2	2	1	4	4	1	2	2	1	2	3	3	1	2	3	4	3	3	3	2	2	2	3	3	4	4	3	3	3	3	2	129			
31	3	4	3	2	4	4	2	3	1	2	4	4	1	2	2	1	4	4	2	3	3	1	1	3	1	1	1	1	4	1	4	4	3	1	3	3	3	4	4	4	4	4	3	3	4	129			
32	4	4	3	2	4	4	3	3	2	2	3	3	3	2	3	2	2	4	2	1	3	1	1	2	1	2	1	2	3	4	3	3	3	2	2	3	2	3	2	3	4	3	3	3	2	119			
33	4	3	4	2	4	4	2	3	1	3	3	4	4	4	3	2	4	4	1	2	4	1	2	2	1	2	1	2	4	4	1	4	3	1	2	2	3	4	3	2	3	1	2	2	121				
34	4	3	3	2	4	3	4	3	4	3	2	1	2	3	3	3	3	2	3	3	2	4	1	1	1	1	2	4	4	4	3	3	3	4	3	3	3	4	2	3	4	3	4	4	3	131			
35	3	3	4	3	3	4	4	3	4	3	4	2	4	3	4	3	3	4	4	3	3	4	3	2	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	2	2	3	145	

ANNEX 30. DATA MATRIX RESULTING FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE (CONTINUATION)*

TABLE A.28 DATA MATRIX OF THE QUESTIONNAIRE FOR STUDENTS (2/3)

E/V	TEACHING																INVESTIGATION										ADMIN./ MANAGEMENT										EXTENSION AND DISSEMINATION										EC	
	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45		
36	3	4	3	3	4	4	3	4	4	4	2	3	3	4	4	4	4	4	3	2	3	3	1	1	1	1	2	3	2	3	4	3	3	4	3	3	4	4	4	4	3	4	4	3	4	3	145	
37	4	3	4	4	4	4	1	4	4	2	3	1	3	3	4	4	4	1	4	4	3	1	4	3	4	3	4	4	1	4	3	4	2	1	4	2	1	1	4	2	3	2	3	2	2	132		
38	1	3	4	2	2	2	3	3	1	2	3	2	4	4	4	3	1	2	1	1	1	3	2	3	3	1	3	1	4	3	3	3	4	4	3	3	2	4	3	1	2	4	3	1	2	4	1	116
39	4	4	3	4	4	3	4	4	3	4	4	4	3	4	3	4	1	2	4	4	1	4	2	1	1	4	4	3	4	3	4	3	4	3	4	4	4	3	3	1	3	3	4	3	3	3	145	
40	1	3	2	2	4	3	4	3	2	4	3	2	3	2	4	3	1	4	4	3	3	3	3	3	4	3	3	1	4	3	2	4	3	1	3	4	3	3	4	3	3	3	3	3	3	132		
41	3	3	4	3	4	2	4	3	3	4	3	3	3	3	3	3	1	3	4	1	1	3	1	3	1	3	3	3	3	4	3	4	3	3	4	3	3	3	4	3	3	3	3	3	3	3	132	
42	3	3	4	2	4	3	2	3	3	3	3	4	2	4	4	4	4	3	4	3	2	3	3	3	3	2	3	3	3	4	3	4	3	2	3	3	3	2	1	3	3	3	4	3	3	137		
43	3	3	4	2	4	4	3	3	2	1	2	2	3	3	1	1	4	1	1	1	1	3	1	3	1	3	1	3	3	3	3	3	4	3	3	3	2	3	3	3	3	3	3	3	3	3	118	
44	2	3	4	3	3	3	2	2	3	3	2	4	4	4	4	3	3	4	3	4	4	4	2	3	2	2	4	3	3	3	4	4	3	4	3	3	3	3	3	3	3	4	3	3	4	3	142	
45	2	3	4	3	4	4	3	2	3	3	3	4	4	4	4	1	3	3	3	1	3	4	3	3	3	1	3	3	4	3	4	3	2	2	3	3	3	3	3	4	2	3	2	3	3	4	135	
46	3	4	3	3	4	4	4	3	4	3	3	2	4	3	4	3	1	4	3	3	2	4	3	3	3	1	3	2	3	3	3	3	3	3	1	3	3	3	3	1	4	3	3	3	3	145		
47	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	4	3	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	2	3	2	1	3	1	3	1	3	1	132			
48	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	1	1	1	116	
49	1	4	4	4	4	3	4	1	4	4	3	1	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	3	2	3	3	3	4	2	4	3	3	3	3	3	145			
50	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	3	2	2	3	1	4	4	3	1	2	2	132		
51	3	4	4	4	4	2	4	4	3	4	3	2	3	2	3	2	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	132	
52	1	3	4	2	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	3	1	4	3	3	4	3	1	3	4	3	3	3	4	3	3	3	3	3	3	2	137	
53	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	4	3	3	3	3	3	3	3	3	3	4	118	
54	1	4	4	3	4	3	3	2	1	2	2	4	3	1	4	4	3	3	1	4	2	3	2	2	1	3	4	4	3	4	3	3	3	3	3	1	1	4	2	1	1	4	3	142				
55	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	2	3	2	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	4	3	135		
56	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	2	3	3	2	3	1	1	4	3	128		
57	3	3	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	116		
58	3	3	4	3	4	2	4	4	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3	4	3	2	3	3	3	3	3	3	2	3	3	3	3	3	3	4	4	3	3	3	3	140		
59	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	4	3	2	3	4	4	3	4	3	2	3	4	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	3	3	3	155		
60	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	3	1	139		
61	3	4	4	3	4	1	3	3	1	3	2	4	3	3	2	3	4	1	2	1	2	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	1	1	1	139		
62	3	3	4	3	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	2	3	3	3	2	3	3	3	3	4	3	2	3	3	3	2	3	3	2	3	2	3	2	2	121	
63	4	4	2	4	4	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	4	3	4	153		
64	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	1	4	4	4	4	2	3	4	4	1	3	2	123		
65	3	4	3	2	4	4	4	4	4	4	3	4	4	4	3	4	4	3	4	4	4	3	3	3	4	3	4	2	4	4	4	3	4	4	3	4	4	3	4	4	4	3	4	3	4	160		
66	2	3	3	1	4	4	2	2	4	3	3	2	4	3	2	2	2	4	2	1	3	2	2	2	2	2	2	3	3	4	4	4	4	2	3	4	3	4	2	3	3	3	2	1	1	122		
67	3	4	4	4	4	4	4	4	4	4	4	4	4	3	4	1	2	4	4	3	4	4	3	3	4	4	3	4	3	2	4	3	4	3	4	4	4	4	3	4	3	3	1	1	4	155		
68	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	3	3	2	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	2	3	4	4	1	3	2	162	
69	4	4	4	4	4	4	4	4	3	3	4	4	4	4	3	4	3	4	3	4	3	4	4	4	4	3	3	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	170	
70	3	2	3	2	3	4	3	3	4	3	3	2	3	2	2	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	80	

ANNEX 30. DATA MATRIX RESULTING FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE (CONTINUATION)*

TABLE A.28 DATA MATRIX OF THE QUESTIONNAIRE FOR STUDENTS (3/3)																																																
E/V	TEACHING																		INVESTIGATION							ADMIN./ MANAGEMENT							EXTENSION AND DISSEMINATION							EC								
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45			
71	3	3	3	3	4	4	4	4	4	3	3	3	3	3	4	3	3	3	3	4	1	1	1	1	1	3	1	1	3	1	3	3	4	2	3	3	1	3	3	2	3	3	2	1	4	2	80	
72	2	3	2	2	4	3	1	2	3	2	3	4	1	3	2	2	2	2	4	2	1	3	2	2	2	1	2	2	4	1	1	1	2	3	2	2	1	1	1	1	2	2	1	1	1	91		
73	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	2	3	3	2	3	1	1	4	3	128		
74	3	3	1	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	116		
75	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3	140	
76	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	3	155		
77	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	2	3	4	4	4	4	4	2	2	4	4	4	3	1	1	2	4	4	1	3	3	1	3	1	3	1	139		
78	3	4	4	3	4	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	1	1	107	
79	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	3	3	3	3	2	3	3	3	4	3	2	3	3	3	3	2	3	3	2	3	2	2	2	121	
80	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	4	3	153	
81	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	4	4	4	4	4	2	3	4	4	1	3	2	153		
82	3	4	3	2	4	4	4	4	4	3	4	4	3	4	4	4	3	4	4	3	4	4	3	3	3	3	4	3	4	2	4	4	3	4	4	3	4	4	4	3	4	4	3	4	3	160		
83	2	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	4	3	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	2	3	2	1	3	1	3	1	3	1	110		
84	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	1	1	100		
85	1	4	4	4	4	3	4	1	4	4	3	1	4	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	2	3	3	3	4	4	3	4	4	3	3	3	3	136		
86	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	3	2	2	3	1	4	4	3	1	2	2	124		
87	3	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	137		
88	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	3	1	4	3	3	4	3	1	3	4	3	3	3	4	3	3	3	3	2	134		
89	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	4	3	3	3	3	3	3	3	3	3	4	142	
90	1	4	4	3	4	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	2	3	2	1	3	4	4	3	4	3	3	3	3	3	1	1	4	2	1	1	4	3	124			
91	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	4	3	124		
92	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	3	4	2	3	3	2	3	1	1	4	3	128
93	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	3	3	3	3	155		
94	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	2	3	4	4	4	4	4	4	2	4	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	3	1	149	
Σ	276	330	314	279	351	342	304	285	305	298	279	265	276	305	325	280	183	303	342	236	185	292	217	214	266	209	222	225	326	306	279	340	271	236	271	302	280	298	263	294	297	263	231	289	237	12491		

Fuente: Elaboración propia a partir de la aplicación del Cuestionario para Estudiantes (Anexo 27) a 94 estudiantes de la Facultad de Derecho y Ciencias Sociales de la Universidad Michoacana de San Nicolás de Hidalgo en el ciclo escolar 2008/09.

*/ En la elaboración de esta Matriz de Datos Resultantes de la Aplicación del Cuestionario para Estudiantes se consideró en un primer momento el Cuestionario para Estudiantes (Versión para Aplicación del Instrumento), Anexo 27; y en un segundo tiempo se procesaron estos datos adoptando el orden y la clasificación de preguntas del Cuestionario de Estudiantes en su versión para Procesamiento de Datos (Anexo 24).

E/V: Estudiantes / Variable.

CE: Calidad Educativa.

ANNEX 31. MATRIX OF DATA RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES*

TABLE A.29 DATA MATRIX OF THE QUESTIONNAIRE FOR GRADUATES (1/3)

E/V	TEACHING																INVESTIGATION							ADMIN./ MANAGEMENT							EXTENSION AND DISSEMINATION							EC								
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43			
1	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	3	2	2	3	1	4	4	3	1	120		
2	3	4	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	131		
3	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	3	1	4	3	3	4	3	1	3	4	3	3	3	4	3	3	3	129		
4	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	4	3	3	3	3	3	3	3	135		
5	1	4	4	3	4	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	2	3	2	2	1	3	4	4	3	4	3	3	3	3	3	1	1	4	2	1	1	117		
6	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	117		
7	2	3	4	3	4	3	2	3	4	3	3	4	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	3	2	3	3	2	3	1	1	121	
8	3	3	1	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	110	
9	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	134	
10	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	4	4	2	3	3	3	3	4	2	3	3	3	3	149		
11	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	4	2	2	4	4	3	1	1	2	4	2	4	4	1	3	3	3	149		
12	3	4	4	3	4	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	105		
13	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	3	3	3	3	2	3	3	4	3	2	3	3	3	3	3	2	3	3	2	3	117		
14	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	146		
15	3	4	4	3	4	4	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	2	4	1	1	1	1	4	4	4	2	3	4	4	1	118		
16	3	4	3	2	4	4	4	4	4	4	4	3	4	4	4	3	4	4	3	4	4	4	3	3	3	3	4	3	4	2	4	4	3	4	4	4	3	3	4	4	4	3	153			
17	2	3	3	1	4	4	2	2	4	3	3	3	2	4	3	2	2	2	4	2	1	3	2	2	2	2	2	3	3	4	4	4	4	2	3	4	3	4	2	3	3	3	2	120		
18	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	1	2	4	4	3	4	4	3	3	4	4	3	4	3	4	4	3	4	4	4	3	4	4	3	4	3	1	150		
19	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	3	3	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	3	4	1	157		
20	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	3	4	3	4	3	3	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	162
21	3	2	3	2	3	4	3	3	4	3	3	2	3	2	2	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	162	
22	3	3	3	4	4	4	4	4	4	3	3	3	3	3	4	3	3	3	4	1	1	1	1	1	3	1	1	3	1	3	3	4	2	3	3	1	3	3	2	3	2	3	2	1	114	
23	2	3	2	2	4	3	1	2	3	2	3	4	1	3	2	2	2	2	4	2	1	3	2	2	2	1	2	2	4	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	89	
24	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	3	4	2	3	3	2	3	1	1	121
25	3	3	1	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	110	
26	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	2	3	3	3	3	3	3	3	2	3	3	3	3	4	4	3	3	134	
27	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	149
28	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	135	
29	3	4	4	3	4	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	105	
30	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	3	3	3	3	2	3	3	4	3	2	3	3	3	3	2	3	3	2	3	117			
31	4	4	2	4	4	4	4	4	4	4	4	3	4	3	4	4	3	4	3	4	3	3	3	4	3	4	4	2	4	3	1	3	1	3	2	3	4	3	2	3	4	3	3	117		
32	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	1	1	4	4	4	4	2	3	4	4	1	118	
33	3	4	3	2	4	4	4	4	4	4	4	3	4	4	4	3	4	4	3	4	4	4	3	3	3	3	4	3	4	3	4	2	4	4	3	4	3	4	4	3	3	4	4	3	153	
34	2	2	2	1	4	3	2	1	3	3	3	2	3	1	3	3	3	4	3	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	2	3	2	1	3	1	3	1	106		
35	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	98		

ANNEX 31. MATRIX OF DATA RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES (CONTINUATION)*

