

# THE DIDACTIC CONTRACT IN THE HIGHER EDUCATION: ELEMENTS FOR UNDERSTAND IT

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## RESUMEN

La universidad debe verse como el espacio que posibilita la reflexión sobre los saberes que en ella discurren, al igual que el escenario que facilita el afianzamiento de la investigación de los mismos. Al respecto. Armando Zambrano (2003) reconviene al manifestar que una de las funciones de la universidad es la docencia v en ella se identifican las prácticas de transmisión del saber y del conocimiento. Para ello, es necesario detenerse a observar las formas de enseñanza de los profesores, las relaciones entre los sujetos, el lugar de los saberes y sus formas de transmisión en el aula. El concepto de Contrato Didáctico ofrece una posibilidad de comprender las relaciones que se entreteien en el aula: docente-estudiante-sabercontexto. En la búsqueda por develar el sentido del concepto, se tomaron dos grupos focales de estudiantes de las dos universidades públicas de Buenaventura: Universidad del Valle y Universidad del Pacífico. Los programas en que se abordó la investigación fueron Administración de Empresas y Sociología; las asignaturas, Estadística y la Electiva General de Etnoeducación: observando a 40 v 20 estudiantes, respectivamente, durante un año. Como resultado se obtuvieron hallazgos que hablan de relaciones educativas, expectativas académicas, nuevas formas de contratos pedagógicos y construcción cognitiva en contextos pertinentes.

Palabras clave: didáctica, situación didáctica, contrato didáctico, transposición didáctica, expectativas, universidad, etnoeducación y educación superior.

## ABSTRACT

The university must be seen as the space that enables reflection about the knowledge that is present there, strengthening the investigation of the same. In this sense Armando Zambrano (2003) admonishes when he manifests that one of the functions of the university is teaching and in this is identified the transfer of knowledge. For this it is necessary to stop and observe the forms of teaching of the teachers, the relationships between the participants, the place of the knowledge and the forms of its transference in the classroom. The concept of Didactic Contract offers a possibility to understand the relationships that are interwoven in the classroom: Teacher-Student-Knowledge-Context. In the search to uncover the sense of the concept, to focal groups were taken from students of two public universities of Buenaventura: "Universidad del Valle" and "Universidad del Pacífico". The programs in which the research took place were Business Management and Sociology, the subjects were Statistics and the General Elective of Ethnoeducation, observing 40 and 20 students during one year respectively. As a result,

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findings that speak of educational affairs, academic expectations, new forms of pedagogic contracts and cognitive construction in pertinent contexts were obtained.

**Key words:** didactic, didactic situation, didactic contract, didactic transposition, expectations, university, ethno-education, Higher education.

#### INTRODUCTION

This research had as an epicenter the concept of didactic contract, and as a space of reference higher education, particularly two universities in the city of Buenaventura. The interest in this concept resides in that through it the classroom can be recognized as "a shared project of teaching and learning linked in one space to teachers and students." (Chevallard, 1991, 27). This research is a distinct form of understanding the educational fact and the act in the university. Registered in the field of research Concepts, Knowledge and Higher Education is sought, through it, to understand in a different way the educational relationship in the teaching-learning process at the university.

Today, the actors of the traditional educational process: teacher-students are confronted with new logics in a didactic situation, understanding the latter as, according to Guy Brousseau, "a set of relationships that bind an agent or several in a space where efforts are made to maintain the same" (2004, 2). It is no longer about reproducing in the classroom passive, cold and authoritarian knowledge, where the other is a mere recipient or transmitter. It is about building relationships in the classroom that facilitate the exchange of knowledge. It is about understanding that the foregoing outlines a number of situations and relationships that can often be traumatic for the development of the course, leading to the usual academic failure.

On the other hand, some lecturers of Colombian universities still do not still cross the border of the program with which the courses begin and end. This can be recognized as a Pedagogic Contract, but the reality of the classroom leads to thinking that other contracts are required, such as the didactic, so that learning objectives are fully met.

This obligates a focus of the fieldwork on two different groups of students and two different universities: "la Universidaddel Valle" (center and"la Universidad Buenaventura) del Pacífico". In the same route, two subjects with two teachers were examined, and classes of statistics fourth semester at the Universidad del Valle, and ethnic education at the University of the Pacific were observed. The central object of the research consisted in understanding, knowing and tracking the history of the Didactic contract and see how the concept operates in college. It is known that this is a theoretical concept that emerges in teaching in 1978, thanks to the research impulsed by Guy Brousseau, in the field of didactics of mathematics, and continued by other researchers such as Michel Develay y Philippe Perrenoud,in other disciplinary fields. At the same time, it was proposed to know and identify the emergence of the concept of didactic contract in the French culture and observe its development in a real situation of teaching in the aforementioned Colombian universities.

