Agència
per a la Qualitat
del Sistema Universitari
de Catalunya

STUDENT DROP OUTS AT CATALAN UNIVERSITIES

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SUMMARY

INTRODUCTION

The explanation that precedes a contribution is usually identified with the introduction or within the presentation itself. In our case, we use this space to present the reference context and the problem that is being exposed, as well as the contents and the research members/staff involved in this study.

We don't contribute if we just highlight the dynamic character of the **current reality**. Societies have become more open and participative, the economic system has been internationalized and the cultural diversity leads us to debate what is our own and what is foreign. But, maybe, what is most significant is the rapid speed at which changes occur and the unpredictability of the future, related directly to the abundant and increasingly scientific and technological developments.

At the same time, the unilateral planning of our relationship with nature, the deficient functioning of generation changeover, the alteration of the demographic pyramid and the exclusion processes which generate socioeconomic development and the knowledge society are current challenges that we face. Although inequality and conflict are almost permanent identifiers of our society, we can not allow then to create deep social fractures, nor to erode cohesion and social equality. We want these values to slowly constitute the values of the citizenship bound to our society.

The future society will be a cognitive society and, in this context, the positioning of each person to knowledge and competence will be decisive. Thus education plays a key role and a strategic element in the development of the knowledge and information society. Human capital assets and education will be essential if they know how to use individual capacities in order to make the creation, the transmission and the application of knowledge the raw material and the most valued material.

It is not unusual that in these circumstances a more extensive education is promoted, systems of evaluation are developed on achievement, and long-life learning is generalized and citizens change their aspirations and expectations in regard to the **educational system**.

The new perspectives also change the orientation and the direction of education and the institutions that organize it. At present, the educational system responds to a very limited vision of education, since the educational responsibility of individuals is only bound to a formal education and to institutions within the educational system i.e. elementary schools, high schools, universities, etc. Education is not understood as a responsibility that has to be shared by the whole of our society, but as the responsibility that educational systems and the professionals who work there must assume.

In order to be able to satisfy, however, the educational needs of the population and face the challenges that stem from the new social, economic, political and cultural scene, it is necessary to broaden the educational concept and to accept that this is responsibility of the whole of society which requires a shared commitment of society and the community to which the system is a part, so that not only what we teach is revised, but also how it is taught, where it is taught and to what end it is taught.

In the **university field**, factors appear that accelerate this change: the access of a greater percentage of the population to this educational stage, quality as a reference factor, changes in the organization and in the conception of higher education promoted by the Bologna Declaration, and, finally, the transformations that the knowledge society is generating in the environment and in professional training.

These new demands are translated into changes that affect educational organization as well as orientation. Thus, learning is considered the core of professional training, the curriculum is understood as instrumental in response to the needs of the society and students, and the teaching staff is called to work in team, while, at the same time, we speak of new moral borders and of new ways of global culture.

The dilemma posed is not separate from the content of the debates that for some time has accompanied meetings between universities: academic or professional orientation, elite or overcrowded university, only formative or social orientation, etc. However, the confusion that still surrounds some of these questions and the lack of commitment to some assigned functions to the university (to contribute to preserving, interpreting and fostering the contextual cultures, for example) allow us to speak more about «discourse» rather than about «reality».

The problems, in reality, are not only conceptual but also operative and are related to a large extent to the internal transformation of the universities (the increase in the number of universities as well as increase in the number of degrees, the introduction of elective and the free elective subjects, the intensifying of research etc.), the inflexibility of their organizational structures, the inadequacy of their answers to the current and future demands of society and the adaptation to a new European reality.

As a matter of fact, we can distinguish important transformations if we consider, for example, the extension of the program contracts among the Administration and the university, the launch of agreements with institutions and companies, research promotion, educational quality improvement, implementation of quality systems, development of the virtual campuses or programs directed to the orientation and the attention of students.

Along this line, the increasing interest of the universities in receiving, orientating and attending to their students is a reality in order to facilitate the transition from high school and provide orientation and guidance to students while they study, as well as to provide support in the transition to the

working world. All these actions reinforce the focus on the student and on the learning process, which are necessary to promote as engines of university activity.

To achieve transition and adaptation to the university, especially in the first years, when dropping out is more likely to occur, a gradual process without trauma has positive effects on student attitudes, on their academic performance and on their socialization process, and, at the same time, can help to avoid the putting off of an academic course of studies which is not desirable and which institutional evaluation processes try to help minimize.

This study, in particular, approaches the analysis of the student drop out rate at public universities in Catalonia, especially those that initiated their studies in 2000-2001 and 2001-2002. Beyond the novelty of this phenomenon and of the meaning that can be given to the drop out rate and to the ways of measuring it, there are many questions which must be answered: What do we really know about what is going on in the university?; Who it involves and Why it persists?; What is the difference between the student who finishes and the one that gives up their studies?; What happens to the students once they have registered?; What causes students to drop out?; Which of these causes or factors are universities responsible for?; How can drop outs be measured? We know that university education has a high rate of drop outs throughout the Spanish university system, as is reflected in the chapters in this document; that the drop outs make up part of the invisible selection process that university carries out on students, and that this problem can be solved.

School failure and the fact of «dropping out» from a course of studies have been taken into consideration from a scientific viewpoint in primary and secondary education before becoming a worry at the university level. Numerous studies by pedagogues and other educational sociologists have already focused on the dividing up of classes, re-orientation in the areas of specialization, support to students with learning or behavioral difficulties, or the lack of education. These concerns have later reached university education, but it remains to be seen whether it is possible to help students to overcome the difficulties and that, therefore, we can be intervene to prevent students dropping out.

To take action, we require knowledge of this phenomenon, its causes and its consequences, in both the personal as well as the institutional, social or economic arena. The effects are so important that they can not nor must be ignored.

Integration and inclusion within the university must assume the logical continuity of an optimum process of transition whereby the student discovers the new culture of the receiving center, becomes interested in and assumes in a progressive way the renouncing of rules, models and habits of the previous educational center. Conflictive feelings that turn up in the transition are softened with the acquisition of new and positive experiences that allow the student to renew and to improve his future expectations. In this way, it will be guaranteed that the changes are easily assumed and that they have a positive effect on the student's personality and on his own implication in his/her studies.

This study focuses on the aforementioned problematic issues of combining theoretical review with field research while, at the same time, it provides references, strategies and tools for intervention. The study deals with the subject of the university drop out, which, in spite of not being a new problem, takes on greater dimensions when extended to the access to university studies. Behind this problem there is the economic cost of university available to a majority and the deficient use of resources, as well as the problems of discourage of those who wanted to be educated but did not see their expectations satisfied, or of those that have not been properly orientated or re-orientated towards professional training to which they could aspire to obtain.

The importance of this document it is not so much to identify the problem of dropping out with more clarity but to suggest some actions and to listen to the opinions of those that are part of this phenomenon. Therefore, several proposals are presented and are directed to the main participants in the educational processes, whether they be those responsible for the system, for the universities or for the centers. It also addresses teachers to make them aware that they can be a part of the solution.

This study is the result of the collaboration of three research teams, the components of which have been interrelated on the assumption of shared responsibilities: the Organizational Development Team (EDO) of the Autonomous University of Barcelona (UAB); Research Group of Academic and Work Transitions (TRALS) and the Research Group of Educational Innovation in Organization of Companies (GROE) of the University of Barcelona (UB). The research teams are responsible for writing up the first drafts of the different chapters, which have served as the basis for debate among the whole group.

We consider the study, in short, an initial approach to the drop out of the university students, in which we attempt to open a space for reflection and action, if we think it can be a means to promote change in the university programs as well as in student orientation and support mechanisms. For this purpose, we have undertaken this study and we welcome any suggestions and constructive criticism you may have.

1. EXPLANATORY MODELS AND FACTORS ASSOCIATED WITH THE UNIVERSITY DROP OUT*

INTRODUCTION

The university drop out problem is not new. However, at present, when the University must yield and give explanations for their actions to society as a public service, the phenomenon of university drop out must be reduced in order to increase the productivity of the institution. Ever since the nineties, the drop out rate has been quantified and used as an indicator of performance. The Bricall and Dearing report on the Spanish, British and French educational systems brought this issue to light in the nineties on the efficacy and the efficiency of the university system, which reaffirmed the conclusions of the first seminar dealing in the demand and recruitment of students at universities (Rauret i Grifoll, 2001). This issue has also been discussed at several meetings of academic authorities of the European Union, and has grown with the adaptation to the European Higher Education Area (EHEA).

The most current data on the situation in Catalonia indicates these same problems: «The incidence of drop out is one of the problems that generates more concerns within the EHEA. Undoubtedly, it is an efficiency of the systems to maximize the development of the human capital of a country».[1] According to the data from this report, the drop out rate for the two courses between 2000 and 2002 stands at 30%, which gives a precise idea as to the dimension of the problem that is the object of this study.

University drop out is a serious subject that worries the majority of European universities from which have emerged and are emerging research groups focused on studying this phenomenon from different perspectives which aim to describe and identify the causes as well as to analyze the consequences. These institutional research groups are varied and governed by different objectives, however, in general, they seek to influence the concepts of academic failure or success. They stem from complementary disciplines, like the economy of education, which attempts to explain how the individual and collective decisions intervene in the university drop out

* The authors of the final version of the chapter have been: Mercè Torrado, M. Luisa Rodríguez, Montserrat Freixa, Immaculada Dorio and Pilar Figuera.

[1] Report *El sistema universitari públic català 2000-2005*, published byAQU Catalunya.

phenomenon; the pedagogy, which studies the relations between the knowledge, the causes and the consequences of school failure; and, finally, sociology, which tries to synthesize what a person decides individually with respect to the macrosocial tendency of the knowledge society.

Why do certain students drop out of university? Is there a profile on students who are more likely to drop out? Which are the factors and the variables that intervene in dropping out? Can an explanatory model of this phenomenon which integrates the different factors and variables be found? These are some of the questions that the different research groups try to answer from their disciplinary and inter-disciplinary perspectives.

This chapter has a further purpose: the recognition of the different factors and variables that intervene in the university drop out rate. In order to accomplish this objective, we first present the terminology and the more common definitions employed in defining the university drop out rate and secondly, a revision of the main explanatory models. Next, we describe and identify the factors associated with dropping out that stem from the integrated explanatory models and that constitute indicators that must be taken into account when making institutional action proposals to increase student perseverance.

TERMINOLOGY AND DEFINITIONS OF UNIVERSITY DROP-OUTS

Any bibliographical revision shows a huge variation in terminology which hampers the definition of the descriptors that must be used in a research project. The use of one term or another depends substantially on the context of where the research takes place and of the objectives that are devised from the beginning. It also depends on whether dropping out is to be considered a failure or not, as well as on the transition model in which the process is framed from when a student leaves high school to go to university.

Terminology

The sociologist B. Longden (2001) synthesized some years ago all the terminological casuistry in a type of classification and added his opinion to it. The lack of a terminological unification has hampered the comparative studies among the results of different research.

Of all the terms in use, the most common in the Anglo-Saxon literature are drop out, attrition and withdrawal, of which in the Catalan context are referred to as *abandó* or *abandonament* and which are used indistinctly. Added to this terminology, Bourdages (1996) brings a new idea in pointing out that it would be more interesting to approach why one persists in an academic project as opposed to investigating why drop outs occur. Thus, this author promotes the introduction of the term *persistence* and, consequently, of the term *non-persistence*. In this sense, we must take into account that the persistence and academic success correlate mutually, but that, however, they

are very different and they are not the cause or consequence of one or the other. Persistence refers to student registration over a period of time, which can be continuous or not, or that it can result in the obtaining or not obtaining a university degree. However, academic success refers to a more extensive concept that brings different value to several forms of persistence.

The studies on drop outs or non persistence at university are many times related to the study of academic performance and, more precisely, with academic failure at university. Latiesa (1992) differentiates among the performance in the broad sense, as for example, the study of the success, delay and desertion, and performance in the strict sense of the word, such as the study of grades or internal performance (Escudero, 1999). In the university context, however, the study of academic performance is imprecise if it is only associated with qualifications, since performance is also considered success in the achievement of personal and professional goals.

The drop out study hides very diverse situations that are not necessarily associated to university failure. The utilization of the terms *academic failure* and *drop out* or *desertion* as synonymous is being substituted for a terminology that gives room to the several types of drop outs. Thus, people speak about *non-persistence* in opposite sense to the retention or continuation of the studies.

There are glossaries and dictionaries to clarify this terminology, in which words are defined such as desertion, retention and others that will be useful when analyzing the data obtained through surveys and interviews (National School of Library and Archive Sciences, 2004).

Definitions

The dictionaries say: a student that drops out is one that does not graduate, the one who leaves the school or the university without obtaining a degree, a non conventional person who chooses to live a different lifestyle; most of the time it refers to a student who leaves education before graduating or getting a degree. We then assume that the issues on definition can be purely technical. For example: Can it be said that a person has started a course if he has simply preregistered or registered?; Can it be said that a student is «active» if he is registered when the course starts, or if he turns in his first assignment?; Is a student considered a drop out if he does not turn in an assigment, or if he has not attended classes, or that he does not show up for an examination, or that he has failed in an evaluation?

Taking into account these ambiguous situations, it is logical to accept that the problems of definition can be avoided by accurately determining the contents, on the one hand, and differentiating situations or typology, on the other.

Thus, according to the contents, the ANUIES (National Association of Universities and Higher Education Institutions) (1986) describes dropping out as not attending class and the non-fulfillment of the obligations in such a way as to affect the final efficiency of the whole of tasks of the university

career. It can also be considered that a student does not drop out if he studies a degree programm at least during a period of two to three years. Thus, the drop out rate could be defined as the percentage of a determinated group that has not achieved the degree at least in a determinate period long enough (about two or three years, whether if it is degree or a master's degree).

However, research demonstrates that there are problems with students that, even though they do not drop out, they repeat courses, they change institution to enroll in the same career and the like. Therefore, the accurate definition of the content does not include the whole, since it does not differentiate the situations. Facing this fact, we use definitions that define differnt types of drop outs.

Thus, Salvador and García-Valcárcel (1989) describe the student that drops out as one who disappears from the university panorama, differentiating him from the ones who decide to change their degree or university. García Areito (1986, 1991) gives three types of definitions: for drop out without starting (non-starters), related to those who have never been examined in spite of being enrolled during one or two years; real drop out, referring to students who are examined before leaving the degree, and global drop out, which is the combination of the two aforementioned concepts. Tinto (1975) defines more drastically the drop out as the flow of students that definitely desert all modalities of university education, and, also, as the moment in which the students carry out an immediate transfer to another institution of university education. Altamira (1997, page 35) describes the desertion from four points of view: voluntary and definite drop out, by expulsion due to academic deficiency, for change of degree and for disciplinary expulsion.

Therefore, when investigating, it is necessary to keep in mind the different type of drop outs —voluntary, involuntary, temporary, permanent, initial, provisional, definite, etc.— and the possible relationship (or not) between dropping out and academic failure. It is also necessary to take into account more concrete casuistry, like enrolling in a degree and not sitting examinations which shows another type of drop out that Himmel (2002) names «premature baby» or that Giovagnoli (2002) qualifies as «epidemic» on referring to those «absent» students that do not obtain the necessary credits to continue studying simply because they have stopped going to university.

The definition of university drop out is not, however, completely outlined, since, as we have just seen, the student who changes university but continues doing the same degree does not represent the same situation (he gives up the university but not the system) than the one that leaves the university studies (he gives up the system). Besides, it will be necessary to define the period of absence in order to be able to consider that a student really drops-out of university.

Operative definitions

The operative definitions of the university drop outs are associated with the performance indicators that have been used since the nineties in the evaluation processes of the quality of universities (MEC (Ministry of Education): *Catalogue of Indicators in the Spanish Public University System*). These have also been used as indicators in the rankings of institutions of university education (Yorke, 1998). These indicators have evolved in parallel to the technological development of the universities to gather and to systematize a whole series of information into their data bases. Thus, people have gone from the simple counting of non-enrolled students to the differentiation of types of drop outs by year and by their compulsory or voluntary character.