TABLE A.29 DATA MATRIX OF THE QUESTIONNAIRE FOR GRADUATES (2/3)																																													
E/V	TEACHING																INVESTIGATION							ADMIN./ MANAGEMENT										EXTENSION AND DISSEMINATION										EC	
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43		
36	1	4	4	4	4	4	3	4	1	4	4	3	1	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	3	2	3	3	3	4	2	4	3	3	3	130	
37	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	3	2	2	3	1	4	4	3	1	120	
38	3	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	131	
39	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	3	1	4	3	3	4	3	3	1	3	4	3	3	3	4	3	3	129	
40	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	3	4	3	3	3	3	3	3	135	
41	1	4	4	3	4	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	2	3	2	2	1	3	4	4	3	4	3	3	3	3	3	1	1	4	2	1	1	135	
42	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	117	
43	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	3	4	2	3	2	3	1	1	121
44	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	149	
45	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	135	
46	3	3	4	4	2	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	130	
47	3	3	3	4	2	3	4	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	2	3	3	3	3	3	4	3	3	120	
48	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	4	3	4	3	2	3	3	4	4	4	4	4	4	2	3	3	3	3	3	4	2	3	3	3	131	
49	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	129	
50	3	4	4	3	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	135	
51	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	2	3	4	1	1	2	2	3	3	3	3	2	3	3	3	3	2	3	3	3	3	3	3	3	3	2	3	3	135
52	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	117	
53	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	1	1	4	4	4	4	2	3	4	4	1	121
54	3	4	3	2	4	4	4	4	4	4	3	4	4	4	4	3	4	4	3	4	4	4	3	3	3	3	4	3	4	2	4	4	3	4	3	4	4	3	3	4	4	4	3	149	
55	2	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	4	3	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	2	3	2	1	3	1	3	1	135	
56	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	3	2	1	2	3	2	2	1	3	1	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	98	
57	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	1	1	4	4	4	4	2	3	4	4	1	118
58	3	4	3	2	4	4	4	4	4	4	3	4	4	4	4	3	4	4	4	4	4	3	3	3	3	4	3	4	2	4	4	3	4	3	4	3	4	3	3	4	4	4	3	153	
59	2	3	3	1	4	4	2	2	4	3	3	3	2	4	3	2	2	2	4	2	1	3	2	2	2	2	2	3	3	4	4	4	2	3	4	4	4	4	2	3	3	3	3	2	120
60	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	1	2	4	4	3	4	4	3	3	4	4	3	4	3	2	4	3	4	3	4	4	4	4	3	4	3	3	1	150
61	4	4	4	4	4	4	4	4	4	4	4	4	2	4	4	4	3	3	4	4	4	3	3	2	4	4	4	4	4	4	4	4	3	4	4	4	4	4	2	3	4	4	1	150	
62	4	4	4	4	4	4	4	3	3	4	4	4	4	4	3	4	3	4	3	4	3	4	4	4	4	3	3	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	3	4	162
63	3	4	2	3	2	3	3	4	3	3	2	3	2	2	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	78
64	3	3	3	3	4	4	4	4	4	3	3	3	3	3	4	3	3	3	4	1	1	1	1	1	3	1	1	3	1	3	3	4	2	3	3	1	3	3	2	3	3	2	1	114	
65	2	3	2	2	4	3	1	2	3	2	3	4	1	3	2	2	2	2	4	2	1	3	2	2	2	1	2	2	4	1	1	1	2	3	2	2	1	1	1	1	2	2	1	89	
66	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	2	3	3	2	3	1	1	121	
67	3	3	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	110	
68	4	3	4	4	3	3	4	3	4	4	3	3	4	3	4	3	1	4	3	3	1	4	3	1	3	3	1	3	3	4	4	4	3	3	3	4	3	3	3	3	3	3	3	135	
69	1	4	4	3	4	4	3	3	4	3	2	1	2	2	4	3	1	4	4	3	1	4	2	3	2	2	1	3	4	4	3	4	3	3	3	3	3	3	1	1	4	2	1	1	117
70	1	4	4	2	3	4	4	3	4	3	3	1	2	3	4	3	1	3	3	3	1	3	3	2	3	1	1	2	2	3	4	4	3	3	3	4	2	4	3	4	2	1	1	117	

ANNEX 31. MATRIX OF DATA RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES (CONTINUATION)*

TABLE A.29 DATA MATRIX OF THE QUESTIONNAIRE FOR GRADUATES (3/3)																																																
E/V	TEACHING																INVESTIGATION								ADMIN./MANAGEMENT								EXTENSION AND DISSEMINATION								EC							
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					
71	2	3	4	3	4	3	2	3	4	3	3	4	4	4	3	2	1	3	4	3	1	3	2	1	3	1	3	3	4	2	3	4	3	4	3	4	3	4	3	4	2	3	3	1	1	121		
72	3	3	1	1	1	1	3	1	1	3	3	3	3	3	4	3	1	1	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	110	
73	3	3	3	4	3	4	2	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	2	3	3	2	3	3	3	3	3	3	3	3	3	3	4	4	3	3	134		
74	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	2	3	4	3	4	3	4	3	2	3	3	4	4	4	4	4	4	4	2	3	3	3	3	3	3	4	2	3	3	3	149	
75	3	3	4	4	2	4	4	4	4	3	2	3	3	4	4	2	4	4	4	4	2	3	4	4	4	4	2	2	4	4	4	3	1	1	2	4	2	4	4	1	3	3	1	135				
76	3	4	4	3	4	4	1	3	3	1	3	2	2	4	3	3	2	3	4	1	2	1	2	2	2	2	3	1	3	3	4	4	3	1	3	1	2	2	1	3	1	1	1	1	105			
77	3	3	4	3	4	4	3	3	2	3	3	1	2	3	3	3	1	2	4	1	1	2	2	2	3	3	3	2	3	3	4	3	3	4	3	2	3	3	3	2	3	2	3	117				
78	4	4	2	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	4	3	4	4	4	2	4	2	4	3	1	3	2	3	4	3	2	3	4	3	146				
79	3	3	4	2	4	4	3	3	2	3	2	1	2	2	3	3	1	1	4	1	1	1	3	1	3	1	3	3	3	3	3	4	3	3	3	3	2	3	3	3	3	3	3	3	112			
80	2	3	4	3	3	3	3	2	3	3	2	4	4	4	4	3	3	4	4	4	2	3	2	2	4	3	3	3	4	4	3	4	3	4	3	4	3	3	3	3	3	4	3	3	135			
81	2	3	4	3	4	4	3	3	2	3	3	3	4	4	4	4	1	3	3	3	1	3	4	3	3	2	3	4	3	4	3	2	3	3	3	3	4	2	3	2	3	2	3	128				
82	3	4	3	3	4	4	4	3	4	3	3	2	4	3	4	3	1	4	3	3	2	4	3	3	3	1	3	2	3	3	3	3	3	3	1	3	3	3	3	1	4	3	3	3	128			
83	2	2	2	1	4	3	2	1	3	3	2	3	1	3	3	3	3	4	3	3	2	3	4	3	2	1	3	4	1	3	3	1	3	3	1	3	3	2	3	2	1	3	1	3	1	106		
84	1	3	3	4	4	3	4	1	3	3	3	1	1	2	3	3	2	3	2	3	2	1	2	3	2	2	1	3	1	1	2	3	3	2	1	3	4	2	1	3	2	2	1	98				
85	1	4	4	4	4	3	4	1	4	4	3	1	4	4	4	4	2	1	4	3	1	4	3	3	3	2	3	2	4	3	3	3	2	3	3	3	4	2	4	3	3	3	3	130				
86	3	3	3	2	4	4	3	4	1	4	3	2	2	2	4	3	1	3	4	3	1	4	4	2	4	1	3	2	3	3	2	4	3	3	3	3	2	2	3	1	4	4	3	1	120			
87	3	4	4	4	4	4	2	4	4	3	4	3	2	3	2	3	1	3	4	3	1	3	3	2	3	1	1	3	3	3	4	4	4	4	4	4	3	3	3	3	3	3	3	3	131			
88	1	3	4	2	4	4	3	4	2	4	3	4	1	4	4	3	1	4	4	3	3	3	2	2	3	3	1	4	3	3	4	3	1	3	4	3	3	3	4	3	3	3	3	129				
89	4	3	4	2	4	4	2	3	1	3	3	4	4	4	4	3	2	4	4	1	2	4	1	2	2	1	2	1	4	4	1	4	3	1	2	2	2	3	4	3	2	3	1	117				
90	4	3	3	2	4	3	4	3	4	3	2	1	2	3	3	3	2	3	2	4	1	1	1	1	1	1	2	4	4	4	3	3	3	4	3	3	3	3	3	3	4	2	3	4	124			
91	3	3	4	3	3	4	4	3	4	3	4	2	4	3	4	3	3	4	4	3	3	4	3	2	4	3	3	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	2	140			
92	3	4	3	3	4	4	3	4	4	4	4	2	3	3	4	4	4	4	3	2	3	3	1	1	1	2	3	2	3	4	3	3	4	3	3	4	4	4	4	4	3	4	4	3	138			
93	4	3	4	4	4	4	1	4	4	2	3	1	3	3	4	4	1	4	4	3	1	4	3	4	3	4	4	1	4	3	4	4	2	1	4	2	1	1	4	2	3	2	3	128				
94	3	4	4	3	4	1	2	3	4	3	4	2	2	3	3	3	1	3	3	1	2	4	3	2	3	2	3	1	4	4	1	1	1	1	1	1	1	1	4	4	4	4	2	3	4	4	1	121
Σ	259	316	323	281	338	331	284	297	314	300	297	258	255	309	328	278	190	289	334	260	183	289	262	231	276	220	251	232	309	293	288	323	249	3.4	264	289	269	286	239	274	274	251	190	11819				

Source: Own elaboration from the application of the Questionnaire for Graduates (Annex 28) to 94 graduates of the Faculty of Law and Sciences of the Michoacan University of San Nicolás de Hidalgo in the 2008/09 school year.

*/ In the elaboration of this Data Matrix Resulting from the Application of the Questionnaire for Graduates, it was considered at first the Questionnaire for Graduates (Version for Application of the Instrument), Annex 28; and in a second time these data were processed adopting the order and classification of questions of the Alumni Questionnaire in its version for Data Processing (Annex 25).

E/V: Graduate / Variable.

CE: Educational Quality.

ANNEX 32. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR TEACHERS

TABLE A.30 DATA VARIABLES OF THE QUESTIONNAIRE FOR TEACHERS (1/3)					
P/S	TEACHING	INVESTIGATION	ADMON. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	18	12	11	10	Total
1	56	35	33	33	157
2	51	34	31	27	143
3	57	30	38	35	160
4	55	34	34	29	152
5	61	32	36	34	163
6	52	33	30	29	144
7	52	27	36	27	142
8	55	30	34	28	147
9	67	42	34	36	179
10	61	41	29	28	159
11	57	37	34	32	160
12	67	42	34	36	179
13	61	41	29	28	159
14	52	26	25	26	129
15	50	30	32	30	142
16	68	41	30	36	175
17	52	32	29	29	142
18	66	40	40	34	180
19	45	32	25	22	124
20	47	22	26	23	118
21	52	32	29	29	142
22	66	40	40	34	180
23	49	30	36	24	139
24	65	43	38	32	178
25	68	44	40	34	186
26	68	44	43	39	194
27	49	50	12	21	97
28	60	21	30	29	140
29	43	26	17	21	107
30	55	30	34	28	147
31	39	34	31	22	126
32	61	32	36	34	163
33	52	33	30	29	144
34	52	27	36	27	142
35	55	30	34	28	147

ANNEX 32. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR TEACHERS (CONTINUATION)

TABLE A.30 DATA VARIABLES OF THE QUESTIONNAIRE FOR TEACHERS (2/3)					
P/S	TEACHING	INVESTIGATION	ADMON. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	18	12	11	10	Total
36	39	34	31	22	126
37	57	37	34	32	160
38	67	42	34	36	179
39	61	41	29	28	159
40	52	26	25	26	129
41	50	30	32	30	142
42	68	41	30	36	175
43	46	27	33	32	138
44	55	37	37	31	160
45	57	34	32	32	155
46	59	33	30	33	155
47	45	32	25	22	124
48	47	22	26	23	118
49	56	35	33	33	157
50	51	34	31	27	143
51	57	30	38	35	160
52	55	34	34	29	152
53	58	28	27	29	142
54	52	30	35	33	150
55	61	39	35	30	165
56	64	28	39	35	166
57	57	38	28	32	155
58	46	26	36	22	130
59	62	35	35	35	167
60	50	37	33	27	147
61	56	30	35	33	154
62	58	36	30	31	155
63	62	36	39	35	172
64	57	24	38	33	152
65	55	28	31	34	148
66	53	29	36	36	154
67	58	28	34	31	151
68	66	33	40	38	177
69	68	38	41	39	186
70	53	23	27	26	129

ANNEX 32. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR TEACHERS (CONTINUATION)

TABLE A.30 DATA VARIABLES OF THE QUESTIONNAIRE FOR TEACHERS (3/3)					
P/S	TEACHING	INVESTIGATION	ADMN. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	18	12	11	10	Total
71	58	28	32	32	150
72	50	25	37	33	145
73	53	25	30	32	140
74	51	34	34	32	151
75	51	35	34	34	154
Total	4187	2444	2445	2076	11358

Source: Information obtained from field research.

P/V: Teacher / Variable

ANNEX 33. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

TABLE A.31 DATA VARIABLES OF THE QUESTIONNAIRE FOR STUDENTS (1/3)

E/V	TEACHING	INVESTIGATION	ADMIN. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	19	6	10	10	Total
1	65	14	32	38	149
2	68	15	29	29	141
3	54	15	24	33	126
4	61	17	31	31	140
5	64	8	31	33	136
6	74	18	34	31	157
7	55	10	25	35	125
8	66	15	34	25	140
9	62	15	30	31	138
10	59	11	26	34	130
11	54	18	27	32	130
12	55	17	29	33	134
13	64	15	29	35	143
14	56	7	27	35	125
15	61	18	29	38	146
16	64	11	32	34	141
17	59	7	26	33	125
18	70	11	32	37	150
19	56	19	31	30	136
20	62	18	25	21	126
21	67	13	29	39	126
22	66	17	31	37	151
23	61	7	30	34	132
24	59	10	26	32	127
25	57	14	24	38	133
26	62	14	24	28	128
27	70	15	33	36	154
28	72	21	30	39	162
29	54	8	27	21	110
30	62	11	26	30	129
31	54	13	23	35	129
32	57	10	24	28	119
33	62	12	23	24	121
34	55	12	31	33	131
35	65	19	33	28	145

ANNEX 33. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE (CONTINUATION)

TABLE A.31 DATA VARIABLES OF THE QUESTIONNAIRE FOR STUDENTS (2/3)					
E/V	TEACHING	INVESTIGATION	ADMON. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	19	6	10	10	Total
36	67	11	30	37	145
37	61	18	31	22	132
38	47	13	29	27	116
39	66	13	36	30	145
40	54	19	27	32	132
41	60	10	33	30	132
42	62	17	30	28	137
43	50	10	29	29	118
44	58	19	33	32	142
45	60	17	28	30	135
46	62	18	25	29	145
47	48	18	24	20	132
48	50	12	18	20	116
49	60	17	28	31	145
50	55	18	27	24	132
51	61	15	31	30	132
52	59	16	28	31	137
53	64	15	31	32	118
54	56	15	30	23	142
55	55	15	26	28	135
56	59	13	30	26	128
57	42	16	28	30	116
58	60	20	28	32	140
59	71	19	35	30	155
60	65	21	27	26	139
61	56	10	27	14	139
62	54	12	29	26	121
63	71	20	31	31	153
64	55	15	22	31	123
65	69	21	34	36	160
66	53	12	31	26	122
67	69	21	34	31	155
68	72	20	39	31	162
69	72	22	37	39	170
70	51	6	13	10	80

ANNEX 33. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE (CONTINUATION)

TABLE A.31 DATA VARIABLES OF THE QUESTIONNAIRE FOR STUDENTS (3/3)					
E/V	TEACHING	INVESTIGATION	ADMON. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	19	6	10	10	Total
71	51	6	13	10	80
72	64	8	24	24	80
73	47	12	19	13	91
74	59	13	30	26	128
75	42	16	28	30	116
76	60	20	28	32	140
77	71	19	35	30	155
78	65	21	27	26	139
79	56	10	27	14	107
80	54	12	29	26	121
81	71	20	31	31	153
82	55	15	22	31	153
83	69	21	34	36	160
84	48	18	24	20	110
85	50	12	18	20	100
86	60	17	28	31	136
87	55	18	27	24	124
88	61	15	31	30	137
89	59	16	28	31	134
90	64	15	31	32	142
91	56	15	30	23	124
92	55	15	26	28	124
93	59	13	30	26	128
94	71	19	35	30	155
Total	5642	1410	2685	2754	12491

Source: Information obtained from field research.