Consequently, this research sought to answer the following basic questions: Is it possible to understand the concept of didactic contract in a real situation of teaching and learning?, How does this concept in a didactic situation operate in a university?, What place does it (the didactic contract) occupy in the teaching practices of teachers and learning processes of students in the fourth semester of the Business Administration program at the University of

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program at the University of Valle (based Buenaventura), and fifth semester of Sociology at the University of the Pacific?<sup>1</sup>

## Problematic situation

The university complies three principal functions. These set the superior character, differentiating it from the preceding levels (basic and middle): teaching, research and extension. Teaching is the dynamic part of knowledge transmission and is in charge of a professionally qualified individual who exercises it. Said dynamic has its point of materialization in research; the lecturer teaches what is researched and the formation of the students take advantage of it. The extension is the way in which the university has presence in the community, thanks to its research and academic activity. These three functions of the University are constituted in its practice and reason for being. To this is added the objectivesof Higher Education formulated in "Lev 30" of 1992, sixth article, especially in literals a, b, c and d, which refer to: the integral formation of Colombians, development of the transmission of knowledge, service to the community, development of science, and other activities in the fields of culture, social, politics, economy and ethics.

The universities are classified in professional and research. The first are institutions whose practices are directed at the communication of professional knowledge; the second turn the formative activity into a point of research. The universities in the first classification are the ones prevalent in our environment. The investigative ones, although limited, have some presence in our country. They are, in general, public universities that have the financial and human resources dedicated to research. This model of University can be found in official institutions

such as "la Universidad de Antioquia", "Universidad Nacional", "Universidad del Valle" or "la Universidad Industrial de Santander" (Bucaramanga). At a Latin American level the Brazilian, Mexican, Argentinean and Chilean universities excel.

The historic nature of the Colombian university has its roots, Zambrano reminds, in three sources, the official, the private and the catholic. The first ones have been created by the state and are national, departmental or district in order; the second are created by privatebusiness initiatives, from economic solidarity. These also have their roots in the decisions of influential politicians in our environment. These materialize in universities such as "Los Andes", USC, "Cooperativa", "Libre", "ISECI", "Autónoma", EAFIT, "Sergio Arboleda" or La Sábana". The religious communities in Colombia have had a strong presence in education, and since its beginningsas a colony to our days, have founded university institutions. The accord of 1886 reaffirms this tendency and vocation. The catholic universities are found represented for example in "la Universidad Javeriana", "La Salle" or "la Universidad de San Buenaventura".

The two forms of universities, referred to previously, coexist and share the same space of higher education and are regulated by "Ley 30" and the reglamentory decrees. This foundational difference causes academic development to be disparate. The academic quality is subject to distinct variables and, generally, are intimately linked to its nature of research or communication of professional knowledge.

At an internal level, the university centers its attention in the processes of transmission of knowledge. Here is where practices of marked knowledge take place, be it, as was stated

<sup>1.</sup> This question is taken from the project:didactic and didactical of the disciplines of the line of concepts, knowledge and higher education (2007), the principal researcher is doctor Armando Zambrano Leal.

earlier, for research or formation of professions. A formation centered on research imposes some practices different from that which take place in the formation of profe-ssions. The problems of quality in education do not only have its roots in the levels of formation, but also in the pedagogic practices. Many studies have shown this variable as determining in the results of quality.<sup>2</sup>

In difference to schools, universities are characterized because their pedagogic practices are linked to the faculties of knowledge, takes place in a region of it, points to teaching and learning of some knowledge and competences and promotes an ethos of study. In the same way, the university is different from school because the students register in a field of disciplinary formation. The processes of formation depends more on the need to explore and acquire some knowledge in a professional or disciplinary field, in as much as in the institutions that precede the university complies the function of socialization, education and immersion in general fields of knowledge. While the professors of the university are characterized by a mystery of knowledge and some study practices, the teachers of the school are regulated by programs and manuals, standards or guidelines. The university lecturer, in general, teaches adults whose interests are supposedly clearly defined.