In year 1996, the Universities Council described the drop out rate as the number of students who have not finished their degree nor are enrolled over the total of new students in an academic year. Later, and in accordance with the National Plan of degree evaluation, two types of drop outs were identified according to the year: rate of drop out in the first year and rate of drop out in the second year. At present, we have gone beyond that point and in the data that must be presented to evaluate degrees and further specify voluntary drop outs and expulsions. Thus, university drop outs are classified into:

- Those who come back to the same degree and centre (they change university) in the public system.
- Those who redistribute themselves among other centers (they change degree).
- Those who leave the degree or the university system.

The diversity of reference contexts where the university drop out can occur and the constant evolution in the study and in the operating definitions of this phenomenon, makes it necessary to carry out an accurate contextualization of the institutional organization of the study plan of reference in order for a suitable interpretation of the associated performance indicator. The comparisons of the drop out rates are harder without some common parameters. The study of Yorke and Longden (2004) brings the complexity of the indicator to light and proposes a rational and contextual use.

Using as a reference the different existing typologies of university drop outs, this work chooses to study the desertion or non-persistence in relation to the degree or to the institution and differentiating between career drop out and institution drop out. Likewise, the classification that is proposed in picture 1 identifies typologies of non-persistence according to the type of desertion, the moment in which the drop out decision takes place and the action that is made posterior to the decision to not continue the started degree: leaving the university definitively or changing university, of studies or of both things.

PICTURE 1 STUDENT'S SITUATION AFTER DROPPING-OUT OF THE UNIVERSITY STUDIES

DROP-OUT OR DESERTION according to:
■ How the drop out occurs: - Involuntary or normative (when the student does not achieve the necessary credits to continue) - Voluntary (when the student drops-out of the degree by his own decision having passed the credits or before examination)
■ Drop out period: - First year - Second year
■ Posterior drop out situation: - Definitive - University transfer - Degree transfer - Degree and university transfer

UNIVERSITY DROP OUT EXPLANATORY MODELS

University drop outs appear as an object of study in the sixties, and by the seventies a theoretical body can be referred to the interactionist theory of Vicent Tinto (Berger and Lyon, 2005). Since then, the major part of literature on university studies continuity is developed based on two models: the Student Integration Model by Spady (1970) and Tinto (1975), and the Student Attrition Model by Bean (1980). Tinto's model has evolved over time and it has promoted the development of an important part of the latter theoretical models which attempt to comprehend a clearly complex and multidimensional phenomenon.

Among the classification models, those of the following authors stand out:

1. The classification by Braxton, Johnson and Shaw-Sullivan (1997), revised by Himmel (2002) and, recently, by Donoso and Schiefelbein (2007).
2. The classification by Cabrera and others (2006).
3. The classification by Nathaniel (2006).

The following table illustrates the coincident and divergent elements of the three classifications of the explanatory models of the university drop out phenomenon.

TABLE 1 CONVERGENT AND DIVERGENT ELEMENTS OF THREE DROP OUT MODEL CLASSIFICATIONS

Models	Definitions	Braxton et al.	Cabrera et al.	Nathaniel
Psychological	Focuses on the personal characteristics of students (personality, motivation, maturity, personal development...).	X		X
Sociologic	Describes the external characteristics of students (race, prestige of the university...).	X		X
Economic	Is based on in cost-benefit that the student assumes for his studies.	X	X	X
Organizational	Focuses on the institution (resources, services, structure...).	X	X	X
Psycho-pedagogical	The drop out is considered from a global perspective and with psycho-pedagogical dimensions (learning styles, teaching staff quality...).		X	
Others	ADAPTATION: focuses on the integration or social and academic adaptation of the student. STRUCTURE: focuses on the contradiction of the different subsystems (political, economic and social).		X	

The most relevant and most common classification from the three above mentioned has been the one by Braxton *et al*. (1997), although the contribution by Cabrera *et al*. (2006) regarding the incorporation of psyco-pedagogical models is quite interesting and comprises aspects that normally have not been taken into account in the theoretical models.

According to the classification proposal by Braxton et al. (1997), the non-persistence analysis approaches can be grouped into five large categories according to the explanatory variables of the phenomenon, whether they are individual, institutional or stem from the family environment. The approaches can be:

1. Explanatory models from the psychological perspective.
2. Explanatory models from the sociological perspective.
3. Explanatory models from the economic perspective.
4. Explanatory models from the organization perspective.
5. Integrating explanatory models.

Explanatory models from a psychological perspective

These models focus the drop out study on the student's personal characteristics. They are based on the fact that the actions and the behaviors of a person are explained by their beliefs, attitudes and prior behavior. Thus, the fact of not continuing the studies is just a change or a weakness of their initial intentions, while persistence is the strengthening of these intentions (Attinasi, 1986). These approaches can explain how the voluntary drop out is a product of the perceptions and the analysis that students make of their university life. The first model eminently psychological is the one by Fishbein and Ajzen (1975), that demonstrates that the decision to desert or to continue the studies is influenced by psychological factors that generate an «intentional conduct» leading to a defined behavior. In the same way, Attinasi (1986) incorporates into this model the reflection about how the analysis of the experience lived after the entry to the university can influence the decision to continue or drop out of studies already begun.

Ethington (1990) incorporated to the psychological approach the «achievement conduct», which adds perseverance, perception of difficulties, personal aims, success expectations, difficulty of the study program, student's self-image and aspirations level to profile personal features of the drop out. The achievements theory demonstrated that the level of aspirations had a direct effect on values and that expectations of success could be explained by the student's self-image and the perception of the degree of difficulty of the studies.

Explanatory models from a sociological perspective

Sociological models base themselves on the influence of external factors to the subject, together with psychological features. Spady (1970) is the first to attempt to explain the university drop out from the theory of the Durkheim suicide or the fact that the student leaves the university context because of the impossibility of socially integrating himself, a situation influenced by the family support environment. The more isolated a person is in the society that surrounds him, the greater the probability he has of committing suicide. On transferring this crude reality to the academic sphere, several diverse concepts can be involved in the drop out attitude: the lack of regulations,

the practice of too differentiated values from those of the conventional group, the difficulty to affiliate or integrate into the structures, etc, always combining the social and academic systems, which are inseparable in the case of the university studies. In the figure of the model of Spady we can observe how the family environment has a direct influence on the academic performance and on social integration, and on how social integration affects the student's satisfaction whereby strengthening or weakening the institutional commitment.

Explanatory models from an economic perspective

Economic models are based on the cost-benefit relation and on focalization. The first model of this cost-benefit approach with respect to the university drop out is when the student perceives the external benefits from university (work, social progress, etc). The drop out decision is produced when the student associates these benefits with the perception of his capacity or incapacity to study (Becker, 1964).

From this perspective, attention is focused on the academic situations of collectives with real limitations (economic problems, minorities, older students, etc), which are explained by this approach. In this line, the demographic and academic variables are included in the analysis, although only as a way of controlling variation sources that the direct effects could hide on students' retention. However, as John, Goatherd, Nora and Asker (2000) propose, progress from this approach happens in the incorporation of the cost-benefit in the organizational theory and the interaction theory between the student and the institution.

Explanatory models from an organizational perspective

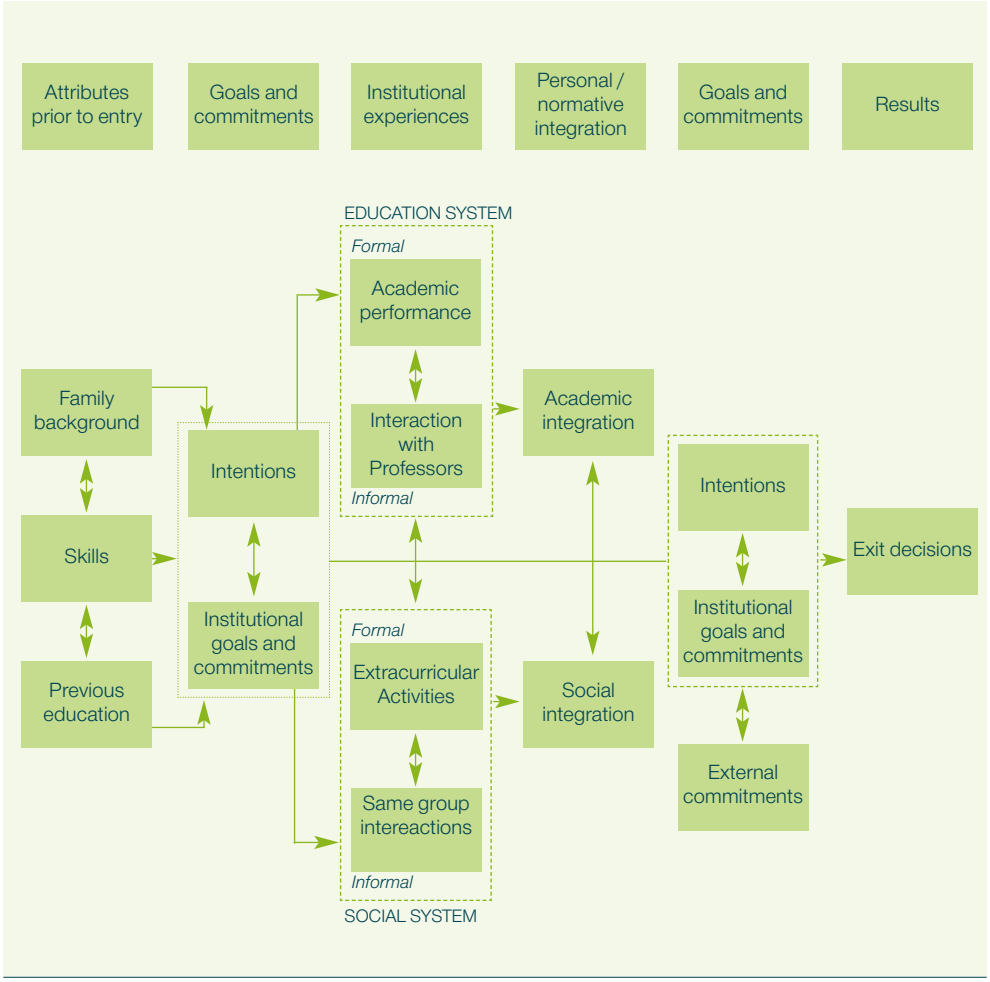
In the organizacional models, we find an attempt by research to explain the university drop out from the same institution, and so the student aid mechanisms, the teaching and the classroom are considered (Braxton, Bray, Berger, 2000). These models incorporate variables related to the teaching quality, classroom experience and the resource availability, as well as the indicators such as the number of students to each teacher.

Integrating explanatory models

The integrating models demonstrate that, in the line of integration and adaptation of the student to the institution, the interrelation between the adaptation capacity of the student to the university context and the capacity of the university institutions to give support to students —with an explicit commitment and with concrete actions to make it effective— the demands of academic and social life is key to the persistence explanation. The author that has more influence in relation to the theoretical and explanatory models of the drop out phenomenon is Vicent Tinto, who has been the obligatory theoretical reference in the analysis of non-persistence from the publication of «Drop out in higher education: A theoretical synthesis of recent research» in the magazine *Review of Educational Research* of 1975.

The Tinto model is based on the fact that the academic and social integration explains permanence in the educational system. This academic and social integration is influenced, on the one hand, by the student's cultural knowledge on entry from previous academic antecedents, family environment and personal characteristics, and, of the other hand, by the initial commitment to the institution and the intention of finishing the studies, as well as for positive interactions with the environment (participation in extracurricular activities). Tinto is the first author that insists on several drop out typology: the voluntary and the involuntary or normative drop out.

FIGURE 1 **DROP OUT MODEL PROPOSED BY TINTO (1975)**



Pascarella and Terenzini (1991), in an attempt to broaden the Tinto model, take into consideration the factors that directly or indirectly influence student's academic performance and the institution's characteristics as a context in which the student is enrolled. Posterior studies have demonstrated that these factors have an outstanding influence on the most minority sectors.

Complementary are the works by Bean (1983, 1995), which add to this model, from a psychological perspective, a person's attitudes and behaviors and external factors have a major influence on persistence (family support, family responsibilities, economic resources, etc). Therefore, this author incorporates to the Tinto's model the characteristics of the productivity model developed in the context of work organizations. It replaces the variables of the work environment with the most suitable for the university education and, in short, considers the studies satisfaction such as work satisfaction.

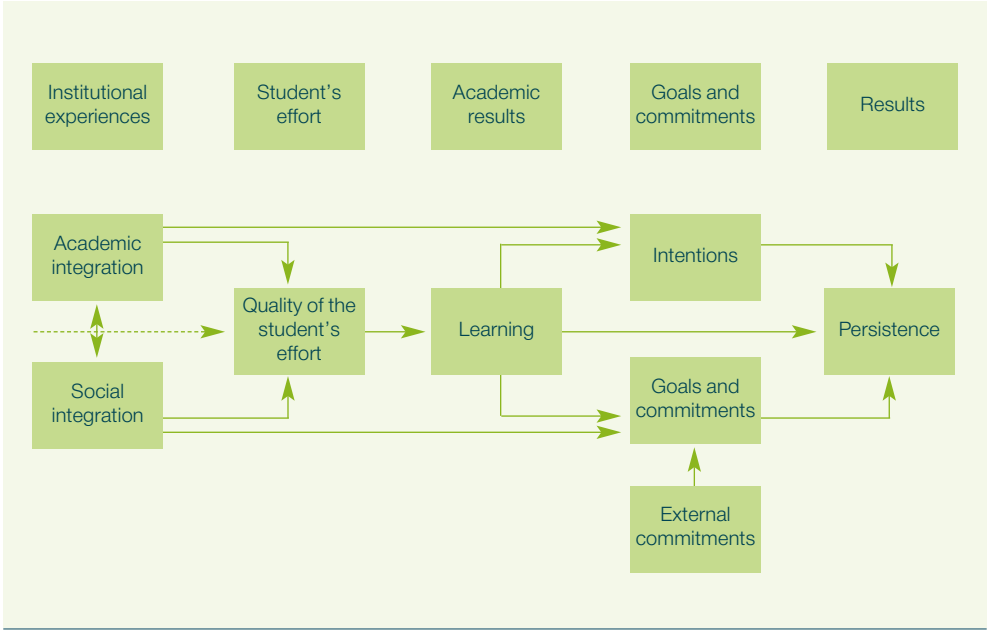
This model considers that these factors have an effect on desertion: (1) academic factors: prior to university, academic integration and academic results; (2) psychosocial factors: goals, perceived utility, interaction with parents and teachers; (3) environmental factors: funding, opportunities to change university, external social relations; (4) socialization factors: academic performance, adaptation and institutional commitment. In more recent studies, Bean and Vesper (1990) observed that the non-cognitive factors, like the personal characteristics (attitudes, aspirations, motivations, interests), environmental and organizational, also carry a significant weight in desertion and in particular, voluntary desertion.

In parallel, there also exists an evolution of the same Tinto theoretical model, which this author integrates into all the theoretical contributions from other studies. In this way, the integrating model passes into the current persistence model.

- ***Integration model*** **(Tinto, 1975, 1987)**: the drop out is produced because the individual breaks ties with the institution/studies on not being able to bear the anxiety that he suffers because of the differences in his social and academic integration.

- ***Persistence model*** **(Tinto, 1997)**: incorporates within the theoretical persistence model several external factors to the same student but which, undoubtedly, help to explain the intention to drop out. It also integrates the classroom experiences.