E/V: Student / Variable.

ANNEX 34. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES

TABLE A.32 DATA VARIABLES FROM THE QUESTIONNAIRE FOR GRADUATES (1/3)

E/V	TEACHING	INVESTIGATION	ADMIN. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	16	7	10	10	Total
1	47	20	27	26	120
2	53	18	28	32	131
3	50	20	29	30	129
4	56	19	29	31	135
5	47	19	29	22	117
6	48	17	25	27	117
7	51	17	27	26	121
8	37	15	30	28	110
9	51	22	30	31	134
10	62	23	34	30	149
11	53	25	32	25	135
12	47	15	27	16	105
13	47	13	30	27	117
14	61	23	34	28	146
15	48	17	22	31	118
16	58	26	33	36	153
17	45	16	30	29	120
18	62	22	33	33	150
19	62	24	38	33	157
20	61	25	37	39	162
21	44	11	13	10	78
22	54	14	22	24	114
23	39	16	18	16	89
24	51	17	27	26	121
25	37	15	30	28	110
26	51	22	30	31	134
27	62	23	34	30	149
28	53	25	32	25	135
29	47	15	27	16	105
30	47	13	30	27	117
31	61	23	34	28	146
32	48	17	22	31	118
33	58	26	33	36	153
34	38	21	25	22	106

ANNEX 34. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES (CONTINUATION)

TABLE A.32 DATA VARIABLES OF THE QUESTIONNAIRE FOR GRADUATES (2/3)					
E/V	TEACHING	INVESTIGATION	ADMIN. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	16	7	10	10	Total
35	42	16	19	21	98
36	53	18	29	30	130
37	47	20	27	26	120
38	53	18	28	32	131
39	50	20	29	30	129
40	56	19	29	31	135
41	47	19	29	22	117
42	48	17	25	27	117
43	51	17	27	26	121
44	62	23	34	30	149
45	53	25	32	25	135
46	53	25	32	25	135
47	51	22	30	31	134
48	62	23	34	30	149
49	53	25	32	25	135
50	47	15	27	16	105
51	47	13	30	27	117
52	61	23	34	28	146
53	48	17	22	31	118
54	58	26	33	36	153
55	38	21	25	22	106
56	42	16	19	21	98
57	48	17	22	31	118
58	58	26	33	36	153
59	45	16	30	29	120
60	62	22	33	33	150
61	62	24	38	33	157
62	61	25	37	39	162
63	44	11	13	10	78
64	54	14	22	24	114
65	39	16	18	16	89
66	51	17	27	26	121
67	37	15	30	28	110
68	56	19	29	31	135
69	47	19	29	22	117

ANNEX 34. DATA VARIABLES RESULTING FROM THE APPLICATION OF THE QUESTIONNAIRE FOR GRADUATES (CONTINUATION)

TABLE A.32 DATA VARIABLES OF THE QUESTIONNAIRE FOR GRADUATES (3/3)					
E/V	TEACHING	INVESTIGATION	ADMIN. / MANAGEMENT	EXTENSION AND DISSEMINATION	EDUCATIONAL QUALITY
No.	16	7	10	10	Total
70	48	17	25	27	117
71	51	17	27	26	121
72	37	15	30	28	110
73	51	22	30	31	134
74	62	23	34	30	149
75	53	25	32	25	135
76	47	15	27	16	105
77	47	13	30	27	117
78	61	23	34	28	146
79	44	12	27	29	112
80	48	24	31	32	135
81	53	18	29	28	128
82	54	20	27	27	128
83	38	21	25	22	106
84	42	16	19	21	98
85	53	18	29	30	130
86	47	20	27	26	120
87	53	18	28	32	131
88	50	20	29	30	129
89	52	18	24	23	117
90	47	18	26	33	124
91	54	24	33	29	140
92	56	20	26	36	138
93	52	20	33	23	128
94	48	17	22	31	118
Total	4770	1807	2672	2570	11819

Source: Information obtained from field research.

E/V: Graduates / Variable.

ANNEX 35. STATISTICAL PERSPECTIVE OF THE GENERAL RESULTS OF THE APPLICATION OF THE TEACHER QUESTIONNAIRE

No.	Questions	No.	Half	error of the mean	Median	Fashion	Standard deviation	Variance	Asymmetry	Asymmetry Error	kurtosis	Kurtosis Error	Range	Maximum value	Minimum value	Addition
1	In the Faculty of Law and Social Sciences (FDyCS) ordinary admission of students is carried out based on a selection exam as the reference academic criterion.	75	2,813	.1150	3,000	3.0	.9958	.992	-.694	.277	-.571	.548	3.0	4.0	1.0	211.0
2	Oral presentation is a didactic strategy used in the FDyCS Law Degree academic program.	75	3,453	.0666	3,000	4.0	.5764	.332	-.466	.277	-.714	.548	2.0	4.0	2.0	259.0
3	Teamwork is a didactic dynamic instrumented in the FDyCS Law Degree academic program.	75	3,400	.0930	4,000	4.0	.8054	.649	-1,180	.277	.603	.548	3.0	4.0	1.0	255.0
4	The debate or discussion of ideas is a didactic strategy used in class in the FDyCS Law Degree academic program.	75	2,920	.1119	3,000	4.0	.9693	.939	-.385	.277	-.946	.548	3.0	4.0	1.0	219.0
5	In the learning evaluation process, the FDyCS teacher carries out a scheduled evaluation with the students of the groups in which he teaches a subject.	75	3,680	.0809	4,000	4.0	.7006	.491	-2,369	.277	5,257	.548	3.0	4.0	1.0	276.0
6	In the learning evaluation process, the FDyCS teacher performs a written evaluation.	75	3,600	.0890	4,000	4.0	.7711	.595	-2,253	.277	4,866	.548	3.0	4.0	1.0	270.0
7	In the study plan of this Degree there is an adequate combination of theoretical and practical contents.	75	3,120	.1073	3,000	4.0	.9294	.864	-.660	.277	-.655	.548	3.0	4.0	1.0	234.0
8	At FDyCS there is fluid communication between teachers and students.	75	3,053	.1089	3,000	3.0	.9429	.889	-.804	.277	-.173	.548	3.0	4.0	1.0	229.0
9	In the FDyCS the number of students per class is adequate for teaching.	75	3,173	.1221	4,000	4.0	1.0574	1,118	-.991	.277	-.353	.548	3.0	4.0	1.0	238.0

10	At FDyCS, faculty participate in events such as academic conferences on their area of knowledge.	75	3,147	.0821	3,000	3.0	.7108	.505	-.916	.277	1,699	.548	3.0	4.0	1.0	236.0
11	The classroom conditions are adequate for teaching at the FDyCS of the Michoacana Universidad de San Nicolás de Hidalgo (UMSNH).	75	3,027	.0805	3,000	3.0	.6970	.486	-.036	.277	-.893	.548	2.0	4.0	2.0	227.0
12	At FDyCS, the library equipment responds to the needs of the user.	75	2,747	.1246	3,000	3.0	1.0792	1,165	-.334	.277	-1,150	.548	3.0	4.0	1.0	206.0
13	The UMSNH FDyCS has clearly defined its mission.	75	2,840	.1216	3,000	4.0	1.0532	1,109	-.313	.277	-1,190	.548	3.0	4.0	1.0	213.0
14	In the FDyCS of the UMSNH, academic freedom is respected, which promotes an adequate work environment for teaching work.	75	3,280	.0861	3,000	4.0	.7454	.556	-.710	.277	-.139	.548	3.0	4.0	1.0	246.0
15	At the UMSNH FDyCS, professors participate in a periodic review of the Law Degree curriculum.	75	3,480	.0768	4,000	4.0	.6650	.442	-.917	.277	-.273	.548	2.0	4.0	2.0	261.0
16	In the FDyCS of the UMSNH, the only institutional way for faculty to enter is the Open Opposition Contest.	75	3,013	.0723	3,000	3.0	.6259	.392	-.009	.277	-.358	.548	2.0	4.0	2.0	226.0
17	In the FDyCS of the UMSNH, professors are stimulated for their promotion due to their academic productivity based on the corresponding regulations.	75	1,947	.1300	1,000	1.0	1.1258	1,267	.749	.277	-.928	.548	3.0	4.0	1.0	146.0
18	In the graduation process of the students of the FDyCS of the UMSNH, the faculty participates based on their professional profiles.	75	3,133	.1028	3,000	3.0	.8904	.793	-.858	.277	.069	.548	3.0	4.0	1.0	235.0
19	In accordance with its legal framework, the FDyCS of the UMSNH has institutional regulations for the development and promotion of research.	75	3,573	.0763	4,000	4.0	.6611	.437	-1,863	.277	4,392	.548	3.0	4.0	1.0	268.0

20	For FDyCS professors there is at least one annual call to participate in institutional research projects.	75	2,613	.1199	3,000	3.0	1.0384	1,078	-.423	.277	-.995	.548	3.0	4.0	1.0	196.0
21	In the FDyCS of the UMSNH there are institutional policies and procedures for the evaluation of research projects.	75	1960	.1192	2,000	1.0	1.0324	1,066	.536	.277	-1,100	.548	3.0	4.0	1.0	147.0
22	At the FDyCS, the faculty involved in the research task is organized into academic bodies.	75	3,093	.1025	3,000	3.0	.8880	.788	-.900	.277	.290	.548	3.0	4.0	1.0	232.0
23	In the FDyCS of the UMSNH, the research proposals of the academics correspond to their research lines.	75	2,453	.1128	3,000	3.0	.9767	.954	-.134	.277	-.998	.548	3.0	4.0	1.0	184.0
24	The financial support received for the research work by the FDyCS faculty is supervised by the corresponding university authorities.	75	2,373	.1151	2,000	2.0	.9969	.994	.108	.277	-1026	.548	3.0	4.0	1.0	178.0
25	At the FDyCS, the faculty immersed in research develops research projects evaluated and supported solely by the UMSNH.	75	2,880	.0929	3,000	3.0	.8047	.648	-.576	.277	.176	.548	3.0	4.0	1.0	216.0
26	Teachers immersed in research relate the latter to teaching through the production of an ex-professional work manual for their subject.	75	2,187	.1196	2,000	1.0	1.0358	1,073	.288	.277	-1,138	.548	3.0	4.0	1.0	164.0
27	UMSNH FDyCS researchers involve students in research by incorporating them into their projects as research assistants.	75	2,493	.1191	3,000	3.0	1.0316	1,064	-.209	.277	-1,130	.548	3.0	4.0	1.0	187.0
28	At the UMSNH FDyCS, professor-researchers publish books to make their research contributions known.	75	2,387	.1169	2,000	3.0	1.0120	1,024	.037	.277	-1,098	.548	3.0	4.0	1.0	179.0
29	At the FDyCS of the UMSNH, the faculty immersed in research publish scientific articles as a result of their investigative work.	75	3,400	.0949	4,000	4.0	.8220	.676	-1,470	.277	1,823	.548	3.0	4.0	1.0	255.0

30	The results of the research at the FDyCS are translated into papers presented at academic events by the research professors.	75	3,173	.1029	3,000	3.0	.8610	.794	-1,059	.277	-.589	.548	3.0	4.0	1.0	238.0
31	The UMSNH FDyCS offers support programs for the training and permanent updating of its teaching staff.	75	3,067	.1046	3,000	3.0	.9054	.820	-.807	.277	-.010	.548	3.0	4.0	1.0	230.0
32	At the UMSNH FDyCS, teachers are provided with material for the proper development of their work.	75	3,560	.0875	4,000	4.0	.7577	.574	-2,124	.277	4,690	.548	3.0	4.0	1.0	267.0
33	In the FDyCS of the UMSNH, the current profile of the personnel in charge of teaching and research tasks corresponds to the ideal profile proposed.	75	2,800	.0949	3,000	3.0	.8220	.676	-.960	.277	.667	.548	3.0	4.0	1.0	210.0
34	In the FDyCS of the UMSNH there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	75	2,453	.1263	3,000	3.0	1.0941	1,197	-.100	.277	-1,318	.548	3.0	4.0	1.0	184.0
35	In the UMSNH FDyCS there are procedures and mechanisms for evaluating the performance of administrative personnel.	75	2,867	.0856	3,000	3.0	.7413	.550	-.803	.277	1,003	.548	3.0	4.0	1.0	215.0
36	The UMSNH FDyCS has collegiate bodies defined within its organizational structure and duly installed for academic and administrative decision-making.	75	3,120	.1022	3,000	4.0	.8847	.783	-.721	.277	-.273	.548	3.0	4.0	1.0	234.0
37	At the UMSNH FDyCS, teachers are committed to the institutional mission.	75	2,853	.0924	3,000	3.0	.8002	.640	-.540	.277	.133	.548	3.0	4.0	1.0	214.0
38	At the UMSNH FDyCS, academics are periodically evaluated on their professional performance.	75	3,080	.0863	3,000	3.0	.8344	.696	-.870	.277	.553	.548	3.0	4.0	1.0	231.0

39	In the FDyCS of the UMSNH there is coherence in the organizational structure of the university unit.	75	2,693	.1230	3,000	3.0	1.0651	1,134	-386	.277	-1,056	.548	3.0	4.0	1.0	202.0
40	In the case of the FDyCS of the UMSNH, a specific regime is applied for the hiring of non-academic personnel.	75	3,067	.1010	3,000	3.0	.8751	.766	-753	.277	.003	.548	3.0	4.0	1.0	230.0
41	The FDyCS of the UMSNH complies with the regulations for the management of institutional finances	75	3,040	.0957	3,000	3.0	.8292	.688	-806	.277	.464	.548	3.0	4.0	1.0	228.0
42	In accordance with its legal framework, the FDyCS of the UMSNH has institutional policies for the development of the dissemination of culture.	75	2,747	.1059	3,000	3.0	.9167	.840	-658	.277	-.267	.548	3.0	4.0	1.0	206.0
43	In the FDyCS of the UMSNH, special funds are applied for the development of the extension function.	75	2,333	.1250	3,000	3.0	1.0822	1,171	-180	.277	-1,478	.548	3.0	4.0	1.0	175.0
44	FDyCS professors have access to research stays with other national and/or foreign educational institutions.	75	2,987	.1065	3,000	3.0	.9226	.851	-822	.277	.039	.548	3.0	4.0	1.0	224.0
45	The professors of the FDyCS of the UMSNH participate in the social activities of the institution.	75	2,493	.1063	3,000	3.0	.9208	.848	-300	.277	-.797	.548	3.0	4.0	1.0	187.0
46	FDyCS professors link teaching to knowledge of the social needs of the population.	75	2,813	.1150	3,000	3.0	.9958	.992	-624	.277	-.571	.548	3.0	4.0	1.0	211.0
47	The UMSNH FDyCS constitutes a factor of social mobility.	75	3,453	.066	3,000	4.0	.5764	.332	-466	.277	-.714	.548	2.0	4.0	2.0	259.0
48	The FDyCS faculty contributes to the formation of opinion leaders who fight for the progress of the social change of the population.	75	3,400	.0930	4,000	4.0	.8054	.649	-1,180	.277	.603	.548	3.0	4.0	1.0	255.0

49	The FDyCS faculty develop social service activities of legal advice in the marginal areas of the State's municipalities.	75	2,920	.1119	3,000	4.0	.9693	.939	-.385	.277	-.946	.548	3.0	4.0	1.0	219.0
50	Through teaching, the FDyCS is linked to the government sector, which it trains through specialization and updating courses.	75	3,680	.0809	4,000	4.0	.7006	.491	-2,369	.277	5,257	.548	3.0	4.0	1.0	276.0
51	Through research activities, the FDyCS is part of an international network of universities that share teaching mobility.	75	3,600	.0890	4,000	4.0	.7711	.595	-2,253	.277	4,866	.548	3.0	4.0	1.0	270.0

Source: Own elaboration based on the calculations obtained from the field research carried out.