The pedagogic practices in the university are varied and are regulated by forms of power. The relationship that is maintained by the university professor with knowledge is of an academic, disciplinary and pedagogic type. He teaches that which reflects and is transformed teaching. Many studies have centered their sights on university pedagogical studies<sup>3</sup>. From the acquisition of competences to the forms of distribution and exercise of power show the magnitude of the researches. As an example we can quote, the research about the relationships of power in the university of professor José Olmedo Ortega<sup>4</sup>, characterization of an excellent teacher practice of professor Restrepo Ocampoof "la Universidad Javeriana" 5, characterization of the teacher identity of the professors of the language school UPTC-Tunjaand establishment of criteria for its evaluation of Castillo N.6 On an International level, the topic of the pedagogic practices of university professors has turned into a very proliferant field of study. In our environment, this field acquires visibility with the creation of programs of formation at a level of masters and specialization. We quote as examples the following programs:

<sup>2.</sup> See for example, MISAS ARANGO Gabriel, (2004) Higher Educationn Colombia: analysis and strategies for its development. Bogotá, Universidad Nacional de Colombia.

<sup>3.</sup> We quote, among many others: BRU Marc, "pratiques d'enseignement a l'université et intérêt de recherche" in, Pratiques pédagogiques dans l'enseignement supérieur, paris, L'Harmattan, 2004 ; ALTET Margarite, enseigner en premier cycle universitaires : des formes émergentes d'adaptation ou le « métis » enseignante. En, Pratiques pédagogiques dans l'enseignement supérieur, paris, L'Harmattan, 2004 ; TRINQUIER Marie-Piere y TERRISE André, entre prévision et réalité du cours : regards croisés sur les pratiques et les représentations des enseignants de DEUG, en Pratiques pédagogiques dans l'enseignement supérieur, paris, L'Harmattan, 2004

<sup>4.</sup> ORTEGA HURTADO José Olmedo. Semiótica de la relaciones de poder y de control en la práctica pedagógica universitaria, Tesis de doctorado. Universidad del Valle, 2001.

<sup>5.</sup> OCAMPO Caracterización de una excelente práctica docente, tesis de doctorado, Universidad de Costa Rica, 2001.

<sup>6.</sup> CASTILLO N, Caracterización de la identidad docente de los profesores de idiomas UTPC Tunja, 1996, Tesina de maestría, 1996.



Especialización en Administración y Docencia Universitaria	18
Especialización en Docencia y Administración Universitaria	3
Especialización en Investigación y Docencia Universitaria	3
Especialización en Docencia e Investigación Universitaria	1
Especialización en Docencia Universitaria	17
Especialización en Docencia para la Educación Superior	3
Especialización en Docencia Universitaria	2
Maestría en Docencia	2
Maestría en Docencia e Investigación Universitaria	2
Maestría en Docencia Universitaria	2

Taken from the document Masters in Higher Education. USC, 2007

Thus, the pedagogic practice of the university professor is an complex issue and rich for its problems. This is an aspect of supreme interest for the Colombian education field and, and especially, for research and where this study is registered. At the moment it is urgent to make a revision of the pedagogic practices in the university. In higher education it is believed that the program the lecturer gives to the student compiles all the situations thatcan present themselves. It ignores that this Pedagogic Contract in our country <sup>7</sup> requires the practice of other contracts such as the school and didactic in order to establish relationships of learning in the environment of the class.

As indicated previously, the theoretic benchmarkof this work are the contributions of the French didactafrancés Guy Brousseau, who has dedicated more than two decades to try and explain, from the theory of the didactic situation, the proposed problem. From the research that are developed in the INRP<sup>8</sup> it has shown that other forms to facilitate the process teaching-learning in the educational context are possible. From here it is peremptory to cover this type of work in Colombia. The interesting thing of this research is that for the first time the Didactic Contract is observed in higher

education, having as an observation space a different discipline to mathematics, ethnoeducation.

#### Theoretical elements

To comprehend the concept of Didactic Contract and the how it operates in the university, it is necessary to stop studying it from certain theories and conceptualizations. This obligates a revision: the didactic, theory of the didactic situation (Guy Brousseau), the theory of the Didactic Contract(Guy Brousseau), the theory of didactic transposition (Yves Chavellard) and the theory of expectations(Víctor Vroom), as fundamental tools for the proposed work.

## The didactics

Jam Amos Komensky, known in history as Comenio, defined the didactic as "the art of teaching". This definition raises the existence of two distinct schools of thought. On the one hand, some feel that it is a science of education and, second, an applied theory of pedagogy. Understanding teaching as a science involves giving a defined status and an object of study within its own field of action.

<sup>7.</sup> Yves Chavellard defines it as the element that regulates the interactions between teachers and students and does not depend on the content. "Studying mathematics: The missing link between teaching and learning". 2003

<sup>8.</sup> Institut Nacional de Recherche Pedagogique Francaise

Observing it as a theory within pedagogy calls for a revision of the principles and ideas in the context of the field under which it falls. The purposes of this research establishes an approximation to the concept of didactics as a science that explains the problems of teaching and the makes evident the complexities in the relationships of the subjects in the teaching-learning process.