FIGURE 2 **PERSISTENCE MODEL (TINTO, 1997, P. 615)**



With the intention of integrating the contributions stated by Bean into the Tinto's theoretical model, Cabrera, Nora and Castañeda (1992, 1993) and Cabrera, Nora and Asker (1999) set out an integral model that entails three phases for the student. In a first phase, academic skills, previous experiences and socioeconomic factors influence the decision to continue one's studies. In a second phase, the student values the cost-benefit that the studies entail and, therefore, establishes an initial commitment to the completion of the studies. In a last phase, after entry to a degree, other factors begin to influence which modify and/or reinforce initial aspirations.

FACTORS ASSOCIATED WITH UNIVERSITY DROP OUT

The drop out problem plays a crucial role in educational centers, especially in regard to the challenge which entails achieving a feeling of belonging and of students' integration within the institution and the completion of the course of studies. It is fundamental for universities to identify the factors associated with the decision to persist in order to adjust their retention actions or strategies at the different institutional levels.

Research carried out in the nineties, developed within the framework of the integrating explanatory models, have demonstrated that there is a great amount of variables related to the drop out of the studies. Bourdages (1996) makes the following classification:

a) Demographical: age, sex, marital status, ethnical origin, social origin.

b) Contextual: family, occupation, material conditions, geographic conditions, life changes.

c) Institutional: academic year, counseling services received, assignments and tutorials.

d) Characteristics of the person that learns: style of learning, school antecedents, motivation, perception of the courses offered and of the study plan.

Apart from taking into account the latest appraisals of the Bologna agreement on the European Higher Education Area that require higher performance and success rates, there are other variables, of no less importance, that intervene in the university drop outs like (Beaupère et al, 2007) the studies organization, hierarchy of degrees in specialization, and the difficulties and obstacles which students find not only throughout the courses, but also once they are introduced to the labour market.

Researchers and theoreticians who study the university drop out treat several elements, which we summarize as follows. To start off with, it is necessary to distinguish two types of determining factors: the social, economic or macrosocial, and the individual, more personal or microsocial ones. Among the first ones, there are many ways to focus on the drop outs: on the one hand, the analysis of the democratization (and, therefore, the overcrowding) of the university education, the hidden selection by social class and by level, the weight of the formation previous to the university, the orientation role and the unavoidable obstacles of a badly focused orientation; on the other, the different philosophies of the university options, not always disinterested nor open enough. Among the second determining factors, the individual ones, they highlight the following: the consequences of the human assets (which do not always coincide with the professional objectives of the universities); the time that a student dedicates to processing secondary school , which notoriously influences on the university drop out: the different options to orientate students so that they pursue their personal and life project; the typology of each student and how he experiences the academic life, and the family determiners, among others.

Factors and dimensions

The study on university drop out has been approached from different perspectives, each of which emphasizes certain factors from which we want to predict elements, situations and conditions that lead a student to give up the university studies.

From the analysis of the Tinto model, that is, from an integrating explanatory model, we can find the most relevant factors of the university drop out. The author distinguishes, on the one hand, the personal characteristics of students, and, of the other one, the institution characteristics, as the following table shows.

TABLE 2 **FACTORS ASSOCIATED WITH THE UNIVERSITY DROP OUT ACCORDING TO TINTO'S MODEL**

PERSONAL FACTORS		INSTITUTIONAL FACTORS
Family background ■ Socioeconomic status ■ Parent's educational level ■ Parent's expectations	Academic integration	
Individual qualities ■ Academic abilities ■ Race ■ Genre	Social integration	■ Institutional structure ■ Normative structure
Previous academic experiences ■ High school characteristics ■ Memory of the aims achieved in school		■ Congruence between the student and the university social system: - Equal groups - Extracurricular activities - Interaction with the teachers and administrators

From the analysis of the Tinto model, Braxton (2000) identifies the personal characteristics of students (psychological model), the social context (sociological model) and the institutional dimension (organizational and inter-acting model) as relevant dimensions in the study of the university drop out. From the revision by Braxton, Southerland (2006) proposes a synthesis of predictive factors in regard to the university drop out.

TABLE 3 **PROPOSAL OF THE FACTORS ASSOCIATED WITH THE SOUTHERLAND UNIVERSITY DROP OUT (2006)**

DIMENSIONS	FACTORS
Predisposition and personal background	Basic family education Social class Parent's educational level Parents and/or partners work situation Parents and/or partners work record Personal habits / social capital Personal academic record
Personal aims	Personal improvement Acquisition of new skills and knowledges Personal prestige
Self perceptions	Auto-effectiveness Auto-control Perception of fitting in the institution Capacity to complete the course requirements

DIMENSIONS	FACTORS
Mandatory circumstances	Alterations in the family environment (unemployment, death...) Economic needs
Means/resources	Access to financial aids and counseling Family support and support from other significant people Correct access to information Availability of educational programs Personal habits / social skills Personal educational skills Own economic resources
Favorable circumstances	Family support Colleagues support Employer support Capacity for self-organization and to fulfill personal bligations
Institution	Type of institution Geographical location Economic cost Institution's purposes Institution's prestige Study plan Educational policies Student's profiles Awareness of students needs Campus atmosphere Coherence between the institutional characteristics and personal goals Relationship between the teaching staff and student Relationship between other staff and the student
Social and academic experiences	Teacher's sensitivity toward the student's needs Teacher's skills to connect with the students Teaching suitability for student typology Interactions between students, teachers- students and students-teachers

In our context, Cabrera et al (2006) formulate the following factor classification as a result of the analysis of different existing explanatory models.

In our context, Cabrera et al (2006) formulate the following factor classification as a result of the analysis of different existing explanatory models.

TABLE 4 **PROPOSAL OF FACTORS ASSOCIATED TO THE UNIVERSITY DROP OUT BY CABRERA (2006)**

DIMENSIONS	FACTORS
Psycho-educational	Motivation Positive expectations Effort capacity Adaptation to the educational system Capacity to face institution demands Perception of academic success Educational values Educational environment perception University support
Developmental	Skills Emotional control Personal autonomy Self-awareness Interpersonal relationship Goal development Integrity development
Familiar	Family pressure Family responsibilities Economic resources of the family
Economic	Financial family resources Own financial resources Need to work Financial aid
Institutional	Studies characteristics Academic resources Teachers University policy Relationship between the teachers and students Aid programs Institutional structure Student's perception of his/her career Demand level Relationship between colleagues
Social	Relationship with the job market Development of the technologies of distance communication Change in the university education

Variables at risk

The factors with the greatest explanatory weight for the university drop out are associated with the academic and personal background of the student (Rodríguez et al, 2004). Among all these, what stands out for its predictive power is the access grade. Other variables such as gender, entry option from high school and the typology of studies contribute to specifying and describing this phenomenon. In this manner and in relation to the variables associated within this study, we have differentiated:

1. Demographic variables
2. Contextual variables
3. Institutional variables
4. Variables for the person who learns

Demographic variables

Age and gender are the variables that all researchers have taken into account. In general. a negative correlation between age and persistence has not been found. However, the results of the research have demonstrated a correlation with mediating variables, for example, between age and locus of control or between age and integration rate. Other demographic variables which must be considered are economic standard, social origin and gender identity.

Regarding the economic standard and the social origin, there is the belief that, once the knowledge society is democratized, qualifications will help in scaling the social ladder as to social status or to job stability. This social belief has led Europe to reconsider the structure of the compulsory and non compulsory secondary school education whereby a high school degree (*batxillerat*) is perceived as a magical key to a lasting and indisputable social welfare state for both students and their families. Upon further analysis of the statistics, when the number of registered university students is compared, we observe that this figure is the greatest in four decades. This overcrowding has led, obviously, to expected results in devaluation of degrees, excess demand, social declassing and massive studies drop out.

In practically all countries of the European Union, attempts are made to explain the difficulties of achieving success in the first course of university (or, at least, in the first cycle). However, it has been demonstrated that the effort to democratize the university education has not erased social inequalities, which persist and are a burden that has hindered political, economic and studies organization, especially regarding the selection of new entry students, excess demand, and the offer and counteroffer from university institutions.

Regarding gender belonging, almost all the countries of the European Union can demonstrate that girls, who had been really excluded from schools for decades, now access the university in a very significant way. In fact, there are careers in which women amply surpass 50% of all registered

students (for example, in health sciences and education sciences studies). But it is also found that, for different reasons, girls do not take the best possible decision which has given rise to the phenomenon that girls with a valuable academic performance in secondary school have not known how to make good choices in their university career. The case of the polytechnic universities is symbolic, not to say symptomatic. Perhaps the same girls (and/or their families) through self-censorship cut off their ambitions and expectations before choosing an option.

With Donoso *et al* (2007) we can confirm that women already reduce their possibilities when choosing their studies or professional career (academic preparation and profession selection). The elections are many times made in biased or in a stereotyped manner. They generally choose professions which are traditionally considered female professions to which they not only agree but their choices are also supported by their families and teachers. The influence of gender in this aspect is demonstrated in classic works such as Borderías i Carrasco (1994), in reports of the *Instituto Navarro de la Mujer* and the *Instituto Andaluz de la Mujer*, and in many other publications dating from the late nineties. The choices of university course of studies already show significant differences between girls and boys, so that men traditionally opt for technical careers and women for humanities. This atavistic tendency can clearly be seen at secondary school.

However, and in spite of these deficiencies in the university studies selection, it is the girls, either because they demonstrate greater maturity than boys of the same age or because they are more dedicated to developing their professional project, give up their studies less frequently in the first courses or in the first cycle. It seems that they are more concerned about entering the workforce and job opportunities than boys. With Beaupère et al (2007, p 43) we can affirm that girls give up their studies less than boys, even though they enroll in shorter study programs oriented toward humanities because of the aforementioned barriers.

Contextual variables

These variables are, in principle, the family, occupation, material conditions, geographical conditions and vital changes. They are mainly those variables that focus on the personal and family life of students more than on their academic life. In fact, these variable focus on taking into account material and economic conditions, physical conditions and the geographical location of those who want to access university studies (Figuera, Dorio and Forner, 2003).

These conditions do not play a relevant role of first order, but they do have a certain influence on persistence. For example, we should not undervalue the proximity to the university and its role in desired integration in the institution. Academic life and social life interfere mutually at shorter distances. We should not ignore the influence of the family living standards (especially if there is not a good policy for studies scholarships and aids) and of the young students' social networks. The person who financially depends on his/her family is less persistent than the autonomous one. It is also very important to value students holding a job which allows for developing time management skills since the difficulty in managing time is one of the most frequent causes for dropping out.

Institutional variables

In general, the institutional variables are the degree programes that the institution offers, curriculum, pedagogic support, academic work that graduates must do, tutorship and council, etc, all of which are related to the support and the tools that are available to students. On one hand, the learning orientation and the studies follow-up stand out while, on the other hand, professional orientation for later social and labor insertion in a medium-term future. Learning orientation in an academic environment can encompass everything related to tutorship — which attends to the personal and academic needs—from motivation on the significance and utility of studies, flexibility and curriculum choices, to the student's active participation with the faculty and/or of the department of student affairs as well as emphasis on training in planning the final studies project. Regarding professional orientation and labor insertion, training is key on how to construct a professional project through student support, ranging from the beginning (open doors and faculty reception) until the possible placement in a company or in a job. The professional project and the final career project are two anchors which have an enormous impact on the permanence of students at the institution, because they are perceived as a guarantee of continuity and an placement in the work world (Rodríguez et al, 2008).

It is important to pay attention, in this section, to the role of the welcoming institution regarding the academic and instructive knowledge that students have inherited from the previous school situations. In certain countries, decision making regarding the formative trajectories takes place too early; in other words, the decision on which studies the student wants to follow is often decided too prematurely which can be from primary school to non-compulsory secondary school through to university studies. Moreover, in many places, the choice of certain specialties in high school already predisposes delay to university studies (it is a well-known fact that in the United Kingdom students start to take decisions at 11 years of age) a fact which conditions the career that they will choose.

Also of great importance is the fact that a large portion of students want to enter the university, even though their performance level and qualifications in secondary school are not brilliant and without realizing that further on he/she can find difficulties. This aspect is reinforced by social selection which can produce homogeneity problems.

Furthermore, it must not be forgotten that even though a total democratization of the education is admitted in the European Union, the social origin of students continues to be a differentiating factor in career choice. It has even been demonstrated that the economic inequality of families has greater influence than a family's cultural background and education.

One also has to keep in mind the existence of or the lack of good academic and professional orientation services at the end of secondary school and upon entering university. Depending on the support received from the orientating system, a person's decision on dropping-out or persisting in their studies can vary drastically. In secondary school, having a the realistic vision of what the

university represents along with initiating the planning of a professional degree act as safeguards in making real and congruent decisions on competent possibilities for future university in line with family expectations. In effect, Bourdages (1996) affirms that understanding the development of a formative and professional project is a mental activity closely correlated to persistence in studies. A realistic and far-sighted orientation can prevent a transition with erratic trajectories.

Variables of the person who learns

Topics that researchers have studied because they are believed to have a special incidence in the drop out rate are: learning styles, previous schooling, motivation, vocational maturity, course perception and curriculums, etc. The two main aspects mentioned by the researchers as indicators of great significance are *the relation between the student and the institution* through a feeling of belonging and of membership and *the relation with the body of the studies*, in other words, in reference to all the range of results obtained during the academic life until choosing a career path. A student's competence results from acquired experience to not only plan their academic objectives, but to know how to manage their study time in an orderly fashion. Lack of time can become an excuse to explain other reasons for failure and for non-persistence (Garland, 1993). This is a more a personal factor than an institutional factor which deals with the skills for planning and to writing up work, for correct study habits, for the capacity to work in a team or for knowing how to use available means of communication, even though it has not been demonstrated in an irrefutable way that these factors are the first cause of drop out.

Other factors that depend on the personal idiosyncrasy of the student are the *cognitive* and *personality* traits. Among cognitive traits, what stands out is the style of learning, which has a key role in the step from the secondary school to university. There have been few studies carried out on the cognitive aspects (Hernández and Maquillón, 2000), since the majority have focused on students in compulsory education, within the framework of different theories like those by Piaget, Vigotski, Bruner, Ausubel, Sternberg or Feuerstein (Gallifa, 1990). The most dealt with aspects operate on the basis of experiential learning by Kolb (1984). Regarding the personality, the elements that mainly stand out are the locus of control, that is, the control of the external and internal conditions, and motivation, the intrinsic as well as the extrinsic. The motivation factor, in addition, has almost an economic dimension that assimilates the perception of the studies as an investment which increases the permanence in the university degree.

Finally, the importance that students' *vocational maturity* is evident in the process of persistence and/or drop out and which can in no way be treated separately. Vocational maturity has significantly promoted some concepts of a professional orientation with an understanding as long-term *the global development of the personal and professional life of a person*. This concept has gained importance because teachers and educational institutions administrators had just not believed that a teenager or a youngster was in condition of taking intelligent and long-term decisions regarding their future academic and career path because at certain ages some have not reached the maturity to do so.

Either for personal causes (lack of vocational maturity), family causes (disproportionate future expectations with regard to their children) (Guichard, 1995, p 46-56), educational causes (lack of professional orientation in secondary school, inconsistency in the curriculum, etc) or policies (disconnection between the educational and labor policies of a country), university drop out rates have become a priority issue among educational administrations (Rayou, 2000). However, it is necessary to say that institutions have little influence on certain external circumstances; nevertheless, internal policies can be changed to combat the drop out phenomenon.

2. NATIONAL AND INTERNATIONAL OUTLOOK OF THE UNIVERSITY DROP OUT*

INTRODUCTION

As we mentioned in the previous chapter, the drop out rate is an indicator of complex analysis and there is not a consensus on its significance rather it lends itself to make a contextual use. Nevertheless, universities do not have a systematized univocal way to collect data on their student drop outs, which makes it difficult to measure. As a consequence, the formulas applied to analyze this phenomenon differ among countries and, thus, to make comparative studies is more than a challenge.