ANNEX 36. CENTRAL TENDENCY MEASURES OF EDUCATIONAL QUALITY FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.33

Measures of Central Tendency of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

No.	75
Half	151,440
Typical error	2.1700
Median	152,000
Fashion	142.0
Standard deviation	18.7928
Variance	353,169
Asymmetry	-.211
Standard Error of Asymmetry	.277
Kurtosis	.331
Kurtosis Standard Error	.548
Range	97.0
Minimum value	97.0
Maximum value	194.0
Addition	11358.0

Source: Information obtained from the field research carried out.

ANNEX 37. DISTRIBUTION OF EDUCATIONAL QUALITY FREQUENCIES FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.34

Distribution of Frequencies of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

Points	Frequency	Percentage	Accumulated percentage
97.0	1	1.3	1.3
107.0	1	1.3	2.7
118.0	2	2.7	5.3
124.0	2	2.7	8.0
126.0	2	2.7	10.7
129.0	3	4.0	14.7
130.0	1	1.3	16.0
138.0	1	1.3	17.3
139.0	1	1.3	18.7
140.0	2	2.7	21.3
142.0	7	9.3	30.7
143.0	2	2.7	33.3
144.0	2	2.7	36.0
145.0	1	1.3	37.3
147.0	4	5.3	42.7
148.0	1	1.3	44.0
150.0	2	2.7	46.7
151.0	2	2.7	49.3
152.0	3	4.0	53.3
154.0	3	4.0	57.3
155.0	4	5.3	62.7
157.0	2	2.7	65.3
159.0	3	4.0	69.3
160.0	5	6.7	76.0
163.0	2	2.7	78.7
165.0	1	1.3	80.0
166.0	1	1.3	81.3
167.0	1	1.3	82.7
172.0	1	1.3	84.0
175.0	2	2.7	86.7
177.0	1	1.3	88.0
178.0	1	1.3	89.3
179.0	3	4.0	93.3
180.0	2	2.7	96.0
186.0	2	2.7	98.7
194.0	1	1.3	100.0
Total	75	100.0	

Source: Information obtained from the field research carried out.

ANNEX 38. MEASURES OF CENTRAL TENDENCY OF TEACHING, RESEARCH, ADMINISTRATION/MANAGEMENT AND EXTENSION AND DISSEMINATION, FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.35

Measures of Central Tendency of the Independent Variables Teaching, Research, Administration/ Management and Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Questionnaire of Professors

	Teaching	Investigation	Administration/ Management	Extension and Diffusion
No.	75	75	75	75
Half	55,827	32,587	35,347	27,680
Typical error	.8128	.7029	.6416	.4739
Median	55,000	33,000	36,000	29,000
Fashion	52.0	30.0	37.0	30.0
Standard deviation	7.0392	6.0874	5.5568	4.1039
Variance	49,551	37,057	30,878	16,842
Asymmetry	-.030	-.163	-1,058	-.516
Standard Error of Asymmetry	.277	.277	.277	.277
Kurtosis	-.339	-.155	3,120	-.141
Kurtosis Standard Error	.548	.548	.548	.548
Range	29.0	29.0	33.0	17.0
Minimum value	39.0	15.0	13.0	19.0
Maximum value	68.0	44.0	46.0	36.0
Addition	4187.0	2444.0	2651.0	2076.0

Source: Information obtained from the field research carried out.

ANNEX 39. DISTRIBUTION OF TEACHING FREQUENCIES FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.36

Distribution of Frequencies of the Independent Variable Teaching in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

Points	Frequency	Percentage	Accumulated percentage
39.0	2	2.7	2.7
43.0	1	1.3	4.0
45.0	2	2.7	6.7
46.0	2	2.7	9.3
47.0	2	2.7	12.0
49.0	2	2.7	14.7
50.0	4	5.3	20.0
51.0	4	5.3	25.3
52.0	9	12.0	37.3
53.0	3	4.0	41.3
55.0	7	9.3	50.7
56.0	3	4.0	54.7
57.0	7	9.3	64.0
58.0	4	5.3	69.3
59.0	1	1.3	70.7
60.0	1	1.3	72.0
61.0	6	8.0	80.0
62.0	2	2.7	82.7
64.0	1	1.3	84.0
65.0	1	1.3	85.3
66.0	3	4.0	89.3
67.0	3	4.0	93.3
68.0	5	6.7	100.0
Total	75	100.0	

Source: Information obtained from the field research carried out.

ANNEX 40. DISTRIBUTION OF RESEARCH FREQUENCIES FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.37

Distribution of Frequencies of the Independent Variable Research in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

Points	Frequency	Percentage	Accumulated percentage
15.0	1	1.3	1.3
21.0	1	1.3	2.7
22.0	2	2.7	5.3
23.0	1	1.3	6.7
24.0	1	1.3	8.0
25.0	2	2.7	10.7
26.0	4	5.3	16.0
27.0	3	4.0	20.0
28.0	5	6.7	26.7
29.0	1	1.3	28.0
30.0	10	13.3	41.3
32.0	6	8.0	49.3
33.0	4	5.3	54.7
34.0	8	10.7	65.3
35.0	4	5.3	70.7
36.0	2	2.7	73.3
37.0	4	5.3	78.7
38.0	2	2.7	81.3
39.0	1	1.3	82.7
40.0	2	2.7	85.3
41.0	5	6.7	92.0
42.0	3	4.0	96.0
43.0	1	1.3	97.3
44.0	2	2.7	100.0
Total	75	100.0	

Source: Information obtained from the field research carried out.

ANNEX 41. DISTRIBUTION OF ADMINISTRATION/MANAGEMENT FREQUENCIES FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.38

Distribution of Frequencies of the Independent Variable Administration/Management in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

Points	Frequency	Percentage	Accumulated percentage
13.0	1	1.3	1.3
19.0	1	1.3	2.7
26.0	2	2.7	5.3
28.0	4	5.3	10.7
29.0	1	1.3	12.0
30.0	2	2.7	14.7
31.0	2	2.7	17.3
32.0	4	5.3	22.7
33.0	5	6.7	29.3
34.0	9	12.0	41.3
35.0	5	6.7	48.0
36.0	5	6.7	54.7
37.0	11	14.7	69.3
38.0	4	5.3	74.7
39.0	5	6.7	81.3
40.0	2	2.7	84.0
41.0	4	5.3	89.3
43.0	2	2.7	92.0
44.0	5	6.7	98.7
46.0	1	1.3	100.0
Total	75	100.0	

Source: Information obtained from the field research carried out.

ANNEX 42. DISTRIBUTION OF EXTENSION AND DIFFUSION FREQUENCIES FROM THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.39

Distribution of Frequencies of the Independent Variable Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Teacher Questionnaire

Points	Frequency	Percentage	Accumulated percentage
19.0	5	6.7	6.7
20.0	1	1.3	8.0
21.0	4	5.3	13.3
24.0	4	5.3	18.7
25.0	7	9.3	28.0
26.0	5	6.7	34.7
27.0	5	6.7	41.3
28.0	6	8.0	49.3
29.0	8	10.7	60.0
30.0	14	18.7	78.7
31.0	5	6.7	85.3
32.0	4	5.3	90.7
33.0	4	5.3	96.0
34.0	1	1.3	97.3
36.0	2	2.7	100.0
Total	75	100.0	

Source: Information obtained from the field research carried out.

ANNEX 43. CORRELATION AND DETERMINATION IN THE RESULTS OF THE APPLICATION OF THE TEACHER QUESTIONNAIRE

Table A.40

Matrix of the Pearson Correlation Coefficient from the Application of the Teacher Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.593 **	0.527 **	0.769 **	0.890 **
Investigation	0.593 **	1,000	0.469 **	0.405 **	0.773 **
Administration/ Management	0.527 **	0.469 **	1,000	0.667 **	0.790 **
Extension and Diffusion	0.769 **	0.405 **	0.667 **	1,000	0.835 **
Educational quality	0.890 **	0.773 **	0.790 **	0.835 **	1,000
R					0.8220 **

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

Table A.41

Matrix of the Coefficient of Determination from the Application of the Teacher Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.351**	0.277**	0.591**	0.792**
Investigation	0.351**	1,000	0.219**	0.164**	0.597**
Administration/ Management	0.277**	0.219**	1,000	0.444**	0.624**
Extension and Diffusion	0.591**	0.164**	0.444**	1,000	0.697**
Educational quality	0.792**	0.597**	0.624**	0.697**	1,000
R2					0.6775**

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

ANNEX 44. STATISTICAL PERSPECTIVE OF THE GENERAL RESULTS OF THE APPLICATION OF THE STUDENT QUESTIONNAIRE

No.	Questions	No.	Half	Error of the mean	Median	Fashion	Standard deviation	Variance	Asymmetry	Asymmetry error	Kurtosis	Kurtosis error	Range	Maximum value	Minimum value	Addition
1	The Law Degree from the Faculty of Law and Social Sciences (FDyCS) has institutional academic tutoring programs for student development.	94	2,936	.1035	3,000	3.0	1.0033	1,007	-.718	.249	-.486	.493	3.0	4.0	1.0	276.0
2	The magisterial class constitutes a didactic strategy used in the FDyCS of the Michoacana Universidad de San Nicolás de Hidalgo (UMSNH).	94	3,511	.0600	4,000	4.0	.5819	.339	-.711	.249	-.459	.493	2.0	4.0	2.0	330.0
3	Teamwork is a didactic dynamic implemented in the UMSNH Law Degree academic program.	94	3,340	.0794	3,500	4.0	.7698	.593	-.963	.249	.326	.493	3.0	4.0	1.0	314.0
4	The debate is a didactic dynamic instrumented in the FDyCS of the UMSNH.	94	2,968	.0974	3,000	4.0	.9442	.891	-.405	.249	-.927	.493	3.0	4.0	1.0	279.0
5	In the learning evaluation process, the FDyCS teacher makes an evaluation on a permanent basis.	94	3,734	.0662	4,000	4.0	.6422	.412	-2,681	.249	7,118	.493	3.0	4.0	1.0	351.0
6	In the FDyCS, the teacher considers the bibliographic research works as part of the learning assessment.	94	3,638	.0754	4,000	4.0	.7310	.534	-2,351	.249	5,430	.493	3.0	4.0	1.0	342.0
7	In the study plan of this Degree there is an interesting offer of optional subjects for the student.	94	3,234	.0913	3,000	4.0	.8851	.783	-.861	.249	-.246	.493	3.0	4.0	1.0	304.0
8	At FDyCS, the faculty is available to guide the student when necessary.	94	3,032	.0986	3,000	3.0	.9555	.913	-.820	.249	-.171	.493	3.0	4.0	1.0	285.0
9	In the FDyCS of the UMSNH, the class schedules are adapted to the needs of the students.	94	3,245	.1044	4,000	4.0	1.0127	1,026	-1,083	.249	-.104	.493	3.0	4.0	1.0	305.0

10	At the UMSNH FDyCS, the professors are constantly updating their knowledge.	94	3,170	.0720	3,000	3.0	.6977	.487	-.827	.249	1,424	.493	3.0	4.0	1.0	298.0
11	In the FDyCS of the UMSNH, the teaching staff is capable of adequately transmitting their knowledge to the students.	94	2,968	.0717	3,000	3.0	.6949	.483	.043	.249	-.891	.493	2.0	4.0	2.0	279.0
12	The conditions of the classrooms are adequate for the studies in the FDyCS of the UMSNH,	94	2,819	.1090	3,000	3.0	1.0571	1,117	-.466	.249	-.984	.493	3.0	4.0	1.0	265.0
13	In the FDyCS of the UMSNH, the equipment of the computer center responds to the needs of the student.	94	2,936	.1046	3,000	4.0	1.0140	1,028	-.439	.249	-1,027	.493	3.0	4.0	1.0	276.0
14	The UMSNH FDyCS makes its mission known effectively among its students.	94	3,245	.0767	3,000	3.0	.7432	.552	-.591	.249	-.399	.493	3.0	4.0	1.0	305.0
15	The UMSNH FDyCS promotes student participation.	94	3,457	.0704	4,000	4.0	.6826	.466	-.880	.249	-.401	.493	2.0	4.0	2.0	325.0
16	With the knowledge and skills imparted by the professors in the FDyCS of the UMSNH, the interest of the students in the subjects is motivated.	94	2,979	.0641	3,000	3.0	.6218	.387	.014	.249	-.343	.493	2.0	4.0	2.0	280.0
17	The students participate as a consulted audience in the Open Opposition Contests, mechanisms by which the faculty makes their institutional entrance to the FDyCS of the UMSNH.	94	1,947	.1146	1,000	1.0	1.1107	1,234	.684	.249	-1025	.493	3.0	4.0	1.0	183.0
18	At the UMSNH FDyCS, students with high academic performance are encouraged with academic scholarships.	94	3,223	.0871	3,000	4.0	.8444	.713	-.994	.249	.502	.493	3.0	4.0	1.0	303.0
19	In the UMSNH FDyCS, graduation occurs only after the student has taken their professional exam, in accordance with the institution's regulatory standards.	94	3,638	.0639	4,000	4.0	.6196	.384	-2,070	.249	5,425	.493	3.0	4.0	1.0	342.0

20	The FDyCS has institutional regulations for undergraduate students to be incorporated into research coordinated by the faculty.	94	2,511	.1098	3,000	3.0	1.0650	1,134	-.274	.249	-1,209	.493	3.0	4.0	1.0	236.0
21	The FDyCS promotes scholarships for research assistants, which are accessed through institutional mechanisms.	94	1968	.1042	2,000	1.0	1.0102	1,020	.513	.249	-1,067	.493	4.0	3.0	1.0	185.0
22	At the FDyCS, the student involved in the research task is organized into research projects led by the teacher-researchers.	94	3,106	.0950	3,000	3.0	.9213	.849	-.889	.249	.046	.493	3.0	4.0	1.0	292.0
23	At FDyCS, research assistant students are incorporated into research sponsored by UMSNH.	94	2,309	.1037	2,000	3.0	1.0056	1,011	-.009	.249	-1,199	.493	3.0	4.0	1.0	217.0
24	Through research projects coordinated by professors, FDyCS students have the opportunity to write their theses.	94	2,277	.1008	2,000	2.0	.9772	.955	.192	.249	-.978	.493	3.0	4.0	1.0	214.0
25	The results of the research at the FDyCS are translated into teachers' books, from which students expand their knowledge.	94	2,830	.0823	3,000	3.0	.7984	.637	-.459	.249	-.018	.493	3.0	4.0	1.0	266.0
26	At the UMSNH FDyCS, teachers are provided with material for the proper development of their class work.	94	2,223	.1060	2,000	1.0	1.0281	1,057	.263	.249	-1,108	.493	3.0	4.0	1.0	209.0
27	In the FDyCS of the UMSNH, there is a correspondence between the institutional financial management and the satisfaction of the needs of the academic unit in question.	94	2,362	.1068	2,500	3.0	1.0354	1,072	-.006	.249	-1,213	.493	3.0	4.0	1.0	222.0
28	In the FDyCS of the UMSNH, procedures are applied for the evaluation of the performance of administrative personnel.	94	2,394	.1082	2,000	3.0	1.0495	1,101	.606	.249	-1,193	.493	3.0	4.0	1.0	225.0