So, supported by Brousseau, it is understood that didactics is "what is appropriate for teaching, the aims of teaching and, more generally, which is related to teaching" (Brousseau, 2004, 1 - 5). On the other hand, in French culture since the late 70s have been studies of some phenomena associated with the advances and discoveries in the field of didactics, emerging theories like the didactic situation.

#### The didactic situation

Didactic situation is understood as the rational or spontaneous organization of the intentionally valid facts of teaching. Brousseau, who creates the concept in 1978, states that the didactic situation is basically composed of three elements: the teacher, the student and the learning environment.It can be deduced that in this logic the teacher is the bearer of knowledge and the student the subject who receives it. The didactic environment is fostered by the teacher, this is how relationships arise that must be observed in order to understand the learning process, especially the friction between subjects. This facilitates the arrival of two concepts that will explain the interrelationships mentioned, it is the didactic contract and the didactic transposition.

# The Didactic Contract

EIn the framework of the didactic situation proposed by Brousseau (1978) a fundamental concept called the Educational Contract appears. This arises in anempirical context that

seeks to explain the causes of school failure for some students (Sarrazy, 1995, 87-95).This concept, according to the author, explains "the explicit or implicit sharing the responsibilities of teachers and students in a teaching-learning situation." (Brousseau, 1-5). Moreover, the contract is considered as the possibility to be a scientific device of didactics to comply with the social purpose it has. That is why Brousseau points out that "the didactic contract helps to legitimize the scientific project of teaching as one more explanatory contribution to its social project." (87). According to Brousseau, in the didactic contract is evidenced a series of phenomena present in most of the situations that will require teaching and understanding.

The above phenomena are: Topaze Effect, Jourdain Effect and Bloom Effect. So, these are going to be the answers the teacher gives to the student and the way they validate or invalidate their responses in a proposed didactic situation. In the Topaze effect, the student arrives at the answer to a problem not with his response, but with the aids and the guidance of the teacher. In the Jourdain effect, the teacher validates the student's incorrect answers in order to not disillusion him. The Bloom effect is the abusive use of analogies that the teacher applies to propose a didactic situation to the learner and allow them to learn.

A basic characteristic of the Didactic Contract is that in a didactic situation there does not exist just one contract, but rather a multitude. Various contracts will always be needed. This indicates that the teaching-learning-knowledge relationship, by being a product of social interaction does not escape the events that allow for social functioning. It is necessary, then, that there is an occurrence of ruptures that will force the celebration of new contracts to normalize the didactic sequence.

The interest in the concept treated, leads to another author who makes an important contribution to the understanding of the didactic contract, it is the <sup>1</sup>Frenchman Bernard Sarrazy. For this theorist, the Didactic Contract has as an origin two contexts: on one side, an empiric context where the research papers are aware of the Gael case, registered by Brousseau. Thus, theorists observe how a student concedes all his efforts so the teacher is one who thinks for him. That is, there is no commitment from the same student towards his learning. This is how, arises from practice the desire to investigate the phenomena that is presented to the researchers.

The other origin of the Didactic Contract is the epistemological context, Sarrazy enunciates that the concept comes to replace sociological research started from sociology of education and shows the pertinence of the emerging didactic. This presupposes a frontal rupture with the dominant explicative models in the Sociology of Education. Therefore, in the didactic contract learning emerges as a rupture, which forces multiple and various contracts in order to advance in the construction of knowledge. We believe that this is what Sarrazy refers to when he says: "in fact the didactic contract will rest on the good functioning of the contract as in its ruptures".(1995, 94).

# Didactic transposition

Esta noción teórica surge de las investigaciones de Yves Chavellard en 1980. Tiene como propósito explicar los cambios que sufren los This theoretic notion emerges from the research of Yves Chavellard in 1980. It has as a purpose explaining the changes that knowledge product of science suffers when taken with didactic ends to the classroom. That is, it is bout understanding that the knowledge and skills that are produced in other instances distant from school (field of science) need to be adjusted to make them digestible in a didactic

asituation. In the words of Chavellard, the didactic transposition is "the step of wise knowledge of knowledge taught".(1991, 16). In this step of knowledge that is born with other pretentions within science and its later arrival to didactic spaces, transformations and conflicts are presented. Therefore, the subjects of the didactic situation will be obligated to install diverse contracts.