This chapter provides a general vision of the student drop out in different university contexts, basically, from the data compiled in several reports elaborated by national and international organizations such as the Organization for Economic Co-operation and Development (OCDE), the National Center for Education Statistics (NCES) of the United States, The International UNESCO Institute for Higher Education in Latin America and the Caribbean (IESALC), the Conferencia de Rectores de las Universidades Españolas (CRUE), the Observatoire National de la Vie Étudiante of France, the National Audit Office (NAO), the Higher Education Funding Council for England (HEFCE), the Higher Education Information System of the United Kingdom, RAND Europe and the Banca di Italia. In particular, it shows the different formulas used to measure the drop out, the ending, the desertion or the university students survival rates, and the common causes of this phenomenon in the American and European continents and in Spain. The final purpose is to offer an extensive perspective on how this phenomenon is being studied and faced in several contexts, in order to design and develop action plans which are designed to increase the retention and the student's performance at university institutions, as we will see further on.

MEASUREMENT OF THE UNIVERSITY DROP OUT

The conceptual and concrete defining of the university drop out is a complex task that goes beyond the theoretical arena and that manifests itself in the policies, actions and studies developed by universities and countries from all over the world. It is also complex to measure because it requires, not only knowing what it is we want to measure, but also having suitable and exact institutional

* The authors of the final version of the chapter have been: Mònica Feixas, David Rodríguez and Joaquín Gairín.

data, collected systematically during a certain period of time. For this reason, the drop out concept and the terms that are related to it are both conceived and perceived in a different way, and are assigned with terminology that has diverse connotations according to the context —desertion, stopping, completion, discontinuity, (non-)persistence, survival or retention—, as mentioned in the previous chapter.

In some countries, finishing is referred to the number of students who graduate within the 150% of the time over a normal course period (six years). But in Ireland, for example, it specifies students that finish their studies on time and from those who graduate late. In Australia and the Netherlands they use other definitions: in Australia the drop out refers to the number of students who leave the university studies after the first year and finishing in graduation percentage after seven years in the university education; in the Netherlands they use the term *progress* or *continuation* to refer to the number of students who stay in the course and progress on time. In Italy they also use the term inactive students, which refer to those students who are enrolled in a university for at least three years but have not attended any subject during the last year. It is, therefore, a challenge to try to make comparisons between percentages of completion and drop outs between countries, understanding the differences in the way in which these terms are defined and calculated.

To be able to analyze the drop out phenomenon and to facilitate its calculation, in Spain, drop out corresponds to students who registered during a course and did not formally enroll again for the next two course periods. Enrollment cancellations are excluded from this recount. In particular, «the drop out indicator registers in a specific course the percentage of students that drop out without academic accreditation, which pertains to the group of registered students to first course, for the first time, in the different degree courses during the academic year (n-t), being (t) the official duration programmed for each degree at official university centers and (n) in the concrete academic course (e.g., 2006-2007), and that have not registered themselves in these degree programes in the two previous courses (2004-2005 and 2005-2006) respectively» (Hernández, 2008, p 522).

In South America it is mainly referred as desertion, that it is understood as «the voluntary or obligatory drop out process of the degree in which a student is enrolled brought about by the positive or negative influence of internal or external circumstances towards him or her» (González, 2006, p 157). The rates of global desertion in the university education systems are calculated on the basis of the «qualification efficiency», that is understood as the proportion of students who graduate in a year in relation to those that enter as many years before as the academic years of a degree. Thus, González (2006) describes the desertion by degrees considering the group that enter three years before the foreseen duration of the qualification. From each group he establishes the amount of students who graduate in the foreseen time, those who complete it one, two and three years later, respectively, and those who have not graduated yet and continue studying. All those students of the entry group that are not included in the above mentioned groups are considered «Deserters». The deserter's calculation was later improved upon by considering the concept of «adjusted desertion», according to which half of students who have not graduated yet and who continue studying will end up dropping-out of the degree programe.

Finally, the Anglo-Saxon countries also analyze the student retention. The report of the National Audit Office (NAO) (2007) of the United Kingdom, for example, uses mainly two measurements:

1. The completion rate: the proportion of students who start in a year and that continue their studies until they obtain the degree, with not more than one consecutive year out of the university education. Since the university degrees take years to complete, the Higher Education Statistics Agency (HESA) of the United Kingdom has made an estimate of the expected completion rates.
2. The continuation rate: a more immediate measure that consists of the enrollment percentage by institution that is enrolled the following year from the initial entry to university.

The calculation of the factors that are related to the continuation rate is made through the «linear regression» technique. The regression model measures the relation between the continuation of students and a number of variables such as age, gender and degree programe. Through this calculation, we can predict how the continuation rate changes as several variables change. Thus, a «r2» of 0,84 indicates that the model explains 71% of the variation in the continuation rates for full time students. According to the NAO report, it is considered a reasonably optimum model for this collective, but not as much as for part-time students.

The United Kingdom and the OCDE complement the data on the continuation rate with the calculation of the general survival rates in university education. According to the OCDE, the survival is the indicator that indirectly measures the internal efficiency of higher education systems. Those who enroll in a type A university study program and obtain a degree with a type A or B qualification, or those that enroll in a type B program and obtain a degree with type A or B[2] qualification.

In short, we find higher education institutions that measure the drop out and the desertion as much as they measure the completion and/or survival. The first two concepts are probably easier to calculate if they are only associated with the number of students that drop out of studies when they do not enroll in any subject or module during two consecutive terms. The two last concepts represent an exercise of greater accuracy: on the one hand, the calculations of the percentages of qualified people assumes projecting an estimation of the expected completion rates, on the other one, the calculation of the probability that students continue and complete a degree implicates having at hand a wider set of variables to be able to offer significant data, as well as to consider part-time students or those slow to complete their degree and full-time students.

[2] Traditional university degree is associated with the type A, while the type B, generally, refers to shorter or inferior courses in a period of three years, often directed toward professional training (training cycles of second term) so as to provide a direct access to the job market. However, the shorter the type A of university programs are (considered of medium duration, from three to four years), the higher the participation rates and degrees in this formation level.

ACCESS, PARTICIPATION AND PROGRESSION IN UNIVERSITY EDUCATION

Policies for the expansion of education have managed to increase the pressure to greater access to university education. This pressure has clearly offset falling enrollment and, although some countries like Spain and Portugal now show signs of stabilization in demand for university education, the overall tendency continues to be upwards.

The reference report, Education at a Glance[3] of 2008, by the OCDE, sustains that the rates of university graduates have increased considerably in the last decades, that the expansion of the university education has had a positive impact on individuals and on national economies, and that, up to now, there are no signs of an «inflation» in degree value.

For this reason, we can affirm that the current performance of the educational systems is related to access to university education, participation in the university system and obtaining university degrees or the completion of the studies. Since the typology of programs and the age of access to the university are variables that affect the completion of the studies, we make special mention:

- Regarding the **typology of programs**, the proportion of students who access university education programs of type A area, in general, superior to type B. In the OCDE countries, in which we have access to data, 15% of the youngsters, as an average, access university education programs of type B, compared to 54% that opt for programs of type A and 2% that opt for programs of advanced research (here they oscillate between less than 1% in some countries and 3% or more in Spain, Greece, the Czech Republic, Slovakia and Switzerland). Spain and New Zealand are the only countries of the OCDE that show a decrease in the entry rates in programs of type A, although in the case of Spain this decrease is counterbalanced for the significant increase of the entry rates in programs of type B.
- Regarding **age**, students traditionally access university immediately after having completed the second stage of secondary education, and this continues to be similar in many countries of the OCDE. For example, in Spain, more than 80% of all new enrollments in university education programs are younger than 23 years of age.

  In other countries of the OCDE and associated economies, the transition to the university level is often delayed, in some cases because of the time dedicated to work. In these countries, individuals that enroll in university education programs are, normally, older and show a wide range of ages when they enter the university system. The proportion of students of older ages that enter university for the first time can reflect, among other factors, the flexibility of these programs and its suitability for students who are not considered the typical or model age group. It could also be the reflection of a specific vision to the value of work experience for higher education or the fact that in some countries there is the compulsory military service, which would delay entry to university.

[3] Report that investigates, among other questions, the effects of the university education expansion in the job market in the thirty member countries.

Access and Participation in university education

The OCDE (2008) reports that the higher the rate of graduation at the secondary school level, the higher the entry rates to university are. To understand the choices that students make at the end of secondary education and the type of orientation they receive is extremely important and will later affect the rate of drop out as well as unemployment rates in that what is studied is not in line with demand in the workforce.

Furthermore, the continual rise in participation and the growing diversity in candidate background and interests for those who continue a university programe places pressure on institutions to not only widen their admissions standards but also to adapt their programs and teaching to the needs of new generations of students. The public, in general, associates university programs with labor demands and greater earning capacity.

On the other hand, to begin and not finish a university program does not necessarily mean failure if the student can benefit from the time spent in the program to enter other programs at a lower level. In many cases, not receiving a degree does not mean that acquired skills and competence are lost and are not valued by the labor force. The OCDE report cites Canada where one year of studies can even open doors to attractive opportunities for students entering the workforce. This would explain why many students choose to drop out before graduating. In Sweden, students often take leave from their studies to work but to later continue without losing credits that are already gained.

About the completion and the survival rates of the university studies

The OCDE report shows the current performance of the educational systems regarding obtaining a university education degree, that is, the percentage of population in the typical age of obtaining and completing the university education that continues and successfully finishes the study program. The number of students who finish their university education is increasing. In the twenty-four countries with comparable data, an average of 36% of the youngsters complete their university studies. However, there are great differences between countries in the percentages of students that have completed successfully either a university program or a university education with professional orientation. In the calculation of the countries of the OCDE with available data, an average of 30% of students enrolled in the university education do not conclude their studies.

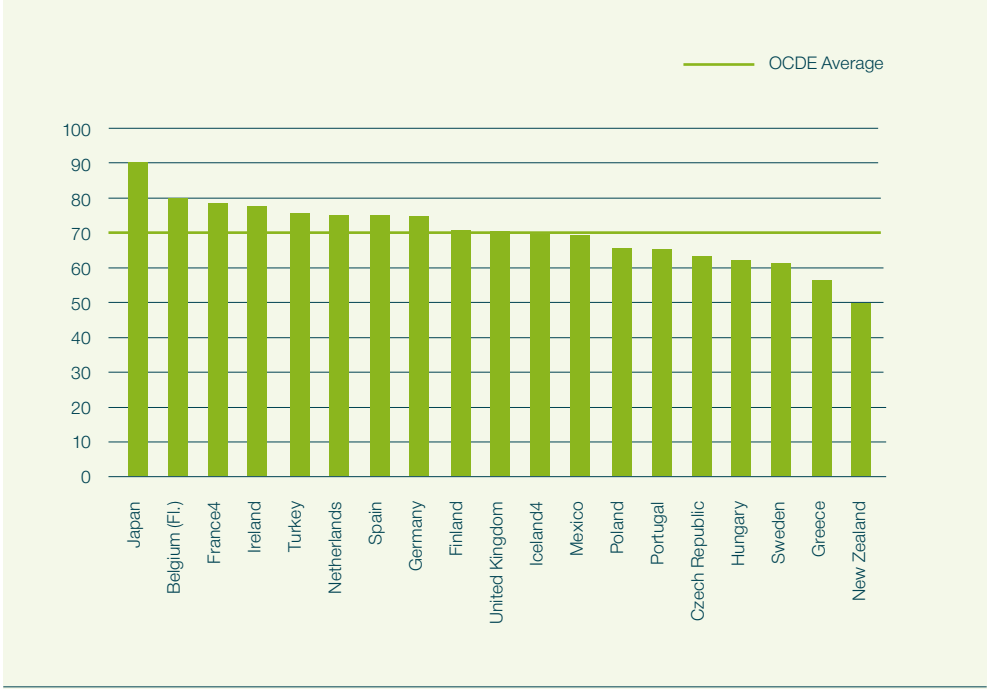
Spain, together with Ireland, offers access to higher education in a more equitable way, while in Austria, Germany, France and Portugal only half of students from a working social class background are likely to enter higher education compared to what the OCDE suggests according to the proportion of population for each country.

There are great variations in the percentages of young people who expect to continue their studies with a university education. Near 57% of the youngsters of 15 years of age in the OCDE countries expect to enter university, but this figure varies from a 95% of students in Korea to 21% in Germany. The indicators show that the expectations differ depending on each country and according to the levels of individual performance, gender, socioeconomic origin and immigrant status:

- The 2003 data from the Programe for International Student Assessment (PISA) demonstrate that the expectations to complete a university program of 15 year old students are narrowly linked to their performance in reading and mathematics.
- Independently from their academic aptitudes, students of 15 years of age that have a lower socioeconomic origin have less probabilities of concluding higher education than the ones coming from more favorable socioeconomic environments.
- Students that come from an immigrant origin have more probabilities of completing the university studies than their native colleagues. Their expectations are even higher than the native student's expectations that have the same aptitudes and similar socioeconomic environments.

Graph 1 shows the number of university graduates divided by the number of students of new entry in the typical years of entry in a specified program, that is, the rates of survival.

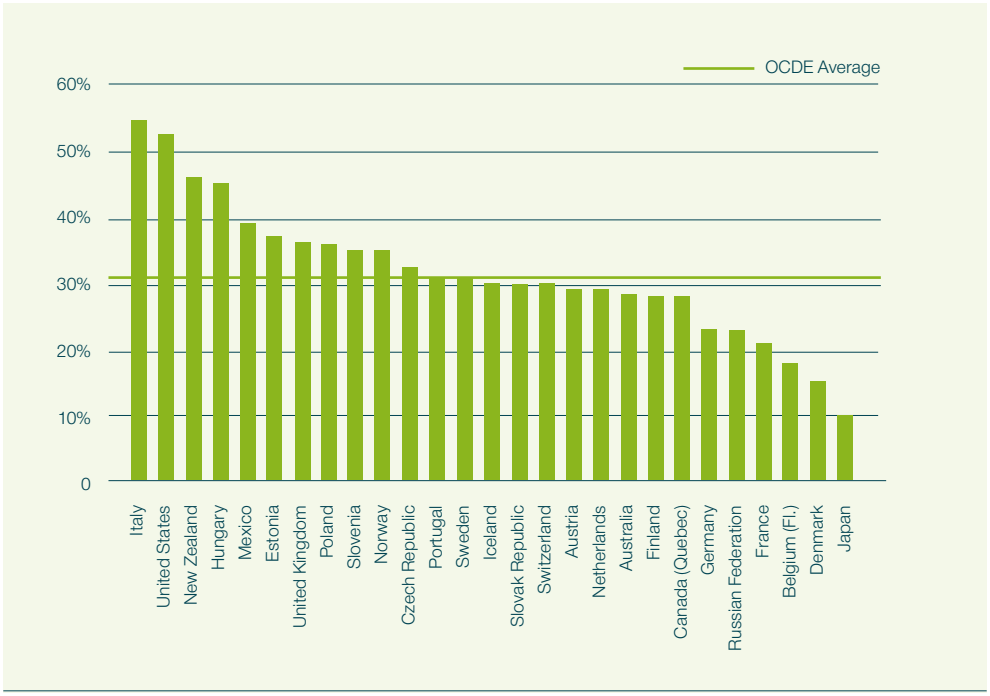
GRAPH 1 **SURVIVAL RATES IN THE UNIVERSITY EDUCATION (OCDE, 2008)**



The report concludes that, even though programe drop out is not necessarily a failure indicator from the point of view of the individual student, a high percentage of drop outs could indicate that the educational system does not satisfy student needs.

The following graph summarizes the drop out percentage in the tertiary education in the OCDE countries, according to the latest data (2008). The countries are indexed in a descending order in the proportion of students that enter a university program and come out without a diploma. The absence of data on Spain is surprising. Undoubtedly, this brings up the need to carry out studies that allow the elaboration of reliable statistics.