29	The FDyCS has collegiate bodies defined within its organizational structure, which are duly installed for academic and administrative decision-making.	94	3,468	.0810	4,000	4.0	.7857	.617	-1,592	.249	2,246	.493	3.0	4.0	1.0	326.0
30	At FDyCS, students are committed to the institutional mission.	94	3,255	.0907	3,000	4.0	.8791	.773	-1,110	.249	.579	.493	3.0	4.0	1.0	306.0
31	In the FDyCS, students periodically evaluate the performance of their teachers.	94	2,968	.0962	3,000	3.0	.9327	.870	-.748	.249	-.167	.493	3.0	4.0	1.0	279.0
32	The FDyCS of the UMSNH has an Academic Secretary for the management of the academic affairs of the dependency.	94	3,617	.0727	4,000	4.0	.7049	.497	-2,309	.249	5,843	.493	3.0	4.0	1.0	340.0
33	In the case of the FDyCS of the UMSNH, the functions of the non-academic staff are delimited by regulation.	94	2,883	.0813	3,000	3.0	.7878	.621	-1002	.249	1,111	.493	3.0	4.0	1.0	271.0
34	, a regime is applied for the hiring of non-academic personnel.	94	2,511	.1119	3,000	3.0	1.0850	1,177	-.157	.249	-1,266	.493	3.0	4.0	1.0	236.0
35	The FDyCS has and complies with the corresponding regulations for the management of institutional finances.	94	2,883	.0798	3,000	3.0	.7740	.599	-.789	.249	.762	.493	3.0	4.0	1.0	271.0
36	In accordance with its legal framework, the FDyCS has institutional policies for the promotion and development of the dissemination of culture.	94	3,213	.0880	3,000	4.0	.8535	.728	-.851	.249	-.022	.493	3.0	4.0	1.0	302.0
37	In the FDyCS special funds are promoted and applied for the development of extension.	94	2,979	.0814	3,000	3.0	.7894	.623	-.632	.249	.310	.493	3.0	4.0	1.0	280.0
38	FDyCS students participate in the institution's sports activities.	94	3,170	.0837	3,000	3.0	.8117	.659	-.940	.249	.716	.493	3.0	4.0	1.0	298.0
39	FDyCS students have access to academic exchange stays with other national and/or foreign educational institutions.	94	2,798	.1065	3,000	3.0	1.0326	1,066	-.480	.249	-.883	.493	3.0	4.0	1.0	263.0

40	FDyCS students link their academic activities with knowledge of the social needs of the population.	94	3,128	.0898	3,000	3.0	.8705	.758	-.853	.249	.161	.493	3.0	4.0	1.0	294.0
41	The UMSNH FDyCS constitutes a factor of social mobility.	94	3,160	.0846	3,000	3.0	.8205	.673	-.902	.249	.553	.493	3.0	4.0	1.0	297.0
42	The students of the FDyCS contribute with their point of view to the solution of the problems that stop social progress.	94	2,798	.0927	3,000	3.0	.8990	.808	-.584	.249	-.269	.493	3.0	4.0	1.0	263.0
43	FDyCS students carry out free legal advice activities in the marginal areas of the State's municipalities.	94	2,457	.1168	3,000	3.0	1.1327	1,283	-.210	.249	-1,428	.493	3.0	4.0	1.0	231.0
44	Through the social service, the students of the FDyCS of the UMSNH are linked to the government sector, in which a large part is inserted to work later.	94	3,074	.0947	3,000	3.0	.9186	.844	-.915	.249	.180	.493	3.0	4.0	1.0	289.0
45	Through research activities, the FDyCS is part of an international network of universities that share student mobility.	94	2,521	0.989	3,000	3.0	0.9586	.919	-.249	.249	-.894	.493	3.0	4.0	1.0	237.0

Source: Own elaboration based on the calculations obtained from the field research carried out.

ANNEX 45. CENTRAL TENDENCY MEASURES OF EDUCATIONAL QUALITY FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.42

Measures of Central Tendency of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Student Questionnaire

No.	94
Half	132,883
Typical error	1.6486
Median	133,500
Fashion	124.0
Standard deviation	15.9838
Variance	255,481
Asymmetry	-.390
Standard Error of Asymmetry	.249
Kurtosis	.797
Kurtosis Standard Error	.493
Range	90.0
Minimum value	80.0
Maximum value	170.0
Addition	12491.0

Source: Information obtained from the field research carried out.

ANNEX 46. DISTRIBUTION OF EDUCATIONAL QUALITY FREQUENCIES FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.43

Distribution of Frequencies of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Student Questionnaire

Points	Frequency	Percentage	Accumulated percentage
80.0	1	1.1	1.1
91.0	1	1.1	2.1
100.0	2	2.1	4.3
107.0	2	2.1	6.4
110.0	3	3.2	9.6
116.0	3	3.2	12.8
118.0	1	1.1	13.8
119.0	1	1.1	14.9
120.0	1	1.1	16.0
121.0	3	3.2	19.1
122.0	1	1.1	20.2
123.0	2	2.1	22.3
124.0	6	6.4	28.7
125.0	4	4.3	33.0
126.0	2	2.1	35.1
127.0	1	1.1	36.2
128.0	4	4.3	40.4
129.0	1	1.1	41.5
130.0	1	1.1	42.6
131.0	2	2.1	44.7
132.0	3	3.2	47.9
133.0	2	2.1	50.0
134.0	4	4.3	54.3
135.0	1	1.1	55.3
136.0	4	4.3	59.6
137.0	3	3.2	62.8
138.0	1	1.1	63.8
139.0	3	3.2	67.0
140.0	4	4.3	71.3
141.0	2	2.1	73.4
142.0	3	3.2	76.6
143.0	1	1.1	77.7
145.0	3	3.2	80.9
146.0	1	1.1	81.9

148.0	1	1.1	83.0
149.0	1	1.1	84.0
150.0	1	1.1	85.1
151.0	1	1.1	86.2
153.0	2	2.1	88.3
154.0	1	1.1	89.4
155.0	4	4.3	93.6
157.0	1	1.1	94.7
160.0	2	2.1	96.8
162.0	2	2.1	98.9
170.0	1	1.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 47. MEASURES OF CENTRAL TENDENCY OF TEACHING, RESEARCH, ADMINISTRATION/MANAGEMENT AND EXTENSION AND DIFFUSION, FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.44

Measures of Central Tendency of the Independent Variables Teaching, Research, Administration/ Management and Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Student Questionnaire

	Teaching	Investigation	Administration/ Management	Extension and Diffusion
No.	94	94	94	94
Half	60,021	15,000	28,564	29,298
Typical error	.7181	.4056	.4383	.6008
Median	60,000	15,000	29,000	30,000
Fashion	55.0	15.0	31.0	31.0
Standard deviation	6.9622	3.9322	4.2491	5.8251
Variance	48,473	15,462	18,055	33,932
Asymmetry	-.172	-.272	-.633	-.913
Standard Error of Asymmetry	.249	.249	.249	.249
Kurtosis	-.193	-.711	1,594	1,247
Kurtosis Standard Error	.493	.493	.493	.493
Range	32.0	16.0	26.0	29.0
Minimum value	42.0	6.0	13.0	10.0
Maximum value	74.0	22.0	39.0	39.0
Addition	5642.0	1410.0	2685.0	2754.0

Source: Information obtained from the field research carried out.

ANNEX 48. DISTRIBUTION OF TEACHING FREQUENCIES FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.45

Distribution of Frequencies of the Independent Variable Teaching in the FDyCS of the UMSNH from the Application of the Student Questionnaire

Points	Frequency	Percentage	Accumulated percentage
42.0	2	2.1	2.1
47.0	2	2.1	4.3
48.0	2	2.1	6.4
50.0	3	3.2	9.6
51.0	1	1.1	10.6
53.0	1	1.1	11.7
54.0	7	7.4	19.1
55.0	9	9.6	28.7
56.0	6	6.4	35.1
57.0	2	2.1	37.2
58.0	1	1.1	38.3
59.0	8	8.5	46.8
60.0	6	6.4	53.2
61.0	6	6.4	59.6
62.0	7	7.4	67.0
64.0	6	6.4	73.4
65.0	5	5.3	78.7
66.0	3	3.2	81.9
67.0	2	2.1	84.0
68.0	1	1.1	85.1
69.0	3	3.2	88.3
70.0	2	2.1	90.4
71.0	5	5.3	95.7
72.0	3	3.2	98.9
74.0	1	1.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 49. DISTRIBUTION OF RESEARCH FREQUENCIES FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.46

Distribution of Frequencies of the Independent Variable Research in the FDyCS of the UMSNH from the Application of the Student Questionnaire

Points	Frequency	Percentage	Accumulated percentage
6.0	1	1.1	1.1
7.0	3	3.2	4.3
8.0	3	3.2	7.4
10.0	7	7.4	14.9
11.0	5	5.3	20.2
12.0	8	8.5	28.7
13.0	7	7.4	36.2
14.0	3	3.2	39.4
15.0	16	17.0	56.4
16.0	4	4.3	60.6
17.0	7	7.4	68.1
18.0	10	10.6	78.7
19.0	7	7.4	86.2
20.0	5	5.3	91.5
21.0	7	7.4	98.9
22.0	1	1.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 50. DISTRIBUTION OF ADMINISTRATION/MANAGEMENT FREQUENCIES FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.47

Distribution of Frequencies of the Independent Variable Administration/Management in the FDyCS of the UMSNH from the Application of the Student Questionnaire

Points	Frequency	Percentage	Accumulated percentage
13.0	1	1.1	1.1
18.0	2	2.1	3.2
19.0	1	1.1	4.3
22.0	2	2.1	6.4
23.0	2	2.1	8.5
24.0	7	7.4	16.0
25.0	3	3.2	19.1
26.0	6	6.4	25.5
27.0	11	11.7	37.2
28.0	9	9.6	46.8
29.0	9	9.6	56.4
30.0	10	10.6	67.0
31.0	13	13.8	80.9
32.0	3	3.2	84.0
33.0	4	4.3	88.3
34.0	5	5.3	93.6
35.0	3	3.2	96.8
36.0	1	1.1	97.9
37.0	1	1.1	98.9
39.0	1	1.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 51. DISTRIBUTION OF EXTENSION AND DIFFUSION FREQUENCIES FROM THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.48

Distribution of Frequencies of the Independent Variable Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Student Questionnaire

Points	Frequency	Percentage	Accumulated percentage
10.0	1	1.1	1.1
13.0	1	1.1	2.1
14.0	2	2.1	4.3
20.0	4	4.3	8.5
21.0	2	2.1	10.6
22.0	1	1.1	11.7
23.0	2	2.1	13.8
24.0	4	4.3	18.1
25.0	1	1.1	19.1
26.0	9	9.6	28.7
27.0	1	1.1	29.8
28.0	6	6.4	36.2
29.0	3	3.2	39.4
30.0	12	12.8	52.1
31.0	13	13.8	66.0
32.0	8	8.5	74.5
33.0	5	5.3	79.8
34.0	3	3.2	83.0
35.0	4	4.3	87.2
36.0	3	3.2	90.4
37.0	3	3.2	93.6
38.0	3	3.2	96.8
39.0	3	3.2	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 52. CORRELATION AND DETERMINATION IN THE RESULTS OF THE APPLICATION OF THE STUDENT QUESTIONNAIRE

Table A.49

Matrix of the Pearson Correlation Coefficient from the Application of the Student Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.360 **	0.630 **	0.454 **	0.857 **
Investigation	0.360 **	1,000	0.384 **	0.205 **	0.580 **
Administration or Management	0.630 **	0.384 **	1,000	0.475 **	0.808 **
Extension and Diffusion	0.454 **	0.205 **	0.475 **	1,000	0.739 **
Educational quality	0.570 **	0.580 **	0.808 **	0.739 **	1,000
R					0.7460 **

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

Table A.50

Matrix of the Coefficient of Determination from the Application of the Student Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.130 **	0.397 **	0.206 **	0.734 **
Investigation	0.130 **	1,000	0.147 **	0.042 **	0.336 **
Administration or Management	0.397 **	0.147 **	1,000	0.226 **	0.653 **
Extension and Diffusion	0.206 **	0.042 **	0.226 **	1,000	0.546 **
Educational quality	0.325 **	0.336 **	0.653 **	0.546 **	1,000
R ²					0.5565 **

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

ANNEX 53. STATISTICAL PERSPECTIVE OF THE GENERAL RESULTS OF THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

No.	Questions	No.	Half	Error of the mean	Median	Fashion	Standard deviation	Variance	Asymmetry	Asymmetry error	Kurtosis	Kurtosis error	Range	Maximum value	Minimum value	Addition
1	In my experience, the UMSNH FDyCS has actions aimed at increasing terminal efficiency.	94	2,755	.0977	3,000	3.0	.9468	.896	-.575	.249	-.484	.493	3.0	4.0	1.0	259.0
2	During my stay at the FDyCS, the didactic strategy of teamwork was applied in the classes.	94	3,383	.0607	3,000	3.0	.5885	.346	-.339	.249	-.684	.493	2.0	4.0	2.0	318.0
3	In the FDyCS, the partial evaluations were adequate to know what the students have learned. Thes.	94	3,436	.0863	4,000	4.0	.8368	.700	-1,425	.249	1,249	.493	3.0	4.0	1.0	323.0
4	Regarding the evaluation of learning, I consider it convenient to incorporate research work in said evaluation for students.	94	2,989	.1031	3,000	4.0	.9999	1,000	-.572	.249	-.820	.493	3.0	4.0	1.0	281.0
5	The contents of the subjects of the FDyCS study plan were adapted to the present reality of the national and regional context.	94	3,596	.0819	4,000	4.0	.7941	.631	-2,034	.249	3,367	.493	3.0	4.0	1.0	338.0
6	According to my personal experience in the FDyCS, the teaching staff is permanently concerned about the learning of the students.	94	3,521	.0941	4,000	4.0	.9126	.833	-2016	.249	2,994	.493	3.0	4.0	1.0	331.0
7	According to my experience, the admission policy to the FDyCS of the UMSNH is pertinent.	94	3,021	.1014	3,000	4.0	.9835	.967	-.528	.249	-.922	.493	3.0	4.0	1.0	284.0
8	In my experience, the UMSNH FDyCS graduation policy is adequate.	94	3,160	.0972	3,000	4.0	.9425	.888	-1,115	.249	.485	.493	3.0	4.0	1.0	297.0