# Theory of the expectations

This theory has its beginnings in 1964. Its principal exponent is the psychologist Víctor Vroom, although it has had other continuers such as Lawler and Polser. This theory states that human behaviour is the result of conscious options between alternatives. That is, that the person that faces a situation will always have various options to make a decision, but these will be mediated by the expectations that the subject has. This theory is explained on the basis that the results are the product of valence, expectations and means. For more clarity it is explained here: valenceis the inclination, the preference to receive a reward.

For each reward there is, in a given moment, a value of unique valencealthough this varies with time in dependence of the satisfaction of the needsand the emergence of others. Expectation is the relationship between the effort made and the performance obtained in the realization of a task. Means is the estimation that each person possesses for the procurement of a reward. (Robins, 2005, 405)

According to D. Nadler and Lawler, the basis of this method is based on four suppositions: the behaviour depends on the combination of the forces of the people and the environment that surrounds them; the people make conscious decisions about their behaviour; people have different needs, desires and goals, and, finally, people choose between different options of behaviour.

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#### Observation of the classes

The theoretic approach proposed from the hermeneutic9 from the understanding of the Didactic Contract concept, forces the realization of observations in two universities:"la Universidad del Valle-Buenaventura", the group of fourth semester in subject of Statistics II<sup>10</sup> and "la Universidad del Pacífico", program of sociology in the subject of Ethnoeducation 11. In the first university the group was composed of 41 students; in the second, was composed of 20 students. Various instruments for the collection of information were designed. In a first moment an observation grid was made. This contained two defined aspects: one showed the commitment and expectations that the students expected from their teacher, and the other gave an idea of the expectations and commitments that the teachers expected of their students.

It also resorted to the design of a structured survey, with eight questions that ascertained about the expectations generated in the classroom. Moreover, to complement the observation two structured discussion groupswere held with the students and a correspondence plan was designed with the teachers, with the objective of observing the evolution of the courses.

## **CONCLUSIONS AND RESULTS**

The theoretic foundations and the questions that orientated the realization of this research allowed, in a broad manner, the understanding of the diverse relationships that are interwoven in the classroom of the university. Particularly, it allowed the validation of the concept Didactic Contract as a valuable theoretical notion to implement better didactic situations

in the classroom. Moreover, it enabledthe unveiling of the diverse contracts that originate between teacher-students everyday life of the classroom. In a special way, it makes reference to the operative contract as a finding that was made from the realized field work, and that allowed to show the imperious need of its existence to optimize the process of teaching-learning in the contexts of dynamic classes outsideof authoritarianism.

The concrete results that were obtained allow, in some way, deduces that the classroom is an area where multiple social interests and representations that the individuals possess are put into play. It is obligatory, then, to recognize the different expectations that arise among individuals in the development of a class. To illustrate this are summarized, then, in a personal judgement, illustrates the contributions of this research.

## Responsibilities undertaken by the students

Since the object of this research is to understand how higher education operates in the concept of didactic contract, it was necessary to see how the responsibilities of students are lost in the generality. Therefore, there is no real commitment towards their own learning. This can be seen when they argue that their responsibility is evidenced in: responsibility, punctuality, pass the course, ask in class, among others.

## Expectations of the students and teachers

The results obtained through the various data collection instruments (grid of observation, survey, interviews and talks) led to the obtainment of a number of aspects that typify the expectations of teachers and students that are summarized in the following table:

<sup>10.</sup> It is known, with Gadamer, that this science aims to study the understanding of phenomena.

<sup>11.</sup> Statistics is part of the field of mathematics. The observing lecturer was Alberto Ruiz.

<sup>12.</sup> This new concept in Colombia (arises in 1985) is the institutional emphasis of the University of the Pacific. Thus, it seemed appropriate to note how it operated in practice. The observation was made in the class of lecturer Felix Reyes Suárez.



Expectativas de los estudiantes	Expectativas de los docentes
Hacer uso práctico de la asignatura	Que los estudiantes aprendan
Aprender	Mejorar la enseñanza
Aprender métodos y técnicas	Terminar el programa

Contracts that emerge in the didactic situation

Another result that this study yielded was the ability to determine the implicit existence of the following evidential contracts and aspects:

	Pedagógico Aspectos	Didáctico Aspectos	Operativo Aspectos
Tipo de contrato	Matrícula Respeto Puntualidad Portar los materiales necesarios	Escuchar Respeto Participación Evaluación Disciplina en clase-atención Preguntar cuando no se entiende	Asesorías Metodologías Tener compromiso, realizar talleres, repasar

All this seems to confirm, through the results obtained, how students and teachers are located in agreements where often the terms thereof are unknown. Students observed openly express blind faith by what the teachers do. They demand all from him, including responding for their learning, forgetting that each one is set in an axis of the didactic situation and that this demands the sharing of certain responsibilities on the part of each of the actors.



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