GRÀPH 2 **DROP OUT PERCENTAGE IN THE UNIVERSITY EDUCATION (OCDE, 2008)**



THE UNIVERSITY STUDIES DROP OUT ON THE AMERICAN CONTINENT

The great extension and diversity of the American territory makes it difficult to find common patterns in the study of university drop out, because of the variety of institutions as well as different university systems. In the United States alone there are up to thirty-two organizational typologies that offer university studies, according to data from the Carnegie Foundation of 2005;[4] and in Latin America and the Caribbean, there has been a great proliferation of small, private higher education institutions. However, in the majority of countries in Latin America and the Caribbean, the access to higher education is still limited to a small portion of the population (González, 2006): less than 20% adults older than 25 years of age have attended university and less than 10% have completed their university studies.

Next, we show some data of the most significant reports that have been carried out, first, in the United States and, afterwards, in Latin American countries.

[4] Distribution of institutions and registrations:
http://www.carnegiefoundation.org/classifications/index.asp?key=805

The majority of studies and North American experts in this area use data from the Integrated Postsecondary Education Data System (IPED) of the National Center on Educational Statistics (NCES),[5] from the Education Department of the United States. One of the main limitations of this data base is that it does not consider students who change centers or students that change from part-time to full-time dedication to university (Shay, 2008). However, there are other national institutions, as what was formerly known as the American College Testing Program (now ACT),[6] that use data coming from their own measurement system. The Survey on Institutional Data (IDQ) that is annually applied in more than 2,500 universities and colleges is an example.

We have organized this study on **drop out in the United States** in three main issues of interest:

1. The student's persistence and performance at university (Choy, 2002; Horn, Berger and Carroll, 2004, and Berkner *et al*., 2007).
2. The drop out in specific collectives: part-time students (O'Tool, Stratton and Wetzel, 2003, and Chen and Carroll, 2007).
3. The academic and non-academic factors in university drop out and retention (Lotkowski, Robbins and Noeth, 2004).

Even though during the last years the persistence rates have increased, there is a significant number of students who change centers for personal, financial and educational motives. For this reason, some studies differentiate among the «retention rate in post-secondary education» and the « institutional retention rate» (Choy, 2002).

According to the data of a group of students registered during the 1989-1990 academic year (Choy, 2002):

- 47% of students obtain their degree in the first institution where they study.
- 44% of students leave their first institution (some drop out and others move to other institutions): in this case, 13% of students obtain a degree in another institution and a 7% are still enrolled in other institutions.
- The persistence in the post-secondary education (in five years) stands at 72%, considerably higher to the institutional retention rate.

The non-traditional students (older, married, parents, full-time workers) have an inferior persistence and performance rate. Only 31% of the non-traditional students obtain their degree in four years, in comparison to 54% of traditional students.

[5] http://nces.ed.gov/ipeds
[6] http://www.act.org/

The studies show that, in the majority of the cases, the drop out decision is temporary. 64% of students who drop out of university, traditional and non-traditional, come back during the six following years (some of them to the same institution, but the majority in a different one).

On the other hand, if we compare the data related to the group of students who started the post-secondary studies in the academic years 1989-1990 and 1995-1996, we can see a significant increase of four years in the persistence rates at public universities, but not in the case of the private universities regardless of for-profit or not. (Horn, Berger and Caroll, 2004).

This developed comparative study by the NCES detects some variations regarding persistence and achievement depending on the student's socio-demographic characteristics. The most significant changes in persistence improvement are identified among male, white students with low incomes. However, we do not detect great changes among women, ethnic groups and students with a high level of income.

According to Choy (2002), students who drop out of university present different characteristics and behaviors from those that stay at university: they have parents without postsecondary studies, they delay their enrollment after secondary education, they obtain low qualifications during the first year, they work thirty-five hours weekly or more and they participate little or in moderate way in co-curricular activities (tutorships, study groups, related school activities, etc).

The study developed by O'Toole, Stratton and Wetzel (2003) from the data from the NCES's Beginning Postsecondary Survey of years 1990 and 1994 and of followed-up interviews during years 1992 and 1994 show that:

- Between 52% and 62% of the students who are part of the analyzed sample are part- time enrolled or they have dropped-out of their studies during a period of time or a semester, this is called a stop-out.
- 70% of the part-time enrolled students do not persist after the last follow-up interview. After excluding those students who had only enrolled for a semester or period of time, the non-permanence rate is still high: of 65%.

According to Chen and Carroll (2007), from the total of students who started in the academic year 1995-1996 and exclusively in a part-time dedication, only 15% completed their degree or diploma by 2001; none had obtained a bachelor's degree; 27% have persisted; 73% have left their studies without obtaining a degree, and 46% dropped out during the first year. These results are coherent with other research and studies (Choy, 2002; Horn, Beger and Carroll, 2004, and Chen and Carroll, 2007) that confirm that part-time attendance at university and working more than fifteen hours weekly reduces the likelihood of persistence.

Other studies point out, in consonance with the approaches revised in the first chapter on the current explanatory drop out models, that the retention of university students is dynamic and implies a complex interaction among academic and non-academic factors (Lotkowski, Robbins and Noeth, 2004):

- The non-academic factors of academic competence, academic self-confidence, academic aims, institutional commitment, social support, determine contextual influences (institutional selectivity and financial aid/help) and social implication have a positive relationship to retention.
- Likewise, the academic factors such as grade average in secondary school, the evaluation grade on the ACT tests and the socioeconomic status also have a positive relationship to retention. The strongest relationship is with the «average grade», followed by the socioeconomic status and the grades on the ACT tests. Regarding performance, the relationship is even stronger when these three variables are combined with the institutional commitment, academic goals, social support, academic self-confidence and social implication.
- Furthermore, in regard to performance, the results indicate that the non academic factors such as academic self-confidence and motivation to achieve are strongly related to the average grade on university records.

The characteristics, the factors and the magnitude of the drop out or desertion at the public and private universities of Latin America and the Caribbean have been systematized in the report by The International Institute for Higher Education in Latin America and the Caribbean (IESALC) on the state of the higher education in countries in this area between the years 2000 and 2005. The report understands desertion as «the degree drop out process, voluntary or obligatory, in which a student is enrolled through either a positive or negative influence of internal or external circumstances in regard to him or her» (González, 2006, p. 157).

The desertion calculation at participant institutions was made considering the «adjusted desertion» concept in three degree programs (Law, Civil Engineering in Public Works and Medicine) which allowed for a representation of different knowledge areas in four institutions (two public ones and two private ones) for each participant country.

The rates on global desertion in the higher education systems are also calculated on the basis of the « degree efficiency », that is understood as the proportion of students who graduate in a year in relation to those that enter as many years earlier as the number of academic years required to complete a degree. According to the study, with the exception of Cuba, only 43% of those that enter higher education studies graduate in the established period.

It is necessary to say that the study and the follow-up of university students drop out, retention and persistence in Latin America and the Caribbean, even though it has increased considerably during the last years, has not been carried out in a systematic way, unlike countries like Holland or

Australia (Van Stolk et al, 2007). In this region, the university drop out and repetition study is being unveiled as a subject of great interest and a relevant problem because of the enrollment increases in higher education that started in the nineties (Bruneforth, Motivans and Zhang, 2004, and González, 2006), mainly among the disfavored collectives and, therefore, more vulnerable to this type of phenomena.

In relation to the factors that cause failure in the Latin American context, we can identify four factor categories which bring about university desertion:

1. External factors: socioeconomic conditions, from the student as well as his family.
2. Institutional factors: enrollment increase, lack of suitable funding mechanisms, academic administration policies, profession and methodology unawareness, educational and institutional environment, and lack of affective bonds with the university.
3. Academic factors: previous academic training, admission examinations, acquired learning level, excess of theoretical orientation and scarce linkage to the job market, lack of support and orientation from the teachers, lack of information for choosing a career, lack of learning training and of autonomous reflection, examination requirements in the selection of the studies, excessive duration of the studies, heterogeneity of students and insufficient teacher preparation to attend the student population.
4. Personal factors: the student's economic activity, aims and personal motivations, dissonance with their expectations, lack of emotional maturity and attitudes typical of the youth, level of satisfaction with the university studies, graduation expectations related to the job market, trouble finding personal integration and adaptation, student's dedication, and lack of aptitudes, skills or interest regarding the chosen studies.

The developed study makes evident that drop out and repetition are two closely bound phenomena, since when a student repeats more than once the same subject or course, it often results in drop out.

In synthesis, we review this section's main ideas:

TABLE 5 SOME CONCLUSIONS ON DROP OUT IN THE AMERICAN CONTINENT

Territory	Determining factors of the system	Drop out characteristics and tendencies
North America (USA)	■ Vast diversity of institutions and university systems ■ Significant number of students who change of center	■ The decision to drop out of university is temporary, many come back during the six following years ■ The nontraditional students have an inferior persistence and performance rate ■ Persistence increase in public institutions ■ The student's profile who will drop out of his studies is the one who obtains low qualifications during the first year, works 35 weekly hours or more, participates little in co-curricular activities and has parents without postsecondary studies
Latin America and the Caribbean	■ Proliferation of small institutions of private character ■ Restricted access to a minority of the population ■ Special interest in the drop out research in the last years, especially on the most vulnerable collectives	■ More than 50% does not graduate in the established time, except in Cuba ■ Desertion causes: socioeconomic difficulties, lack of institutional support previous academic training typology and personal difficulties

UNIVERSITY DROP OUT ON THE EUROPEAN CONTINENT

In Europe we can ascertain an increasing interest in the university drop out research and an increase of institutional initiatives to favor the retention of students. For the time being, however, it is still hard to find researches that have achieved to compile data related with this phenomenon, and when it has been done, it has been contacting the institutions individually and for a concrete period of time, and they have reconstructed the data. Since in a historical way this data collection has been little systematic, not all the institutions have preserved the necessary data to be able to calculate the drop out percentages.

In this section, we present Europe's situation from the point of view of the first evaluations since the implementation of the Bologna process, the drop out percentages by countries, the student's typology and the drop out causes. In fact, one of the things that is being achieved throughout the university system reform or the European Higher Education Area is a more defined follow-up of the groups of students who have pioneered university promotions in different countries, in regard to the functioning of the European credit system as well as in relation to the methodology centered on the student.

In this new context in which all the European universities are immersed, the attainment of high performance levels and higher retention rates is a priority. Each country is in a different adaptation process to the new European framework, though the common objective is in the completion of studies. Later, we go through the studies drop out situation in some countries. Our selection has been conditioned by the possibilities of accessing reliable data and, therefore, we are limited to some examples that allow us to offer a general perspective on how this phenomenon is faced.

The results of the research elaborated by The Higher Education Information System (HIS)[7] show that the university drop out in **Germany** is being reduced, and this is seen as a consequence of the reforms implementation of the Bologna process, especially through the establishment of the new degrees and postgraduate courses. In particular, the HIS indicates that the university drop out has diminished 24% in 2004 and 20% in 2006. In Social Sciences, the figure has been reduced from a 27% to a 10%, and more precisely, there has been a drastic decrease in language and culture studies from a 43% to 32%. In the opinion of the German Ministry of Education, this positive development shows that the Bologna process supports the aim of the university policy to reduce the university drop out abandonment and that the introduction of the degree levels is contributing to obtain one senior level of academic success.

It is not surprising that the average time duration that a student takes to complete a career has shortened with the introduction of the bachelors' degree. Furthermore, the first research results in relation to the graduate's success in the job market are positive. The *Education in Germany 2008*[8] report shows that those who obtain a degree have good opportunities in the job market, in particular in the areas related to the engineering and business management. The initial data in relation to the basic initial wages also reveal that there are only minimal differences between graduates from applied sciences universities that have obtained a diploma or the new bachelor degree.

However, Germany is still a country with a low percentage of access to higher education studies and, therefore, have a low proportion of higher education graduates (about 20%). Since the nineties, the government has continued to establish measures to facilitate access from vocational schools, but, however, the percentage in this case is only from 1% (Education in Germany, 2008).

[7] www.his.de

[8] http://www.bildungsbericht.de/daten2008/summary08.pdf

The OCDE (2007) also suggests that the universities funding is made flexible in order to improve the university education quality (establishment of payments, refundable loans according to income, etc), making it especially attractive in those "Länder" where these policies have not been implanted.

France has made up for lost time for what it could have achieved in the past in education levels attained by its population. Currently, the proportion of youngsters among 25 and 34 years that finish higher education studies stands at 41% (OCDE, 2008). However, university students face selective and non-selective degrees, a dual system that provokes access and success inequality in higher education.

The organization of higher education, as Beaupère *et al* (2007) sustain, induces inequalities among students through university selection which takes place through elimination or self-elimination. Felouzis (1997) differentiates between visible selection which functions through examinations, and invisible selection, which produces drop out because it tests the student's adaptation capacities.

The French study "L'abandon des études supérieurs", by Beaupère *et al* (2007), sustains that the people who drop out of university are mostly boys who have obtained a high school diploma, mainly professional or technological, with a year or more of delay. The type of center and studies chosen also has a remarkable incidence on the drop out probability. We can identify two key drop out periods: (1) at the beginning of the course, for those who are not able to adapt and (2) after the first holidays or in the January examination period (11% of students who come out without a higher education diploma or drop out in relation to the generation that graduated in year 2001).

This drop out of the A type education is not always seen as a failure, since the majority of students who drop out of it re-orient their studies towards the professional education and obtain an intermediate degree that the French institutions offer, like the Cap-Bep level (28%), the Bac level (16%), the Bac + 2 (18%) and the third cycles and large schools (9%). Only an 8% do not obtain any type of degree.

According to the OCDE data (2007), **Italy** is one of the countries with most drop outs among the university students, with a rate of 58% compared to the 30% average in the rest of the OCDE member countries. The European Commission has studied this singular case from the high drop out percentage and, therefore, of inefficiency of its university system (D'Hombres, 2007). The study confirms that the reform introduced by the EEES has increased the studies persistence: the drop out likelihood in the period before the reform was implemented is 5.4% lower than before. This indication, the same obtained in Germany and Portugal (Cardoso *et al*, 2006), augurs a higher retention and completion level of the studies in the European university institutions that are adopting the derivative proposals from the Declaration of Bologna.

Along the same line of the previous study, Cingano and Cipollone (2007) make a data analysis from the survey carried out in year 2001 by the National Statistics Institute of Italy (ISTAT) to 23,000

individuals and, on the basis of a representative sample (approximately 5% of the population) of Italians graduated in secondary school in the year 1998, they present the following data in relation to the rate of drop out:

1. Of the 7,483 students that started tertiary education in 1998, 1,048 said to have left studies during the three years that the survey was being done.
2. 23% of students that graduated from secondary school in year 1998 changed university or dropped-out in the summer of 2001.

   The authors warn that this low drop out rate has to be read while taking into account that there are students who do not respond to have left or have never started a degree.
3. If we measure the drop out from the perspective of the success rates (comparison among the number of university graduates in a concrete year with the number of students enrolled some years earlier —as many years as the academic degree has—), the drop out rate in 1997 is 58,5%, similar to the rate obtained in the year 2001 (not very different to the one that the OCDE calculates).

When these authors analyze the causes of a high drop out rate, they focus on the family context (years of the parent's education, the grandparent's education and the father's profession) former scholar, and some personal variables (sex, age and marital status) are centered on the family context (years of education of the parents, education of the grandparents and profession of the father), the performance and the previous school background and some personal variables (sex, age and marital status).

This way, they calculate that the drop out likelihood is:

- Inversely proportional to the parent's education level;
- more pronounced among students coming from vocational schools than from high schools or «general schools», and argue in relation to the better learning skills that the latter have, and
- lower in women.

The rest of the variables considered (grandparent's education, father's profession, local conditions) do not have any significant effect on the drop out likelihood.