9	In the Law Degree of the FDyCS of the UMSNH, the teaching staff have a sufficient level of theoretical knowledge.	94	3,340	.1075	4,000	4.0	1.0427	1,087	-1,308	.249	.241	.493	3.0	4.0	1.0	314.0
10	From my experience, in the FDyCS of the UMSNH, the teaching staff have an acceptable level of practical knowledge.	94	3,191	.0714	3,000	3.0	.6921	.479	-1,069	.249	2,437	.493	3.0	4.0	1.0	300.0
11	The physical facilities of the FDyCS are comfortable and welcoming.	94	3,160	.0682	3,000	3.0	.6608	.437	-184	.249	-.704	.493	2.0	4.0	2.0	297.0
12	The performance of managers, teachers and students was framed in a climate of mutual respect.	94	2,745	.1080	3,000	3.0	1.0466	1,095	-387	.249	-1,011	.493	3.0	4.0	1.0	258.0
13	Regarding my appreciation, the education received at the FDyCS allowed me to develop a personality with a critical attitude.	94	2,713	.1097	3,000	2.0	1.0638	1,132	-.110	.249	-1,287	.493	3.0	4.0	1.0	255.0
14	The knowledge and skills acquired in my training at the FDyCS have application in my current professional performance.	94	3,287	.0703	3,000	3.0	.6819	.465	-433	.249	-.802	.493	2.0	4.0	2.0	309.0
13	, the regulations referring to the entry of academic staff were applied with the necessary rigor.	94	3,489	.0655	4,000	4.0	.6349	.403	-.861	.249	-.276	.493	2.0	4.0	2.0	328.0
16	During my stay at the FDyCS I had timely access to information on scholarships offered to students with high academic performance.	94	2,957	.0584	3,000	3.0	.5663	.321	-.011	.249	.206	.493	2.0	4.0	2.0	278.0
17	The FDyCS has specific regulations for the development and promotion of research.	94	2,021	.1132	2,000	1.0	1.0972	1,204	.606	.249	-1,030	.493	3.0	4.0	1.0	190.0

18	During my stay at the FDyCS I had access to the calls to participate as a student in institutional research projects coordinated by the faculty.	94	3,074	.0898	3,000	3.0	.8705	.758	-.846	.249	.251	.493	3.0	4.0	1.0	289.0
19	During my stay at the FDyCS, the faculty actively participated in institutional research projects.	94	3,553	.0558	4,000	4.0	.5411	.293	-.632	.249	-.779	.493	2.0	4.0	2.0	334.0
20	During my stay at the FDyCS, I appreciated that funds are applied for the development of research, which include professors and students, who are accessed through institutional mechanisms and are supervised.	94	2,766	.1085	3,000	3.0	1.0516	1,106	-.591	.249	-.817	.493	3.0	4.0	1.0	260.0
21	The research projects coordinated by professors and assisted by students were supported by the UMSNH.	94	1,947	.1052	2,000	1.0	1.0199	1,040	.543	.249	-1,080	.493	3.0	4.0	1.0	183.0
22	The research activities carried out by the assistant professors-researchers allowed the students to carry out their undergraduate thesis.	94	3,074	.0959	3,000	3.0	.9302	.865	-.887	.249	.051	.493	3.0	4.0	1.0	289.0
23	The results of the research generated in the FDyCS were translated into chapters of thematic books that accounted for the institutional level of scientific and technological innovation.	94	2,787	.0867	3,000	3.0	.8408	.707	-.354	.249	-.353	.493	3.0	4.0	1.0	262.0
24	In the FDyCS, teachers are provided with material for the proper development of their work in the classroom.	94	2,457	.0988	2,000	2.0	.9579	.918	.161	.249	-.890	.493	3.0	4.0	1.0	231.0

25	In the FDyCS there is a correspondence between institutional financial management and the satisfaction of the needs of the academic unit in question.	94	2,936	.0753	3,000	3.0	.7304	.534	-.577	.249	.590	.493	3.0	4.0	1.0	276.0
26	From my perspective, the FDyCS applies procedures for evaluating the performance of administrative staff.	94	2,340	.1107	2,000	3.0	1.0732	1,152	.079	.249	-1,282	.493	3.0	4.0	1.0	220.0
27	During my stay at the FDyCS of the UMSNH, it had the proper installation of the collegiate bodies defined within its organizational structure.	94	2,670	.1052	3,000	3.0	1.0201	1,041	-.475	.249	-.873	.493	3.0	4.0	1.0	251.0
28	From my experience, at FDyCS, the faculty and students are committed to the institutional mission.	94	2,468	.1011	3,000	3.0	.9805	.961	-.084	.249	-.997	.493	3.0	4.0	1.0	232.0
29	In the FDyCS, the role of the teacher and the directors is evaluated in each school year.	94	3,287	.0928	4,000	4.0	.8995	.809	-1,239	.249	.815	.493	3.0	4.0	1.0	309.0
30	From my stay at the FDyCS, I noticed the correspondence between the organizational structure and the nature of the university dependency.	94	3,117	.0931	3,000	3.0	.9023	.814	-.953	.249	.303	.493	3.0	4.0	1.0	293.0
31	From my perspective, in the case of the FDyCS a regime is applied for the hiring of non-academic personnel.	94	3,064	.0966	3,000	3.0	.9368	.878	-.770	.249	-.259	.493	3.0	4.0	1.0	288.0
32	In the FDyCS there is a regulatory framework for the authorities and the exercise of their actions.	94	3,436	.0939	4,000	4.0	.9106	.829	-1,771	.249	2,304	.493	3.0	4.0	1.0	323.0

33	In consideration of my permanence in the FDyCS of the UMSNH, I realized that it complies with the regulations for the management of institutional finances.	94	2,649	.0916	3,000	3.0	.8885	.789	-.746	.249	-.257	.493	3.0		1.0	249.0
34	From my stay at the FDyCS, I appreciated that, in accordance with its legal framework, the university dependency had institutional policies for the development of the extension and diffusion of culture.	94	2,489	.1139	3,000	3.0	1.1047	1,220	-.193	.249	-1,329	.493	3.0	4.0	1.0	234.0
35	During my stay at the FDyCS of the UMSNH, the professors and students received financial support for extension activities.	94	2,809	.0818	3,000	3.0	.7935	.630	-.829	.249	.608	.493	3.0	4.0	1.0	264.0
36	During my stay at the FDyCS, the professors had access to research stays with other national and/or foreign educational institutions.	94	3,074	.0983	3,000	4.0	.9531	.908	-.760	.249	-.374	.493	3.0	4.0	1.0	289.0
37	During my stay at the FDyCS, the students had access to academic exchanges with other national and foreign educational institutions.	94	2,862	.0823	3,000	3.0	.7979	.637	-.393	.249	-.153	.493	3.0	4.0	1.0	269.0
38	During my stay at the FDyCS of the UMSNH, the students participated in community social service activities.	94	3,043	.0906	3,000	3.0	.8788	.772	-.861	.249	.290	.493	3.0	4.0	1.0	286.0
39	In my view, the students of the FDyCS of the UMSNH link research to knowledge of the social needs of the population.	94	2,543	.1066	3,000	3.0	1.0335	1,068	-.236	.249	-1,100	.493	3.0	4.0	1.0	239.0

40	From my experience, the faculty of the FDyCS of the UMSNH contributes with their points of view to the debate on the solution of the problems that stop the progress of society.	94	2,915	.0976	3,000	3.0	.9465	.896	-.605	.249	-.463	.493	3.0	4.0	1.0	274.0
41	From my experience, FDyCS students develop free legal advice activities in the marginal areas of the State's municipalities.	94	2,915	.0890	3,000	3.0	.8633	.745	-.755	.249	.202	.493	3.0	4.0	1.0	274.0
42	The FDyCS is linked to the government sector through teaching and social service.	94	2,670	.0996	3,000	3.0	.9660	.933	-.534	.249	-.655	.493	3.0	4.0	1.0	251.0
43	During my stay at the FDyCS I verified that, through research activities, this university unit is part of an international network of universities that share student mobility.	94	2,021	.1069	2,000	1.0	1.0367	1,075	.134	.249	-1,763	.493	3.0	4.0	1.0	190.0

Source: Own elaboration based on the calculations obtained from the field research carried out.

ANNEX 54. MEASURES OF THE CENTRAL TENDENCY OF EDUCATIONAL QUALITY FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.51

Measures of Central Tendency of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

No.	94
Half	125,734
Typical error	1.8544
Median	122,500
Fashion	117.0
Standard deviation	17.9792
Variance	323,251
Asymmetry	-.177
Standard Error of Asymmetry	.249
Kurtosis	-.028
Kurtosis Standard Error	.493
Range	84.0
Minimum value	78.0
Maximum value	162.0
Addition	11819.0

Source: Information obtained from the field research carried out.

ANNEX 55. DISTRIBUTION OF EDUCATIONAL QUALITY FREQUENCIES FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.52

Distribution of Frequencies of the Dependent Variable *Educational Quality* in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

Points	Frequency	Percentage	Accumulated percentage
78.0	2	2.1	2.1
89.0	2	2.1	4.3
98.0	3	3.2	7.4
105.0	4	4.3	11.7
106.0	3	3.2	14.9
110.0	4	4.3	19.1
112.0	1	1.1	20.2
114.0	2	2.1	22.3
117.0	11	11.7	34.0
118.0	5	5.3	39.4
120.0	5	5.3	44.7
121.0	5	5.3	50.0
124.0	1	1.1	51.1
128.0	3	3.2	54.3
129.0	3	3.2	57.4
130.0	2	2.1	59.6
131.0	3	3.2	62.8
134.0	4	4.3	67.0
135.0	10	10.6	77.7
138.0	1	1.1	78.7
140.0	1	1.1	79.8
146.0	4	4.3	84.0
149.0	5	5.3	89.4
150.0	2	2.1	91.5
153.0	4	4.3	95.7
157.0	2	2.1	97.9
162.0	2	2.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 56. MEASURES OF CENTRAL TENDENCY OF TEACHING, RESEARCH, ADMINISTRATION/MANAGEMENT AND EXTENSION AND DIFFUSION, FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.53

Measures of Central Tendency of the Independent Variables Teaching, Research, Administration/ Management and Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

	Teaching	Investigation	Administration or Management	Extension and Diffusion
No.	94	94	94	94
Half	50,745	19,223	28,426	27,340
Typical error	.7119	.4031	.5106	.5773
Median	51,000	19,000	29,000	28,000
Fashion	47.0	17.0	27.0	31.0
Standard deviation	6.9017	3.9080	4.9503	5.5968
Variance	47,633	15,272	24,505	31,324
Asymmetry	-.081	.023	-.787	-.794
Standard Error of Asymmetry	.249	.249	.249	.249
Kurtosis	-.496	-.904	1,002	1,176
Kurtosis Standard Error	.493	.493	.493	.493
Range	25.0	15.0	25.0	29.0
Minimum value	37.0	11.0	13.0	10.0
Maximum value	62.0	26.0	38.0	39.0
Addition	4770.0	1807.0	2672.0	2570.0

Source: Information obtained from the field research carried out.

ANNEX 57. DISTRIBUTION OF TEACHING FREQUENCIES FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.54

Distribution of Frequencies of the Independent Variable Teaching in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

Points	Frequency	Percentage	Accumulated percentage
37.0	4	4.3	4.3
38.0	3	3.2	7.4
39.0	2	2.1	9.6
42.0	3	3.2	12.8
44.0	3	3.2	16.0
45.0	2	2.1	18.1
47.0	15	16.0	34.0
48.0	9	9.6	43.6
50.0	3	3.2	46.8
51.0	9	9.6	56.4
52.0	2	2.1	58.5
53.0	12	12.8	71.3
54.0	4	4.3	75.5
56.0	4	4.3	79.8
58.0	4	4.3	84.0
61.0	6	6.4	90.4
62.0	9	9.6	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 58. DISTRIBUTION OF RESEARCH FREQUENCIES FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.55

Distribution of Frequencies of the Independent Variable Research in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

Points	Frequency	Percentage	Accumulated percentage
11.0	2	2.1	2.1
12.0	1	1.1	3.2
13.0	4	4.3	7.4
14.0	2	2.1	9.6
15.0	8	8.5	18.1
16.0	7	7.4	25.5
17.0	13	13.8	39.4
18.0	8	8.5	47.9
19.0	6	6.4	54.3
20.0	9	9.6	63.8
21.0	3	3.2	67.0
22.0	6	6.4	73.4
23.0	9	9.6	83.0
24.0	4	4.3	87.2
25.0	8	8.5	95.7
26.0	4	4.3	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 59. DISTRIBUTION OF ADMINISTRATION/MANAGEMENT FREQUENCIES FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.56

Distribution of Frequencies of the Independent Variable Administration/Management in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

Points	Frequency	Percentage	Accumulated percentage
13.0	2	2.1	2.1
18.0	2	2.1	4.3
19.0	3	3.2	7.4
22.0	7	7.4	14.9
24.0	1	1.1	16.0
25.0	6	6.4	22.3
26.0	2	2.1	24.5
27.0	14	14.9	39.4
28.0	3	3.2	42.6
29.0	12	12.8	55.3
30.0	14	14.9	70.2
31.0	1	1.1	71.3
32.0	6	6.4	77.7
33.0	8	8.5	86.2
34.0	9	9.6	95.7
37.0	2	2.1	97.9
38.0	2	2.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 60. DISTRIBUTION OF EXTENSION AND DIFFUSION FREQUENCIES FROM THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.57

Distribution of Frequencies of the Independent Variable Extension and Diffusion in the FDyCS of the UMSNH from the Application of the Alumni Questionnaire

Points	Frequency	Percentage	Accumulated percentage
10.0	2	2.1	2.1
16.0	6	6.4	8.5
21.0	3	3.2	11.7
22.0	6	6.4	18.1
23.0	2	2.1	20.2
24.0	2	2.1	22.3
25.0	6	6.4	28.7
26.0	8	8.5	37.2
27.0	8	8.5	45.7
28.0	9	9.6	55.3
29.0	4	4.3	59.6
30.0	10	10.6	70.2
31.0	12	12.8	83.0
32.0	4	4.3	87.2
33.0	5	5.3	92.6
36.0	5	5.3	97.9
39.0	2	2.1	100.0
Total	94	100.0	

Source: Information obtained from the field research carried out.

ANNEX 61. CORRELATION AND DETERMINATION IN THE RESULTS OF THE APPLICATION OF THE ALUMNI QUESTIONNAIRE

Table A.58

Matrix of the Pearson Correlation Coefficient from the Application of the Alumni Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.641 **	0.643 **	0.551 **	0.872 **
Investigation	0.641 **	1,000	0.689 **	0.519 **	0.815 **
Administration or Management	0.643 **	0.689 **	1,000	0.615 **	0.863 **
Extension and Diffusion	0.551 **	0.519 **	0.615 **	1,000	0.805 **
Educational quality	0.872 **	0.815 **	0.863 **	0.805 **	1,000
R					0.8387 **

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

Table A.59

Matrix of the Coefficient of Determination from the Application of the Graduates Questionnaire

Variables	Teaching	Investigation	Administration/ Management	Extension and Diffusion	Educational quality
Teaching	1,000	0.411 **	0.413 **	0.304 **	0.760 **
Investigation	0.411 **	1,000	0.475 **	0.269 **	0.664 **
Administration or Management	0.413 **	0.475 **	1,000	0.378 **	0.745 **
Extension and Diffusion	0.304 **	0.269 **	0.378 **	1,000	0.648 **
Educational quality	0.760 **	0.664 **	0.745 **	0.648 **	1,000
R2					0.7035 **

**/ The correlation is significant at the 0.01 level (bilateral).

Source: Information obtained from the field research carried out.