It is evident that, and in addition, the quality of academic programs is a fundamental indicator for the retention and that any pedagogic reform promoted in this direction can benefit the increase in university graduation rates.

The **United Kingdom** is favorably compared with other OCDE countries for their estimated graduation or survival rates. In year 2004 the UK was ranked fifth place, behind Japan, Ireland, Korea and Greece.

This country has invested important resources in consolidating a higher access policy and participation in university education. Its goal is to increase the participation in higher education up to 50% in individuals within the ages of 18 and 30 years, and to move forward to a more equal access, while keeping the drop out data in control. The United Kingdom has been one of the first countries to validate professional training and to establish evaluation measures of informal ways of learning. With this, higher education seeks to increase and to broaden the participation and to include more students that come from groups that have been less represented.

According to the last report from the National Audit Office (NAO) on student's retention in higher education: The Retention of Students in Higher Education, of 2007, the drop out has been reduced in the last years and the number of applicants accepted in the higher education institutions has increased, with some differences with respect to different degrees. The main increase has been in Medicine and Art studies, while the main reduction in Mathematics, Computer Science and Engineering.

The report has been based on:

- an analysis of student's data from the Higher Education Statistics Agency and quantitative analyses on higher education;
- case studies on selected universities, including a telephonic survey to students who drop out of that university at the beginning of the degree;
- a revision of the academic research;
- an international comparative research published in the RAND Europe report, and
- consulting different experts and institutions, and meetings with staff from the Innovation Department, Universities and Competencies and the Higher Education Funding Council for England (HEFCE).

The data is optimistic. Regarding the retention, out of 256,000 full-time students, 91.6% of them from the 2004-2005 academic year have enrolled in their first degree and continued to the second year. We expect that 78.1% of these students will finish their degree that 2.2% obtain an inferior degree and that 5.8% continue their studies in another institution. In the case of students from a part-time first career in that same year, 76.9% continued the second year.

The difficulty lies in finding data on part-time students, because of the inherent flexibility in the different study patterns. The calculation of students completion expectations have not been able to be done because of the lack of consistency in the course structures in which they can enroll.

The report points out the main reasons why students drop out of the university programs in the United Kingdom, they are very varied and are closely related to current explanatory models that have been revised in the first chapter:

- **Personal issues**: physical or mental illness; feeling homesick, a problem that lasts and becomes worse, especially among young women and students in rural areas, or the equilibrium among study requirements and domestic duties, like taking care of children or elderly people.
- **Dissatisfaction with the course or the institution**: boredom or dissatisfaction with the education provision, the course or the program, when it does not result in obtaining the desired professional accreditation.
- **Lack of preparation**: the course contents are not the ones expected; students do not have the suitable skills to study and to be able to carry out their studies with success or to notice how the academic progress depends on self-management and self-regulation; students are not aware of the necessary commitment level to successfully progress; the level of the course is too difficult.
- **Wrong course choice**: a choice that has been not deeply thought out, especially in students who enter the university system late, can have channeled decisions towards unsuitable subjects; lack of information on the higher education can lead to a stereotyped choice of courses and/or institutions; students may lack of confidence to change their course or institution.
- **Economic reasons**: students who are not informed of the center's payment and can acquire debt; students who have to struggle for sustaining a good level of efficiency in work while they study; working more than fifteen hours weekly reduces the possibilities of progression in the studies; benefits and economic aids that do not arrive in time to cover financial commitments; debt fear; limited funding; unreal expectations towards the lifestyle that students lead when they become indebted and soon have to leave their studies.
- **Choosing a more attractive opportunity**: going to university can lead the student to attain career goals without the need of completing the course of study; taking time off from study to travel; realizing too late academic interests or degree goals.

Finally, and to synthesize the main contributions of this section, we present the entry and graduation rates in the university education of the countries we have commented on, according to the available OCDE data, Spain is also included, which is next analyzed:

TABLE 6 **GRADUATION RATE RELATED TO THE HIGH EDUCATION ENTRY RATE IN COUNTRIES ANALYZED**

European territory	University education entry rate (2006)	Higher education degree rates
Germany	35	21.2
France	No data	No data
United Kingdom	57	39.0
Italy	55	39.4
Spain	43	32.9
UE average (19 countries)	55	35.2
OCDE average	56	37.3

UNIVERSITY STUDIES DROP OUTS IN SPAIN

According to the last available data[9] (MECD, 2007 and 2008), the Spanish university system has 77 universities (50 public and 27 private), five of them are non-presential, and 998 university centers (708 public, 59 associated centers, 97 private associated centers and 134 private university centers). In addition, the Spanish university system offers two university centers that are specialized in postgraduate program courses: "Universidad Internacional Menéndez Pelayo" and the "Universidad Internacional de Andalucía". This offer has meant that during the 2009 course there was a university center for all of the 48,500 individuals of university age with an average of 19,500 students for each center (MECD, 2008).

The data that we next present are related to the graduation rates at university which allow us to know the percentage of students that finish their studies, and are later complemented by data on students who drop out of their studies. This is the current available data from the OCDE and the CRUE 2008 reports.

During the 2007-2008 course, there were almost 1,390,000 students that enrolled in the first and second cycle (the forecast for the 2008-2009 course is slightly lower, of 1,366,542), 33,021 students enrolled in authorized masters programs and 77,654 students enrolled in doctoral

[9] http://web.micinn.es/04_Universidades/02@EstInf/00-Novedades/Datos%20y%20Cifras%20del%20Sistema%20Universitario%20Espanol%20Curso%202008-09.pdf

programs[10] (see table 7). Of all the enrolled students, only 1% were foreign students, while the average of foreign students in the rest of the OCDE countries is of 6,9% (OCDE, 2008).

TABLE 7 EVOLUTION OF STUDENTS ENROLLED IN THE FIRST AND SECOND CYCLE

	Academic year				
	1997-1998	2001-2002	2005-2006 (1)	2006-2007 (1)	2007-2008 (1)
Total	**1,575,193**	**1,525,989**	**1,443,811**	**1,405,894**	**1,389,553**
Long cycle (2)	1,024,394	947,276	874,139	842,426	827,989
Short cycle	550,799	578,713	569,672	563,468	561,564
Type of studies					
Social and Juridical Sciences	809,400	749,317	711,788	699,870	704,243
Technical	363,093	392,285	380,042	363,580	347,695
Humanities	155,668	149,168	132,563	128,753	124,523
Health Sciences	111,384	115,692	118,166	119,481	122,071
Research Sciences	135,648	119,527	101,252	94,210	91,021

(1) Provisional data.

(2) In the long cycle only the second cycle education has been included.

TABLE 8 GRADUATED STUDENTS IN OFFICIAL DEGREE UNIVERSITY STUDIES BY UNIVERSITIES AND CENTER TYPOLOGIES (2006-2007 ACADEMIC YEAR)[11]

	Presential		Non presential		Total	
	Number	(%)	Number	(%)	Number	(%)
Public	**159,996**	**85.61**	**5,397**	**2.89**	**165,363**	**88.50**
Official centers	146,366	78.33	5,397	2.89	151,763	81.22
Affiliated institutions	13,600	7.28	0	0.00	13,600	7.28
Private						
Own centers	19,738	10.56	1,756	0.94	21,494	11.50
University centers	**179,704**	**96.17**	**7,153**	**3.83**	**186,857**	**100.00**

Source: *La universidad Española en cifras, 2008*. CRUE y Datos de Avance. Course 2006-2007. MEC. Elaboration JHA.

[10] http://web.micinn.es/contenido.asp?menu1=2&menu2=2&dir=04_Universidades/01@General/01-DyCSunE

[11] http://www.crue.org/export/sites/Crue/Publicaciones/Documentos/UEC/UEC_2008_resumen.pdf

The OCDE (2008) calculates that the percentage of Spanish population (between 25 and 34 years) with university degrees is of 39%, this figure is superior to the average of the European countries (33%) and to the 19 OCDE countries considered (33%).

Although the number of graduates is superior to the average, the graduation or completion rates are inferior. It is estimated that, since 2004, 32.9% of the Spanish students complete their university education, unlike the average of 37.3% of the population in the OCDE countries and of the 35.2% in Europe (sample among nineteen countries). In 2006, this data was of 25.5% in men and 40.8% in women, while the average of the OCDE is 29.8% and 45.2%, respectively.

The survival rate — not graduation rate — in Spain is of 74%, and it is higher than the OCED average which is in 71%. It is necessary to highlight that the proportion of graduates in Experimental Sciences has increased, but continues to be under the OCDE rate.

Finally, Spain still attracts relatively few international and foreign students regarding the degree and postgraduate course studies but, nevertheless, the proportion in advance research programs is higher than the majority of the other OCDE countries. 41.9% of the international students are South American.

Regarding drop out, the last CRUE report (Hernández, 2008) reveals that during 2006-2007 course, 127,396 drop outs were registered in public universities, corresponding to students who enrolled during 2004-2005 and that have not formalized their enrollment again during the two posterior courses. From this tally, the enrollment cancelations have been excluded.

However, in spite of the data, we are not able to obtain the global drop out rate in the Spanish university system. However, we can estimate that, excluding the UNED, with a drop out rate of 55.2%, the desertion at the different Spanish universities stands between 25% and 29%.

If we notice the data of the CRUE 2007 report (Hernández, 2007), the drop out rates by subject areas in Spain are: 14.4% in the Arts; 17.7% in short cycles of Social and Juridical Sciences and 30.8% in long cycles; 7.5% in Research Sciences; 0.9% in short cycles of Health Sciences and 1. 7 % in long cycles; and, finally, 16.3% in short cycles of Technical areas and 10.7% in long cycles. In general, in Spanish universities, the majority of university degrees are long cycle.

Of the total of registered drop outs:

- in 35.5% of the cases students were enrolled in short cycle degrees and the other 64.5% in long cycle degrees;
- 48.03% corresponds to women and 51.97% to men, even though it is necessary to clarify that, excluding the degrees in Experimental Sciences, Technical areas, and the rest of educational branches (Arts, Social and Juridical Sciences and Health Sciences) the drop out percentage is higher among women.

The challenges that the Spanish university system face are the following, according to the OCDE (2007):

- The first challenge is to continue increasing the level of graduates. The proportion in Spain of people who have attained university studies has increased substantially and is above the OCDE average for the group of younger ages. The completion rate among the OCDE countries has also been increased, but an average of 30% of students enrolled in university education do not complete their curriculum.
- The second challenge is equity. The access to the higher education in Spain, together with Ireland, is the most equitable. The proportion of students in Spain who aspire to access university is next to the OCDE average, but there are important gender differences in these expectations.
- The third challenge is to improve the quality levels in initial training so that by its own means satisfies the increasing and changing demand of competences in the job market, and to increase the continued training related to work. In Spain, only 10% of the employees undergo continued training, the data is substantially lower than for the rest of the OCDE countries.
- Finally, regarding the resources and efficiency challenges, Spain has increased 62% its education investment in between 1995 and 2004, but it is still inferior to the OCDE average (4.7% of the GDP of 2004 versus the OCDE's 5.8%). The student's expense in higher education has also increased. Type A higher education enrollment fees in Spain are low, but there is also a low proportion of students who benefit from public credits or scholarships.

All reports indicate that the decrease of new university enrollments, together with the fact that students can now access the degree chosen in first option, should contribute to a reduction in the drop out rates and, consequently, lead to an increase in graduation figures. As a consequence, this would have a rebound effect on reducing the average necessary time to graduate.

3. ANALYSIS OF THE DROP OUT PHENOMENON IN CATALONIA*

INTRODUCTION

The drop out complexity in higher education, from the point of view of the theoretical models as well as from the nearest aspects in the measuring of the phenomenon in the international panorama, brings the need to carry out an approach and an analysis of students who do not persist in their studies in our university context. This analysis of the phenomenon has been carried out in two research phases in the field study that are presented in this chapter and in the following one.

The first phase analyzes the drop out phenomenon in Catalonia. From the data collected from statistical platform UNEIX, a descriptive population analysis has been made that allows a quantitative approach to the drop out rate and also a qualitative approach on some personal and academic characteristics of students who gave up their studies at Catalan universities.

In the second phase, an approach on the reality of the students who have given up their studies at our universities has been carried out through a descriptive and comprehensive study from a pilot sample. This second phase in analyzing this phenomenon has helped to distinguish the causes that have led these students to give up their studies and, at the same time, to collect opinions and suggestions in order to be able to establish retention strategies.

In this way, this chapter carries out an approach to the research problem following aggregated results, at a university scale (macro) as well as in a more disintegrated scale, by type of education, in order to find out the profile and the basic characteristics of the students that have given up their university studies (micro).

We intend delve deep into those factors that can explain or at least shed light on the motives that lead to drop out in the Catalan university system so as to identify the performance lines and recommendations in order to guarantee a greater retention at university.

The data base provided by the Catalan University Quality Assurance Agency (AQU)[12] gathers data on the 2005-2006 academic years drop outs of those students that entered university in courses

* The authors of the final version of this chapter have been: Pilar Aparicio, Natalia Jaría, Ernest Pons, Xavier M. Triadó and Màrius Domínguez.

[12] In the construction of this data base, the drop out has been considered in the situation in which the student, after the last enrolment, has not enrolled himself again in the degree programs in two consecutive years.

2000-2001 and 2001-2002, with a total of 21,620 drop outs.[13] This information is provided by the General Directorate of Universities of the Generalitat de Catalunya coming from the statistical platform UNEIX.

DATABASE PRESENTATION

The information in the data base allows us to analyze the data on two different scales: a macro scale, that compares the drop out rates between different degrees and universities; and a micro scale, where we describe the profile and the basic characteristics of the students that have given up their university studies.

In table 9, we present the main variables of the database that have been analyzed in this research, from a micro scale as well as from a macro scale.

TABLE 9 VARIABLES FROM THE CATALONIA AQU DATABASE

THEM ATIC FIELD	VARIABLES
Ex ante	
Student's socio-demographic and social variables	Age Gender Nationality Studies at birthplace Occupations at birthplace
Academic variables previous to the university entry	Entry branch A level modality Access grade
Degree program that has been dropped-out	
Variables of the degree program that has been dropped-out	Degree program area Does it have an access grade? University
Performance in the degree program	Accumulated passed credits Number of years Average of passed credits per year before the drop out Enrolled credits in the drop out year

[13] Since a student who has already given up the studies can drop out of them again after a re-entry, we can find two or more records for a same student.

THEM ATIC FIELD	VARIABLES
Ex post	
Post drop out situation	Re-entry Re-entry year Degree program area (same degree program area as before or area change) Re-entry university (same university or university change)

The reading of the former table and its comparison with the theoretical model proposals on the university drop outs (see chaptyer 1) allows us to identify the main limitations of the presented analysis regarding the database. A first limitation is related to the variables that have not been collected in the database, as well as the lack of information on the students that do not drop out of their university studies.

In relation to the collected variables, it is necessary to point out that the database **does not** provide information about certain aspects that the drop out theoretical models point out as fundamental. Among these, we can mention the following:

- **Variables of the person that learns**: style of learning, school antecedents (academic and instructive knowledge that the student inherits from former school situations), motivation, vocational maturity, perception of the courses offered and of the curricula, etc.
- **Variables** that allow for the analysis of the **relationships between the student and the institution** through the feeling of belonging and of membership and in relation to the body of studies.
- **Institutional variables** in relation to the help and the follow-up of students in their studies: pedagogic support, academic work that the graduates have to elaborate, tutorship and council, etc.
- Looking into certain **contextual variables** that allow us to analyze the student's situation regarding their employment (combination of the university studies with work activity), material conditions (scholarships and study aids), geographical conditions, vital changes and social networks of young students.

The second limitation has to do with the control of the information collection: certain variables have a very noticeable percentage no answer (for example, in the variables of student's home origin, some have percentages of no information around 50-60 %). This lack of information limits in a significant way the analyses.

The third limitation is that the database that we have worked on only provides information on the students that have given up their university studies and it does not allow for comparisons to be

made in relation to the global enrollment. The fact of not being able to compare their profile and its characteristics with those colleagues who have not given up their studies makes it impossible to identify the most significant variables in university drop out rates and thus how to establish explanatory models for the drop out situation.[14]

In spite of these limitations, it is necessary to appreciate the considerable effort on the collection of the information and the organization of this same process (combination of several information sources, collection of the information in several temporary moments, etc) in order to offer a base diagnosis on the drop out situation in Catalonia; it is a process that could hardly have been carried out without the total implication of the university centers and of their main agents. After mentioning these considerations, it is necessary to say that for an integral and complete approach to the drop out situation of university studies, it is advisable to further develop these questions.

The database possibilities has allowed us to carry out a macro radiograph, with a comparison of the drop out rates between different degrees and universities, and a micro radiograph, on the profile and the basic characteristics of the students that have given up their university studies.

MACRO SCALE ANALYSIS: REALITY OF A PROBLEM

In Catalonia, according to data coming from the Commissioner for Universities and Research corresponding to course 2006-2007, the university system is made up of twelve universities, five of them are private, and a total of 225,181 students enrolled in first cycle, of first and second cycle, and of second cycle, with a clear descent in the number of new entry students, explainable by demographic factors, according to AQU Catalonia (2007).

[14] It is necessary to comment that for future researches it would be worthwhile to include secondary data added in certain variables such as the type of degree program, gender, age, etc, should be used in order to be able to compare the student's profile of those who have not given up their university education with the students who have dropped-out.

TABLE 10 STUDENTS IN THE CATALAN UNIVERSITY SYSTEM

	Total enrolled students			Total new entry students			Total graduated students		
Course	Men	Women	Total	Men	Women	Total	Men	Women	Total
99-00	101,431	117,572	219,003	24,080	28,264	52,344	13,412	19,526	32,938
00-01	103,354	119,364	222,718	23,597	28,606	52,203	13,530	19,716	33,246
01-02	105,209	120,581	225,790	25,640	29,665	55,305	14,164	20,056	34,220
02-03	105,136	121,504	226,640	25,593	30,197	55,790	13,523	20,165	33,688
03-04	105,541	122,026	227,567	26,372	30,868	57,240	13,185	19,138	32,340
04-05	105,046	121,322	226,368	25,477	30,456	55,933	14,000	19,372	33,391
05-06	104,338	122,745	227,083	26,650	31,741	58,391	12,490	18,571	31,071
06-07	103,559	121,622	225,181	25,496	30,458	55,954	12,796	18,781	31,597

Total Catalonia university system
(data corresponding to first cycle, of first and second cycle, and to second cycle degrees)

Source: AQU Catalonia (2007). *El sistema universitari públic català 2000-2005: una perspectiva des de l'avaluació d'AQU Catalunya*. Barcelona: AQU Catalunya.

In regard to the graduates, despite data according to AQU Catalonia (2007) their number has decreased 7.7% during the five consecutive years 2000-2005 representing 11% of the total graduates in the Spain during this same five years. This descent in the number of graduates can be explained by:

- A greater density and difficulty of studies;
- in engineering, the demand to present a final degree project;
- the inadequacy of the student's profile;
- social, work and personal factors, and
- inadequacy of the teacher's approach.

In order to fully understand the type of drop out that is produced in our university system, it is necessary to differentiate the new entry students that enroll in their first option from the rest, since «there is an hypothesis that states that students who access in first option degree are more motivated and, therefore, will have a higher performance than those that access to their second or third degree option» (AQU Catalonia, 2007, p 14).

According to data corresponding to the whole of Catalan public universities, during course 2004-2005, 76% of the university students of new entry were enrolled in their first option, and the area of Social Sciences was the one that presented, in contrast, more enrollments (47%) and demands (48%).

All the data on student's drop outs in the Catalan university system that we introduce here are specified in a detailed way in the following chapter.

In view of this situation, the study shows an radiograph of the dimension of the problem. To carry out this analysis, we focus on the data related to the students that were admitted to Catalan universities in courses 2000-2001 and 2001-2002. Thus, we can analyze how many of these students gave up their studies in the three following courses (that is, until 2003-2004,this last one included).

It is necessary to specify that the information on the drop out obtained from the AQU Catalonia data analysis can not be compared with the data from the CRUE report on Spanish universities, since there is no available data for the studied years, 2000-2001 and 2001-2002. What we do know is that in the year 2006, of the total drop outs registered at the Spanish public universities, 35,5% corresponded to students enrolled in short cycle degrees and the 64,5% remaining corresponded to long cycle degrees students. In the same year, in Catalonia the figures were of 34.1% and of 65.9%, respectively.

In our research, the drop out distribution among the different universities — average of the short and long cycles— shows that there are not many differences between universities and that the drop out affects all the degree programs at different universities. Although the medium drop out rate is 33.6%, the different university rates fluctuate between 28.3% for the UPF (Universitat Pompeu Fabra) and 37.2% for the UPC (Universitat Politècnica de Catalunya) (table 11).

TABLE 11 DROP OUT RATE AT PUBLIC CATALAN UNIVERSITIES

University	Drop out rate
UAB	30.5%
UB	34.9%
UdG	36.5%
UdL	28.6%
UPC	37.2%
UPF	28.3%
URV	33.3%
Total	**33.6%**

Source: data elaborated by AQU Catalonia from the UNEIX (DIUE) official data.

The comparison among the different degrees is next analyzed.

Drop out distribution by degree typologies

In relation to the type of degree program, the data shows the distribution of the groups from 2000-2001 and 2001-2002, with 40% in the area of Social Sciences, followed by Technical degree areas (29.6%) and Arts (17.2%) (table 12).

TABLE 12 DISTRIBUTION PERCENTAGE IN THE 2000-2001 AND 2001-2002 GROUPS

	Frequency	Percentage	Summed up percentage
Humanities	3,714	17.2	17.2
Social Sciences	8,740	40.4	57.6
Research Sciences	2,001	9.3	66.9
Health Sciences	761	3.5	70.4
Technical	6,404	29.6	100.0
Total	**21,620**	**100.0**	

To be able to examine the drop out rate correctly, it has to be analyzed as a whole, with the percentage of enrolled students at each university. If we compare these data with the number of students who accessed each of the universities in courses 2000-2001 and 2001-2002, it is seen that, obviously, the UB is the university with most drop outs, because it also presents a higher enrolment rate than the rest of universities (table 13).

TABLE 13 NUMBER OF STUDENTS THAT ACCESSED TO THE DIFFERENT CATALAN UNIVERSITIES

	New entry students				Drop out rate
	2000-2001		2001-2002		
UAB	6,909	20.4%	6,844	20.3%	30.5%
UB	11,629	34.3%	11,709	34.7%	34.9%
UdG	2,482	7.3%	2,515	7.5%	36.5%
UdL	2,035	6.0%	1,810	5.4%	28.6%
UPC	5,952	17.6%	5,916	17.5%	37.2%
UPF	2,046	6.0%	2,332	6.9%	28.3%
URV	2,809	8.3%	2,606	7.7%	33.3%
Total	**33,862**	**100%**	**33,732**	**100%**	**33.6%**

MICRO SCALE ANALYSIS

The micro scale research carries out the analysis considering three temporary moments in the students trajectory (table 14), that allows us to describe the **student's profile** in each moment:

1. Situation at the beginning of the university studies: socio-demographic and social variables and previous academic variables.
2. Variables on the dropped-out degree program, like the access and the academic performance.
3. Ex post situation, that considers the change of studies and the university re-entry.

TABLE 14 VARIABLES FROM THE AQU CATALONIA DATABASE

Before the drop out (*ex ante*)	
Student's sociodemographic and social variables	Age Gender Nationality Studies in the origin home Employments in the origin home
Academic variables previous to the university entry	Entry branch A level modality Access grade
Degree program that has been dropped-out	
Variables of the degree program that has been dropped-out	Degree program area Does it have an access grade? University
Performance in the degree program	Accumulated passed credits Number of years Average of passed credits per year before the drop out Enrolled credits in the drop out year
After the drop out (*ex post*)	
Post drop out situation	Re-entry Re-entry year Degree program area (same degree program area as before or area change) Re-entry university (same university or university change)

Situation at the beginning of the university studies (before the drop out)

In the dimension of the previous situation before the university studies drop out, we have information referring to sociodemographic and social variables of the students, as well as of prior academic variables to university entry. If we had information of these variables for all of the students, the totality could be compared to the drop out profile.

Socio-demographic and social profile

The socio-demographic profile of the students that give up their university studies does not show clear differentiating features as to age, gender, parent's studies or employment.

Regarding the drop out distribution according to the age (table 15), we can see how these problems affect the different groups of ages.

TABLE 15 DROP OUT PERCENTAGE DISTRIBUTION BY AGES

	Percentage	Summed up percentage
18-20	16.6	16.6
21	16.5	33.2
22	13.5	46.6
23	10.2	56.9
24-25	15.0	71.9
26-30	19.1	91.0
31 i més	9.0	100.0
Total	**100.0**	

In relation to gender we can point out that the drop out affects boys more than girls: 51.4% compared to 48.6%, respectively. If we take into account that there are more girls than boys[15] the university drop out is more common in boys. (table 16).

[15] The data on registration for the same academic year (2000-2001) for the whole of Catalan university system is of 18,569 for women (54.6%) and 15,293 for men (45.2%).

TABLE 16 DROP OUT PERCENTAGE BY GENDER

	Frequency	Percentage
Men	11,102	51.4
Women	10,518	48.6
Total	**21,620**	**100.0**

As for the origin home variables, the father's and the mother's studies (table 17) and the father's and the mother's employment (table 18), the high percentage of no answer (40%) does not allow us to draw clear conclusions. However, it is observed that the drop out does not affect a concrete social group in a clear way: the sons/daughters of parents with university studies (15.1%) as well as for those with primary studies (18.1%) are represented.

TABLE 17 DROP OUT PERCENTAGE DISTRIBUTION BY THE FATHER'S AND THE MOTHER'S STUDIES

	Frequency	Percentage	Valid percentage
No information	8,798	40.7	49.4
Up to primary studies	3,219	14.9	18.1
Secondary studies	2,145	9.9	12.0
University studies	2,688	12.4	15.1
Others	973	4.5	5.5
Total	**17,823**	**82.4**	**100.0**
No answer	3,797	17.6	
Total	**21,620**	**100.0**	

TABLE 18 **DROP OUT PERCENTAGE DISTRIBUTION FOR THE FATHER'S AND THE MOTHER'S STUDIES**

	Frequency	Percentage
No information	8,993	41.6
No answer	3,797	17.6
Others	2,485	11.5
Medium services technician	2,450	11.3
High head-technician	2,231	10.3
Medium technician other sectors	1,240	5.7
No degree	424	2.0
Total	**21,620**	**100.0**

Academic variables prior to university entry

As for the academic variables of the students prior to entry at university, we have information regarding the origin branch, high school modality and the access grade.

The origin branch of the students that give up their degrees indicates that the main access profile to the university corresponds to students coming from A levels and from vocational training. This is not unusual at all, given that the main access itinerary and that proportionally there are more students that access from A levels than from vocational training schools (table 19).

TABLE 19 **DROP OUT PERCENTAGE DISTRIBUTION BY STUDENT'S ACCESS BRANCH**

	Frequency	Percentage
A-level; high school degree	12,921	59.8%
Vocational training	2,271	10.5%
Above 25 years of age	1	0.0%
Graduated	839	3.9%
No information	5,588	25.8%
Total	**21,620**	**100.0%**

The analysis of the high school degree modality provides relevant information (table 20). The data shows that among the total of students that give up their studies, there are two very significant groups: the students that have done the selectivity (university entrance examination) out of Catalonia (with a 18.4% drop out rate) and for students whom we do not have information because it comes from transfers (29%).

TABLE 20 DROP OUT PERCENTAGE DISTRIBUTION BY HIGH SCHOOL MODALITY

	Frequency	Percentage
Art	157	0.7%
Nature and Health Sciences	2,446	11.3%
Humanities and Social Sciences	3,715	17.2%
Technology	1,856	8.6%
Selectivity out of Catalonia	3,979	18.4%
Others (GCE A-level studies, foreigners with selectivity...)	81	0.4%
With no information because of transfer	6,275	29.0%
No applicable (Vocational training, +25, graduates)	3,111	14.4%
Total	**21,620**	**100.0%**

We can take note as an hypothesis that we are dealing with students that were in Catalonia temporarily or that came to Catalonia to start university studies and that probably after some time changed of residence and, therefore, dropped-out of the Catalan university system; but the available data does not allow us to go beyond this. However, since we are talking about nearly half of the students who drop out of university (18.4% + 29 %), it is significant enough to take into consideration and further scrutinize this data.

We can not have available data on the number of students who are out of the Catalan system and that enroll in university, to be able to ascertain, if the previous data is correlated with student drop out or if these students return to their origin or nearby to finish their degree, as in the case of Portuguese students enrolled in a degree in medicine.

From the rest of the students, we can see how the students that have done their A-level in Arts and Social Sciences (17.2%) and in Nature and Health Sciences (11.3%) and the students that come from a vocational training / 25 years and older / graduates (14.4%) represent the main drop out collectives. This behavior is predictable if we consider that one of the branches with the greatest drop out at university is Social Sciences and that the majority of high school students of this modality are enrolled in Social Sciences degree programs.

Ultimately, the information on the access grade to enter the university allows us to check out how drop outs are not influenced in this sense. The idea that students with lower access grades are

more likely to drop out of their studies is false: students with notes between 5 and 6 drop out of university the same as students with notes between 6 and 7.

TABLE 21 PERCENTAGE DISTRIBUTION ON DROP OUT BASED ON ENTRY NOTE

	Frequency	Percentage	Valid percentage
A 5 access grade	4,122	19.1	27.6
Between a 5 and 6 access note	5,012	23.2	33.6
Between a 6 and 7 access grade	4,184	19.4	28.1
More than a 7 access note	1,590	7.4	10.7
Total	**14,908**	**69.0**	**100.0**
System	6,712	31.0	
Total	**21,620**	**100.0**	

DROP OUT RATES IN STUDY PROGRAMS

In this section we focus on those variables that allow us to analyze the information related to the degree programs that have been abandoned, as well as the academic performance (in relation to the credits passed) of the students in the university studies before leaving them.[16]

Degrees comparison

If the we make a comparison between the different degree programs offered by the Catalan public universities, we can find important differences regarding drop out distribution that goes from 4.4% as the minimum value up to a maximum value of 87.5%. In relation to these rates, however, it is necessary to highlight that degrees that are being compared have different number of new entry students and very different characteristics (such as the access note, degree access, full/part-time, schedules...). However, the majority is distributed among 20% and 60% (graph 3).

[16] It must be taken into account that the aggregated analyses are carried out by degrees and universities, as we show in the macro scale analysis section.

GRAPH 3 **DROP OUT RATE**

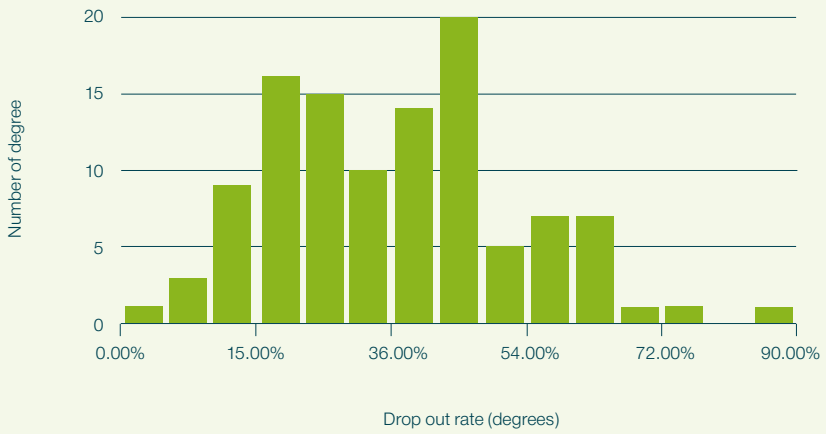


Table 23 shows the drop out rate of degrees independent of the university.[17] The five qualifications with a minor drop out percentage are Podiatry, Physiotherapy, Veterinary Science, Early Childhood Education and Oenology. In contrast, the degrees with a higher drop out percentage are Portuguese Philology, Romance Philology, Arab Philology, Public Administration and Management, and Diploma in Maritime Navigation.