ANNEX 62. FREQUENCY DISTRIBUTION OF THE TEACHER QUESTIONNAIRE (FOR DATA PROCESSING)

Table A.60

Frequency Distribution of the Teacher Questionnaire

Question / Frequency, (%) and [accumulated %]	Never	Sometimes	Frequently	Always	Total
1	12 (16.0) [16.0]	9 (12.0) [28.0]	35 (46.7) [74.7]	19 (25.3) [100]	75 (100)
2	/	3 (4.0) [4.0]	35 (46.7) [50.7]	37 (49.3) [100]	75 (100)
3	2 (2.7) [2.7]	9 (12.0) [14.7]	21 (28.0) [42.7]	43 (57.3) [100]	75 (100)
4	6 (8.0) [8.0]	20 (26.7) [34.7]	23 (30.7) [65.3]	26 (34.7) [100]	75 (100)
5	2 (2.7) [2.7]	4 (5.3) [8.0]	10 (13.3) [21.3]	59 (78.7) [100]	75 (100)
6	4 (5.3) [5.3]	1 (1.3) [6.7]	16 (21.3) [28.0]	54 (72.0) [100]	75 (100)
7	4 (5.3) [5.3]	16 (21.3) [26.0]	22 (29.3) [56.0]	33 (44.0) [100]	75 (100)
8	7 (9.3) [9.3]	10 (13.3) [22.7]	30 (40.0) [62.7]	28 (37.3) [100]	75 (100)
9	9 (12.0) [12.0]	9 (12.0) [24.0]	17 (22.7) [46.7]	40 (53.3) [100]	75 (100)
10	3 (4.0) [4.0]	5 (6.7) [10.7]	45 (60.0) [70.7]	22 (29.3) [100]	75 (100)
11	0 (0.0) [0.0]	17 (22.7) [22.7]	39 (52.0) [74.7]	19 (25.3) [100]	75 (100)
12	13 (17.3) [17.3]	16 (21.3) [38.7]	23 (30.7) [69.3]	23 (30.7) [100]	75 (100)
13	9 (12.0) [12.0]	21 (28.0) [40.0]	18 (24.0) [64.0]	27 (36.0) [100]	75 (100)
14	1 (1.3) [1.3]	10 (13.3) [13.3]	31 (41.3) [41.3]	33 (44.0) [44.0]	75 (100)
15	7 (9.3) [9.3]	25 (33.3) [42.7]	43 (57.3) [100]	0 (100)	75 (100)
16	0 (0.0) [0.0]	14 (18.7) [18.7]	46 (61.3) [80.0]	15 (20.0) [100]	75 (100)

17	38 (50.7) [50.7]	14 (18.7) [69.3]	12 (16.0) [85.3]	11 (14.7) [100]	75 (100)
18	5 (6.7) [6.7]	10 (13.3) [20.0]	30 (40.0) [60.0]	30 (40.0) [100]	75 (100)
19	2 (2.7) [2.7]	1 (1.3) [4.0]	24 (3.2) [36.0]	48 (6.4) [100]	75 (100)
20	17 (22.7) [22.7]	9 (12.0) [34.7]	35 (46.7) [81.3]	14 (18.7) [100]	75 (100)
21	35 (46.7) [46.7]	14 (18.7) [65.3]	20 (26.7) [92.0]	6 (8.0) [100]	75 (100)
22	6 (80.0) [8.0]	8 (10.7) [18.7]	34 (45.3) [64.0]	27 (36.0) [100]	75 (100)
23	16 (21.3) [21.3]	19 (25.3) [46.7]	30 (40.0) [86.7]	10 (13.3) [100]	75 (100)
24	17 (22.7) [22.7]	24 (32.0) [54.7]	23 (30.7) [85.3]	11 (14.7) [100]	75 (100)
25	5 (6.7) [6.7]	14 (18.7) [25.3]	41 (54.7) [80.0]	15 (20.0) [100]	75 (100)
26	25 (33.3) [33.3]	20 (26.7) [60.0]	21 (28.0) [88.0]	9 (12.0) [100]	75 (100)
27	18 (24.0) [24.0]	14 (18.7) [42.7]	31 (41.3) [84.0]	12 (16.0) [100]	75 (100)
28	18 (24.0) [24.0]	21 (28.0) [52.0]	25 (33.3) [85.3]	11 (14.7) [100]	75 (100)
29	4 (5.3) [5.3]	4 (5.3) [10.7]	25 (33.3) [44.0]	42 (56.0) [100]	75 (100)
30	6 (8.0) [8.0]	6 (8.0) [16.0]	32 (42.7) [58.7]	31 (41.3) [100]	75 (100)
31	6 (8.0) [8.0]	10 (13.3) [21.3]	32 (42.7) [64.0]	27 (36.0) [100]	75 (100)
32	0 (0.0) [0.0]	4 (5.3) [5.3]	21 (28.0) [33.3]	50 (66.7) [100]	75 (100)
33	9 (12.0) [12.0]	7 (9.3) [21.3]	49 (65.3) [86.7]	10 (13.3) [100]	75 (100)
34	21 (28.0) [28.0]	13 (17.3) [45.3]	27 (36.0) [81.3]	14 (18.7) [100]	75 (100)
35	5 (6.7) [6.7]	11 (14.7) [21.3]	48 (64.0) [85.3]	11 (14.7) [100]	75 (100)

36	4 (5.3) [5.3]	13 (17.3) [22.7]	28 (37.3) [60.0]	30 (40.0) [100]	75 (100)
37	5 (6.7) [6.7]	15 (20.0) [26.7]	41 (54.7) [81.3]	14 (18.7) [100]	75 (100)
38	5 (6.7) [6.7]	8 (10.7) [17.3]	38 (50.7) [68.0]	24 (32.0) [100]	75 (100)
39	15 (20.0) [20.0]	12 (16.0) [36.0]	29 (38.7) [74.7]	19 (25.3) [100]	75 (100)
40	5 (6.7) [6.7]	11 (14.7) [21.3]	33 (44.0) [65.3]	26 (34.7) [100]	75 (100)
41	5 (6.7) [6.7]	9 (12.0) [18.7]	39 (52.0) [70.7]	22 (29.3) [100]	75 (100)
42	11 (14.7) [14.7]	10 (13.3) [28.0]	41 (54.7) [82.7]	13 (17.3) [100]	75 (100)
43	27 (36.0) [36.0]	4 (5.3) [41.3]	36 (48.0) [89.3]	8 (10.7) [100]	75 (100)
44	8 (10.7) [10.7]	8 (10.7) [21.3]	36 (48.0) [69.3]	23 (30.7) [100]	75 (100)
45	14 (18.7) [18.7]	18 (24.0) [42.7]	35 (46.7) [89.3]	8 (10.7) [100]	75 (100)
46	12 (16.0) [16.0]	9 (12.0) [28.0]	35 (46.7) [74.7]	19 (25.3) [100]	75 (100)
47	0 (0.0) [0.0]	3 (4.0) [4.0]	35 (4.0) [50.7]	37 [100]	75 (100)
48	2 (2.7) [2.7]	9 (12.0) [14.7]	21 (28.0) [42.7]	43 (57.3) [100]	75 (100)
49	6 (8.0) [8.0]	20 (26.7) [34.7]	23 (30.7) [65.3]	26 (34.7) [100]	75 (100)
50	2 (2.7) [2.7]	4 (5.3) [8.0]	10 (13.3) [21.3]	59 (78.7) [100]	75 (100)
51	4 (5.3) [5.3]	1 (1.3) [6.7]	16 (21.3) [28.0]	54 (72.0) [100]	75 (100)

Source: Information obtained from the field research carried out.

In each row (of the 51), the quantities in the first row indicate the frequency; the amounts in the second row, in parentheses, represent the percentage of the frequency; and the amounts in the third row, in square brackets, indicate the percentages cumulative frequency of the items of the Teacher Questionnaire.

ANNEX 63. DISTRIBUTION OF FREQUENCIES OF THE STUDENT QUESTIONNAIRE (FOR DATA PROCESSING)

Table A.61

Distribution of Frequencies of the Student Questionnaire

Question / Frequency, (%) and [accumulated %]	Never	Sometimes	Frequently	Always	Total
1	13 (13.8) [13.8]	11 (11.7) [25.5]	39 (41.5) [67.0]	31 (33.0) [100]	94 (100)
2	0 (0.0) [0.0]	4 (4.3) [4.3]	38 (40.4) [44.7]	52 (55.3) [100]	94 (100)
3	2 (2.1) [2.1]	11 (11.7) [13.8]	34 (36.2) [50.0]	47 (50.0) [100]	94 (100)
4	6 (6.4) [6.4]	25 (26.6) [33.0]	29 (30.9) [63.8]	34 (36.2) [100]	94 (100)
5	2 (2.1) [2.1]	4 (4.3) [6.4]	11 (11.7) [18.1]	77 (81.9) [100]	94 (100)
6	4 (4.3) [4.3]	2 (2.1) [6.4]	18 (19.1) [25.5]	70 (74.5) [100]	94 (100)
7	4 (4.3) [4.3]	16 (17.0) [21.3]	28 (29.8) [51.1]	46 (48.9) [100]	94 (100)
8	10 (10.6) [10.6]	11 (11.7) [22.3]	39 (41.5) [63.8]	34 (36.2) [100]	94 (100)
9	9 (9.6) [9.6]	12 (12.8) [22.3]	20 (21.3) [43.6]	53 (56.4) [100]	94 (100)
10	3 (3.2) [3.2]	7 (7.4) [10.6]	55 (58.5) [69.1]	29 (30.9) [100]	94 (100)
11	0 (0.0) [0.0]	24 (25.5) [25.5]	49 (52.1) [77.7]	21 (22.3) [100]	94 (100)
12	15 (16.0) [16.0]	17 (18.1) [34.0]	32 (3.4) [68.1]	30 (31.9) [100]	94 (100)
13	9 (9.6) [9.6]	24 (25.5) [35.1]	25 (26.6) [61.7]	36 (38.3) [100]	94 (100)
14	1 (1.1) [1.1]	14 (14.9) [16.0]	40 (42.6) [58.5]	39 (41.5) [100]	94 (100)
15	0 (0.0) [0.0]	10 (10.6) [10.6]	31 (30.0) [43.6]	53 (56.4) [100]	94 (100)
16	0 (0.0) (0.0)	19 (20.2) (20.2)	58 (61.7) (81.9)	17 (18.1) (100)	94 (100)
17	48 (51.1) [51.1]	15 (160.0) [67.0]	19 (20.2) [87.2]	12 (12.8) [100]	94 (100)

18	5 (5.3) [5.3]	10 (10.6) [16.0]	38 (40.4) [56.4]	41 (43.6) [100]	94 (100)
19	2 (2.1) [2.1]	1 (1.1) [3.2]	26 (27.7) [30.9]	65 (69.1) [100]	94 (100)
20	25 (26.6) [26.6]	12 (12.8) [39.4]	41 (43.6) [83.0]	16 (17.0) [100]	94 (100)
21	42 (44.7) [44.7]	20 (21.3) [66.0]	25 (26.6) [92.6]	7 (7.4) [100]	94 (100)
22	8 (8.5) [8.5]	11 (11.7) [20.2]	38 (40.4) [60.6]	37 (39.4) [100]	94 (100)
23	27 (28.7) [28.7]	21 (22.3) [51.1]	36 (38.3) [89.4]	10 (10.6) [100]	94 (100)
24	24 (25.5) [25.5]	31 (33.0) [58.5]	28 (29.8) [88.3]	11 (11.7) [100]	94 (100)
25	6 (6.4) [6.4]	21 (22.3) [28.7]	50 (53.2) [81.9]	17 (18.1) [100]	94 (100)
26	29 (30.9) [30.9]	27 (28.7) [59.6]	26 (27.7) [87.2]	12 (12.8) [100]	94 (100)
27	26 (27.7) [27.7]	21 (22.3) [50.0]	34 (36.2) [86.2]	13 (13.8) [100]	94 (100)
28	24 (25.5) [25.5]	25 (26.6) [52.1]	29 (30.9) [83.0]	16 (17.0) [100]	94 (100)
29	4 (4.3) [4.3]	5 (5.3) [9.6]	28 (29.8) [39.4]	57 (60.6) [100]	94 (100)
30	6 (6.4) [6.4]	9 (9.6) [16.0]	34 (36.2) [52.1]	45 (47.9) [100]	94 (100)
31	10 (10.6) [10.6]	12 (12.8) [23.4]	43 (45.7) [69.1]	29 (30.9) [100]	94 (100)
32	4 (4.3) [4.3]	0 (0.0) [0.0]	24 (25.5) [29.8]	66 (70.2) [100]	94 (100)
33	9 (9.6) [9.6]	8 (8.5) [18.1]	62 (66.0) [84.0]	15 (16.0) [100]	94 (100)
34	24 (25.5) [25.5]	17 (18.1) [43.6]	37 (36.2) [79.8]	19 (20.2) [100]	94 (100)
35	7 (7.4) [7.4]	13 (13.8) [21.3]	58 (61.7) [83.0]	16 (17.0) [100]	94 (100)
36	4 (4.3) [4.3]	14 (14.9) [19.1]	34 (36.2) [55.3]	42 (44.7) [100]	94 (100)
37	5 (5.3) [5.3]	15 (16.0) [21.3]	51 (54.3) [75.5]	23 (24.5) [100]	94 (100)

38	5 (5.3) [5.3]	9 (9.6) [14.9]	45 (47.9) [62.8]	35 (37.2) [100]	94 (100)
39	15 (16.0) [16.0]	16 (17.0) [33.0]	36 (38.3) [71.3]	27 (28.7) [100]	94 (100)
40	6 (6.4) [6.4]	12 (12.8) [19.1]	40 (42.6) [61.7]	36 (38.3) [100]	94 (100)
41	5 (5.3) [5.3]	10 (10.6) [16.0]	44 (46.8) [62.8]	35 (37.2) [100]	94 (100)
42	11 (11.7) [11.7]	16 (17.0) [28.7]	48 (51.1) [79.8]	19 (20.2) [100]	94 (100)
43	31 (33.0) [33.0]	6 (6.4) [39.4]	40 (42.6) [81.9]	17 (18.1) [100]	94 (100)
44	9 (9.6) [9.6]	9 (9.6) [19.1]	42 (44.7) [63.8]	34 (36.2) [100]	94 (100)
45	18 (19.1) [19.1]	22 (23.4) [42.6]	41 (43.6) [86.2]	13 (13.8) [100]	94 (100)

Source: Information obtained from the field research carried out.

In each row (of the 45), the quantities in the first row indicate the frequency; the amounts in the second row, in parentheses, represent the percentage of the frequency; and the amounts in the third row, in square brackets, indicate the percentages cumulative frequency of the items of the Teacher Questionnaire.

ANNEX 64. FREQUENCY DISTRIBUTION OF THE ALUMNI QUESTIONNAIRE (FOR DATA PROCESSING)

Table A.62

Frequency Distribution of the Alumni Questionnaire

Question / Frequency, (%) and [accumulated %]	Never	Sometimes	Frequently	Always	Total
1	14 (14.9) [14.9]	14 (14.9) [29.8]	47 (50.0) [79.8]	19 20.2 [100]	94 (100)
2	0 (0.0) [0.0]	5 (5.3) [5.3]	48 (51.1) [56.4]	41 (43.6) [100]	94 (100)
3	4 (4.3) [4.3]	9 (9.6) [13.8]	23 (24.5) [38.3]	58 (61.7) [100]	94 (100)
4	9 (9.6) [9.6]	20 (21.3) [30.9]	28 (29.8) [60.6]	37 (39.4) [100]	94 (100)
5	4 (4.3) [4.3]	6 (6.4) [0.6]	14 (14.9) [25.5]	70 (74.5) [100]	94 (100)
6	9 (9.6) [9.6]	0 (0.0) [0.0]	18 (19.1) [28.7]	67 (71.3) [100]	94 (100)
7	7 (7.4) [7.4]	23 (24.5) [31.9]	25 (26.6) [58.5]	39 (41.5) [100]	94 (100)
8	10 (10.6) [10.6]	5 (5.3) [16.0]	39 (41.5) [57.4]	40 (42.6) [100]	94 (100)
9	10 (10.6) [10.6]	10 (10.6) [21.3]	12 (12.8) [34.0]	62 (66.0) [100]	94 (100)
10	4 (4.3) [4.3]	3 (3.2) [7.4]	58 (61.7) [69.1]	29 (30.9) [100]	94 (100)
11	0 (0.0) [0.0]	14 (14.9) [14.9]	51 (54.3) [69.1]	29 (30.9) [100]	94 (100)
12	16 (17.0) [17.0]	18 (19.1) [36.2]	34 (36.2) [72.3]	26 (27.7) [100]	94 (100)
13	13 (13.8) [13.8]	31 (33.0) [46.8]	20 (21.3) [68.1]	30 (31.9) [100]	94 (100)
14	0 (0.0) [0.0]	12 (12.8) [12.8]	43 (45.7) [58.5]	39 (41.5) [100]	94 (100)
15	0 (0.0) [0.00]	7 (7.4) [7.4]	34 (36.2) [43.6]	53 (56.4) [100]	94 (100)

16	0 (0.0) [0.0]	17 (18.1) [18.1]	64 (68.1) [86.2]	13 (13.8) [100]	94 (100)
17	42 (44.7) [44.7]	21 (22.3) [67.0]	18 (19.1) [86.2]	13 (13.8) [100]	94 (100)
18	7 (7.4) [7.4]	11 (11.7) [19.1]	44 (46.8) [66.0]	32 (34.0) [100]	94 (100)
19	0 (0.0) [0.0]	2 (2.1) [2.1]	38 (40.4) [42.6]	54 (57.4) [100]	94 (100)
20	19 (20.2) [20.2]	8 (8.5) [28.7]	43 (45.7) [74.5]	24 (25.5) [100]	94 (100)
21	44 (46.8) [46.8]	18 (19.1) [66.0]	25 (26.6) [92.6]	7 (7.4) [100]	94 (100)
22	9 (9.6) [9.6]	10 (10.6) [20.2]	40 (42.6) [62.8]	35 (37.2) [100]	94 (100)
23	7 (7.4) [7.4]	24 (25.5) [33.0]	45 (47.9) [80.9]	18 (19.1) [100]	94 (100)
24	15 (16.0) [16.0]	37 (39.4) [55.3]	26 (27.7) [83.0]	16 (17.0) [100]	94 (100)
25	4 (4.3) [4.3]	16 (17.0) [21.3]	56 (59.6) [80.9]	18 (19.1) [100]	94 (100)
26	28 (29.8) [29.8]	21 (22.3) [52.1]	30 (31.9) [84.0]	15 (16.0) [100]	94 (100)
27	19 (20.2) [20.2]	12 (12.8) [33.0]	44 (46.8) [79.8]	19 (20.2) [100]	94 (100)
28	19 (20.2) [20.2]	26 (27.7) [47.9]	35 (37.2) [85.1]	14 (14.9) [100]	94 (100)
29	7 (7.4) [7.4]	7 (7.4) [14.9]	32 (34.0) [48.9]	48 (51.1) [100]	94 (100)
30	8 (8.5) [8.5]	9 (9.6) [18.1]	41 (43.6) [61.7]	36 (38.3) [100]	94 (100)
31	8 (8.5) [8.5]	14 (14.9) [23.4]	36 (38.3) [61.7]	36 (38.3) [100]	94 (100)
32	9 (9.6) [9.6]	0 (0.0) [0.0]	26 (27.7) [37.2]	59 (62.8) [100]	94 (100)
33	16 (17.0) [17.0]	11 (11.7) [28.7]	57 (60.6) [89.4]	10 (10.6) [100]	94 (100)

34	27 (28.7) [28.7]	12 (12.8) [41.5]	37 (39.4) [80.9]	18 (19.1) [100]	94 (100)
35	9 (9.6) [9.6]	13 (13.8) [23.4]	59 (62.8) [86.2]	13 (13.8) [100]	94 (100)
36	8 (8.5) [8.5]	15 (16.0) [24.5]	33 (35.1) [59.6]	38 (40.4) [100]	94 (100)
37	5 (5.3) [5.3]	22 (23.4) [28.7]	48 (51.1) [79.8]	19 (20.2) [100]	94 (100)
38	8 (8.5) [8.5]	10 (10.6) [19.1]	46 (48.9) [68.1]	30 (31.9) [100]	94 (100)
39	21 (22.3) [22.3]	18 (19.1) [41.5]	38 (40.4) [81.9]	17 (18.1) [100]	94 (100)
40	10 (10.6) [10.6]	16 (17.0) [27.7]	40 (42.6) [70.2]	28 (29.8) [100]	94 (100)
41	9 (9.6) [9.6]	12 (12.8) [22.3]	51 (54.3) [76.6]	22 (23.4) [100]	94 (100)
42	17 (18.1) [18.1]	13 (13.8) [31.9]	48 (51.1) [83.0]	16 (17.0) [100]	94 (100)
43	46 (48.9) [48.9]	3 (3.2) [52.1]	42 (44.7) [96.8]	3 (3.2) [100]	94 (100)

Source: Information obtained from the field research carried out.

In each row (of the 43), the quantities in the first row indicate the frequency; the amounts in the second row, in parentheses, represent the percentage of the frequency; and the amounts in the third row, in square brackets, indicate the percentages cumulative frequency of the items of the Teacher Questionnaire.

ANNEX 65. SCALOGRAMS FOR THE MEASUREMENT OF THE DEPENDENT AND INDEPENDENT VARIABLES OF STUDY IN THE CATEGORIES OF TEACHERS, STUDENTS AND GRADUATES

Table A.63 Scalogram of the Educational Quality Variable in the Teacher Questionnaire

Always	Frequently	Sometimes	Never
204	165.75	127.5	89.25

↑

151.440

Source: Own elaboration with data from Annexes 23, 29 and 32; value between scales: 38.25.

Table A.64 Scalogram of the Teaching Variable in the Teacher Questionnaire

Always	Frequently	Sometimes	Never
72	58.5	45	31.5

↑

55.827

Source: Own elaboration with data from Annexes 23, 29 and 32; value between scales: 13.5.

Table A.65 Research Variable Scalogram in the Teacher Questionnaire

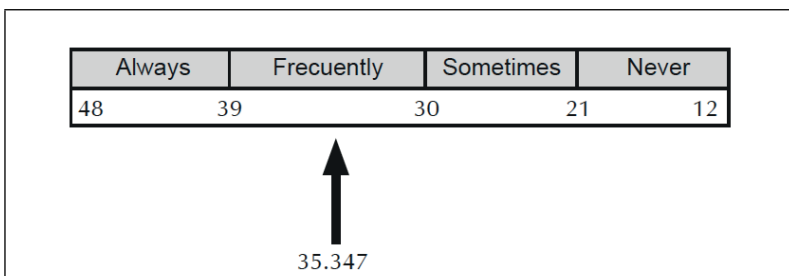
Always	Frequently	Sometimes	Never
48	39	30	21

↑

32.587

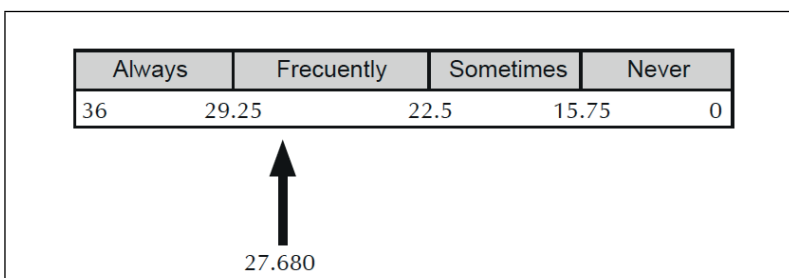
Source: Own elaboration with data from Annexes 23, 29 and 32; value between scales: 9.

Table A.66 Scalogram of the Administration or Management Variable in the Teacher Questionnaire



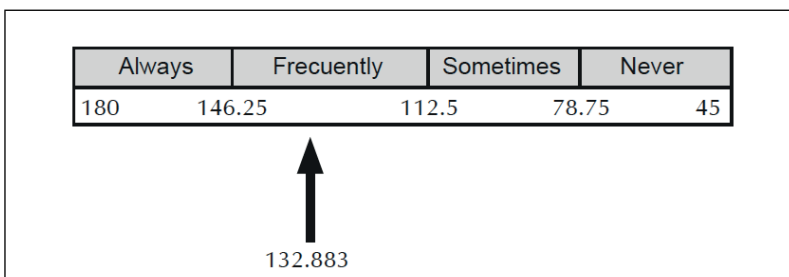
Source: Own elaboration with data from Annexes 23, 29 and 32; value between scales: 9.

Table A.67 Scalogram of the Extension and Diffusion Variable in the Teacher Questionnaire



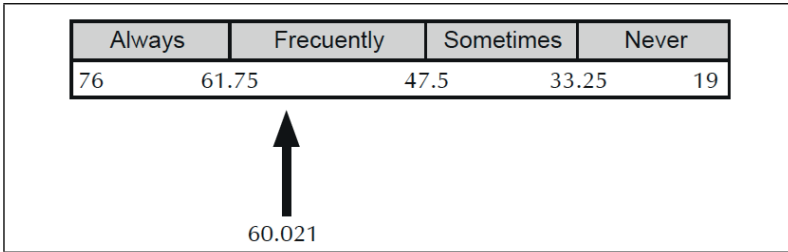
Source: Own elaboration with data from Annexes 23, 29 and 32; value between scales: 6.75.

Table A.68 Scalogram of the Educational Quality Variable in the Student Questionnaire



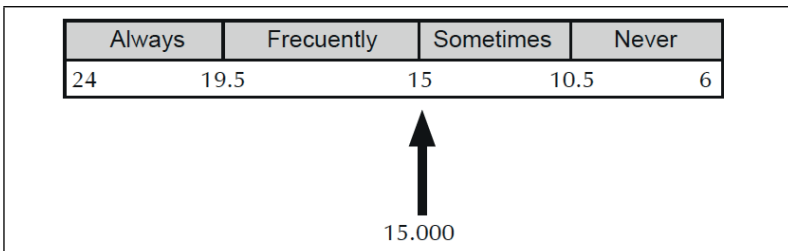
Source: Own elaboration with data from Annexes 24, 30 and 33; value between scales: 33.75.

Table A.69 Scalogram of the Teaching Variable in the Student Questionnaire



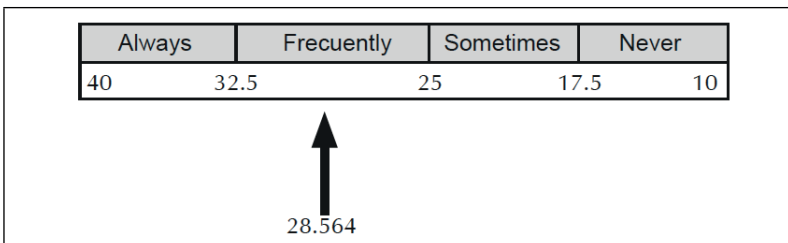
Source: Own elaboration with data from Annexes 24, 30 and 33; value between scales: 14.25.

Table A.70 Research Variable Scalogram in the Student Questionnaire



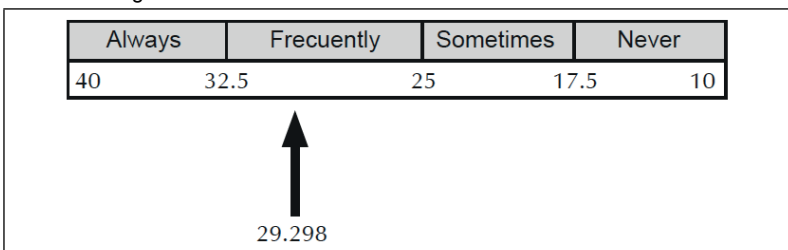
Source: Own elaboration with data from Annexes 24, 30 and 33; value between scales: 4.5.

Table A.71 Scalogram of the Administration or Management Variable in the Student Questionnaire



Source: Own elaboration with data from Annexes 24, 30 and 33; value between scales: 7.5.

Table A.72 Scalogram of the Extension and Diffusion Variable in the Student Questionnaire



Source: Own elaboration with data from Annexes 24, 30 and 33; value between scales: 7.5.

Table A.73 Scalogram of the Educational Quality Variable in the Graduates Questionnaire

Always	Frequently	Sometimes	Never	
172	139.75	107.5	72.25	43

↑
125.734

Source: Own elaboration with data from Annexes 25, 31 and 34; value between scales: 32.25.

Table A.74 Scalogram of the Teaching Variable in the Graduates Questionnaire

Always	Frequently	Sometimes	Never	
64	52	40	28	16

↑
50.745

Source: Own elaboration with data from Annexes 25, 31 and 34; value between scales: 12.

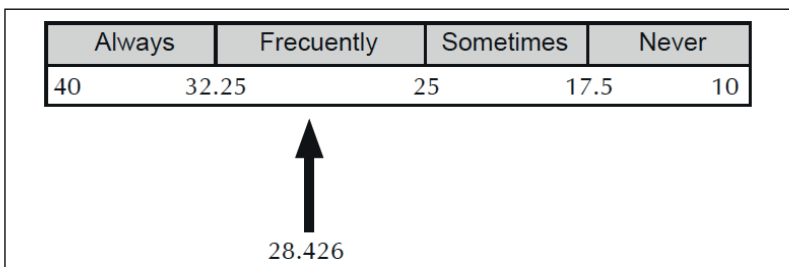
Table A.75 Research Variable Scalogram in the Graduates Questionnaire

Always	Frequently	Sometimes	Never	
28	22.75	17.5	12.25	7

↑
19.223

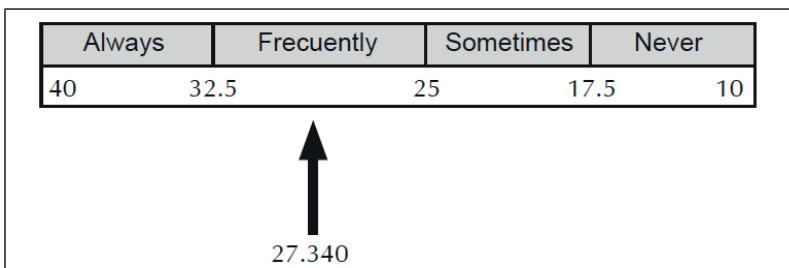
Source: Own elaboration with data from Annexes 25, 31 and 34; value between scales: 5.25.

Table A.76 Scalogram of the Administration or Management Variable in the Graduates Questionnaire



Source: Own elaboration with data from Annexes 25, 31 and 34; value between scales: 7.5.

Table A.77 Scalogram of the Extension and Diffusion Variable in the Graduates Questionnaire



Source: Own elaboration with data from Annexes 25, 31 and 34; value between scales: 7.5.

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