Next we show a comparative table (table 22) with the drop out distribution of five different degrees. It is based on degree selection in order to carry out an exhaustive research: Business Administration and Management, Biology, Computer Engineering, History and Medicine (the selection of these specific degrees is justified in the following chapter).

[17] The intention of this table is not to make a ranking of degrees with a rate of higher drop out, but to show the variability between them.

TABLE 22 MAIN DATA ON FIVE SELECTED DEGREES

	Drop out rate*	New entry*	Enrolled credits**	Average age**	Performance rate***	Access grade**
Business Adm. And Man.	28%	1,770	64	22	65%	6.1
Biology	29%	847	66	21	68%	6.3
Computer Engineering	38%	834	63	22	62%	5.7
History	43%	837	63	26	65%	5.0
Medicine	16%	768	76	21	85%	7.5
Total**	**34%**	**33,862**	**63**	**23**	**69%**	**5.9**

* Data referred to course 2000-2001.

** Average in courses from 2000-2001 to 2005-2006.

*** Data referred to course 2005-2006.

**** It refers to the whole Catalan university system.

TABLE 23 DROP OUT DISTRIBUTION PERCENTAGE BY DEGREES WITH UNIVERSITY INDEPENDENCE

Business Management and Administration	29.3%
Social and Cultural Anthropology	42.9%
Architecture	22.7%
Technical Architecture	24.6%
Fine Arts	27.3%
Information and Documentation	28.8%
Biology	28.2%
Biochemistry	15.4%
Actuarial and Financial Sciences	39.4%
Environmental Sciences	12.7%
Business studies	32.9%
Statistic Sciences and Techniques	48.8%
Food Sciences and Technologies	22.7%
Business management and Administration	26.7%
Audiovisual Communication	19.7%
Diploma in Naval Machines	39.1%
Diploma in Maritime Navigation	63.6%
Documentation	27.8%
Law	41.5%
Economics	29.5%
Social Education	22.4%
Agricultural Engineering	21.3%
Industrial Electronics and Automatic Control Engineering	39.3%
Channels and Ports Engineering	51.7%
Electronic Engineering	43.6%
Forest Engineering	20.0%
Geological Engineering	63.2%
Industrial Engineering	38.8%
Computer Engineering	44.1%

TABLE 23 DROP OUT DISTRIBUTION PERCENTAGE BY DEGREES WITH UNIVERSITY INDEPENDENCE (CONTINUATION FROM PREVIOUS PAGE)

Material Engineering	44.8%
Engineering in Industrial Organization	36.8%
Chemical Engineering	31.5%
Agricultural Technical Engineering (Farm Exploitations)	47.8%
Agricultural Technical Engineering (Hortofructicult. and Gardening)	28.2%
Agricultural Technical Engineering (Agricultural and Food industries)	32.1%
Agricultural Technical Engineering (Rural Mecanitz. and Constr.)	60.9%
Technical Forest Engineering (Forest Industries)	55.9%
Technical Industrial Engineering (Electricity)	38.1%
Technical Industrial Engineering (Industrial Electronics)	47.5%
Technical Industrial Engineering (Mechanical)	36.1%
Technical Industrial Engineering (Chemistry)	36.6%
Technical Industrial Engineering (Textile)	23.1%
Technical Engineering on Computer Management	46.6%
Technical Engineering on Computer Systems	46.9%
Mining Engineering	27.3%
Technical Naval Engineering (Propulsion and Services)	47.9%
Technical Engineering on Public Buildings	44.0%
Technical Telecommunications Engineering. (Electronic systems)	45.5%
Technical Telecommunications Engineering (Telecom. systems)	22.2%
Technical Telecommunications Engineering (Telematics)	23.8%
Technical Topography Engineering	37.7%
Telecommunications Engineering	32.0%
Oenology	12.5%
Statistics	46.3%
Pharmacy	14.4%
Hebrew Philology	57.1%
German Philology	58.2%
English Philology	41.0%
Arab Philology	70.4%
Catalan Philology	43.4%
Classical Philology	61.8%
Slavic Philology	61.1%
French Philology	51.2%
Galician Philology	62.5%
Hispanic Philology	44.8%
Italian Philology	56.5%
Portuguese Philology	87.5%
Romance Philology	72.7%
Philosophy	57.7%
Physics	55.6%
Physiotherapy	6.3%
Geography	41.2%
Public Management and Administration	64.5%
History	47.0%
Art History	45.8%
Music History and Sciences	48.1%
Humanities	39.6%
Nursing	15.0%
Market Research and Technics	30.9%
Linguistics	44.9%
Degree on Naval Machinery	22.0%
Degree in Nautical Studies and Maritime Transportation	18.5%
Speech Therapy	18.3%

TAULA 23 DROP OUT DISTRIBUTION PERCENTAGE BY DEGREES WITH UNIVERSITY INDEPENDENCE (CONTINUATION FROM PREVIOUS PAGE)

Mathematics	47.8%
Medicine	16.4%
Teacher of Special Education	18.3%
Physical Education Teacher	21.0%
Teacher of Early Childhood	10.4%
Music Teacher	35.7%
Teacher of Primary Education	17.5%
Teacher of Foreign Language	31.3%
Odontology	14.5%
Optics and Optometry	30.1%
Pedagogy	36.3%
Journalism	15.4%
Podiatry	4.4%
Psychology	27.8%
Psychopedagogy	29.0%
Advertising and Public Relations	20.0%
Chemistry	43.9%
Labor Relations	30.5%
Sociology	42.7%
Literary Theory and Comparative Literature	55.7%
German Translation and Interpreting	27.9%
English Translation and Interpreting	18.2%
French Translation and Interpreting	27.8%
Animal Science and health	9.4%

Performance in the dropped-out studies

The data shows that almost 58% of the students that drop out of the university studies mainly do it during the first year of the degree, 23% after two courses and 19% in the third or fourth year from the beginning of the university studies (table 24). This gives an average time at university of a little more than one year and a half, precisely 1. 66 years, before leaving studies.

TABLE 24 DROP OUT DISTRIBUTION PERCENTAGE BY NUMBER OF STUDIED ACADEMIC YEARS

	Frequency	Percentage	Accumulated percentage
One course	12,484	57.7	57.7
Two courses	5,024	23.2	81.0
Three courses	3,021	14.0	95.0
Four courses	1,091	5.0	100.0
Total	**21,620**	**100.0**	

If we analyze the number of years studied segmented by universities (table 25), we can confirm that the first year is critical, however, we do not observe differences between universities.

TABLE 25 DROP OUT DISTRIBUTION PERCENTAGE BY THE NUMBER OF STUDIED YEARS BY UNIVERSITY

	UAB	UB	UdG	UdL	UPC	UPF	URV	Total
One course	56%	55%	60%	60%	59%	63%	67%	58%
Two courses	24%	24%	23%	19%	27%	16%	16%	23%
Three courses	14%	15%	12%	15%	11%	15%	13%	14%
Four courses	6%	6%	4%	6%	3%	6%	4%	5%

We do not observe major differences (table 26) between types of degrees; what is outstanding is that the majority of students who drop out of technical studies do it during the first year (61%). A possible explanation to this phenomenon is the difficulty of passing the first course of the UPC (technical studies) because of their permanence rules.

TABLE 26 DROP OUT DISTRIBUTION PERCENTAGE BY NUMBER OF STUDIED YEARS AND BY KNOWLEDGE AREA

	Humanities	Experim. Sciences	Social Sciences	Technical	Health Sciences	Total
One course	57.8%	52.1%	56.7%	61.0%	56.6%	57.7%
Two courses	20.8%	27.2%	22.7%	24.2%	22.2%	23.2%
Three courses	15.5%	15.6%	14.9%	11.2%	15.1%	14.0%
Four courses	5.9%	5.0%	5.7%	3.6%	6.0%	5.0%

Table 27 is an account of the information related to the student's performance in the studies that he/she drops out of as to the enrolled and passed credits.

The data shows that the students that give up their studies have enrolled to an average of 54.5 credits and have passed an average of 38.3 of the degree in which he/she leaves. If we take into account that a «type» bachelor's degree includes 300 credits and that the desirable performance in a university student is to complete between 65 and 70 credits per academic year, we can affirm that the performance of a student that drops out of university is rather low.

TABLE 27 AVERAGE ENROLLED AND EARNED CREDITS AT THE DROP OUT MOMENT

	Enrolled credits in the current course drop out	Accumulative credits earned in current course drop out	Average number of credits earned before drop out
Average	54.50	38.39	20.20
Standard deviation	20.24	53.61	27.78
Minimum	0.00	0.00	0.00
Maximum	135.00	522.00	409.50

However, these general data on the student's performance are different according to the type of degree that is abandoned (table 28).

TABLE 28 AVERAGE NUMBER OF ENROLLED AND PASSED CREDITS AT THE DROP OUT MOMENT BY DEGREE AREAS

	Average studied credits by year prior to the drop out	Enrolled credits in the drop out course	Accumulated passed credits in the drop out course
Humanities	23.62	56.43	45.62
Social Sciences	22.04	54.95	41.87
Experimental Sciences	18.80	52.68	37.66
Health Sciences	34.47	62.42	62.27
Technical	14.43	52.40	26.80
Total	**20.20**	**54.50**	**38.39**

From all the degree areas, the Health Sciences is the one with a higher average of studied credits per year before the drop out, followed by Arts, Social Sciences, Experimental Sciences and, finally, the Technical degrees area.

The students who drop out of university with a lower academic performance are concentrated in the Technical area of degrees (52.5 enrolled credits the year that they give up their studies with 26.6 accumulated passed credits in that same year), followed by the Experimental Sciences degrees (52.6 and 37.6, respectively). The Sciences of Health degrees are those degrees in which the students that give up their studies have a higher number of enrolled and accumulated passed credits in the drop out year (62.4 and 62.2, respectively).

POST DROP OUT SITUATION

It is necessary to consider the student's post situation after they drop out their studies in the analysis of the university drop out situation. The database worked on only shows information related to the existence of re-entry to another degree. This data allows us to know if we are talking about a university drop out or a re-orientation in the academic trajectory.

The results show that almost 63% of the students who have given up their studies do not re-enter into another degree and, therefore, completely gives up the university studies (table 29).

TABLE 29 DISTRIBUTION PERCENTAGE ON STUDENT'S THAT RE-ENTRY UNIVERSITY

	Frequency	Percentage	Accumulated percentage
No re-entry	13,564	62.7	62.7
Re-entry	8,056	37.3	100.0
Total	**21,620**	**100.0**	

Taking into account the importance of the drop out proportion on those students who have sat the selectivity exam in Catalonia or that have accessed the Catalan university system by transfers, we have to be very careful interpreting the re-entry data, since probably an important part of these students continue with their university studies outside of Catalonia (and, therefore, they turn up as no re-entry in the Catalonian AQU's database).

The data confirm (table 30) that these students (transfers and selectivity outside of Catalonia) is what shows a higher percentage of no re-entry (about 80%), which would reinforce the hypothesis that these students go back to their origin place. It would be interesting to verify this hypothesis in nearby studies and that, therefore, this can be the drop out reason. The rest of students show much higher re-entry rates in another degrees; the students of the Technical and Health Sciences area degrees stand out with, 65.7% and 59.8%, respectively, by their re-entry in another degree. The students of the Arts are in a totally contrary situation since almost 76% of them do not re-enter university.

TABLE 30 DISTRIBUTION PERCENTAGE OF STUDENTS THAT RE-ENTRY UNIVERSITY BY THEIR ORIGIN A-LEVEL MODALITY

	Re-entry indicator		Total
	No re-entry	Re-entry	No re-entry
Arts	75.8%	24.2%	100.0%
Health Sciences	40.2%	59.8%	100.0%
Humanities	53.5%	46.5%	100.0%
Technology	34.3%	65.7%	100.0%
Selectivity out of Catalonia	65.5%	34.5%	100.0%
Others (GCE A-level studies, foreigners with selectivity...)	82.7%	17.3%	100.0%
With no information because of transfer	74.5%	25.5%	100.0%
No applicable (vocational training, +25, graduates)	80.0%	20.0%	100.0%
Total	**62.7%**	**37.3%**	**100.0%**

It is probable that some of these drop outs are caused by the so-called «culture» that exists in some of these branches (e.g. Art) from the idea of starting to work before finishing the studies.

Regarding the years that it takes for a student to re-enter the university after he/she has given up the studies, in table 31 we observe that it is about a year for the majority (25.7%). This data brings up the hypothesis that maybe these students did not access the right option and had to wait a course in order to be able to change towards the desired degree. However, there is almost 63% of students for which it is not known when they re-enter, if they ever do.

TABLE 31 YEARS THAT TAKE TO RE-ENTRY AFTER DROPPING OUT

		Frequency	Percentage	Accumulated percentage
Valid	0	643	3.0	3.0
	1	5,550	25.7	28.6
	2	682	3.2	31.8
	3	801	3.7	35.5
	4	297	1.4	36.9
	5	83	0.4	37.3
	Not aplicable	13,564	62.7	100.0
	Total	**21,620**	**100.0**	

The degree areas that readmit more students are Experimental Sciences and Health Sciences areas. On the other hand, the degree areas that have a lower re-entry are Technical and Social Sciences, collected in table 32.

TABLE 32 RE-ENTRY DEGREE AREA

		Frequency	Percentage	Accumulated percentage
Valid	Humanities	1,010	4.7	4.7
	Experimental sciences	3,428	15.9	20.5
	Social Sciences	635	2.9	23.5
	Technical	337	1.6	25.0
	Health Sciences	2,646	12.2	37.3
	Not applicable	13,564	62.7	100.0
	Total	**21,620**	**100.0**	

Finally, if we stop and examine the universities that have the most re-entered students (table 33), the UB counts the largest percentage of students, while at the other extreme the UdL has just 1.5% of students who return there to study.

TABLE 33 RE-ENTRY UNIVERSITY

	Frequency	Percentage	Accumulated percentage
UAB	1,426	6.6	6.6
UB	2,679	12.4	19.0
UPC	1,788	8.3	27.3
UPF	442	2.0	29.3
UdG	721	3.3	32.6
UdL	321	1.5	34.1
URV	679	3.1	37.3
Not applicable	13,564	62.7	100.0
Total	**21,620**	**100.0**	

If we analyze the degrees with the most re-entries (table 34) , 40% of these take place in the following type of degrees: Information and Communication, Teachers, Production Advanced Technologies, Business and Occupational.

TABLE 34 DISTRIBUTION PERCENTAGE OF STUDENTS THAT RE-ENTRY UNIVERSITY BY THEIR RE-ENTRY DEGREE

	Frequency	Percentage
507 Information and Communication Technical Area	877	10.9
210 Teachers	752	9.3
505 Production Advanced Technologies Technical Area	683	8.5
202 Business	552	6.9
204 Occupational	510	6.3
201 Economy and Business Management and Administration	444	5.5
101 Geography and History Area	388	4.8
203 Law	343	4.3
302 Nature and Biology	286	3.6
508 Communication and Information Area	255	3.2
205 Politics	231	2.9
501 Architechture	212	2.6
208 Psychology	211	2.6
102 Philosophy and Humanities	195	2.4
506 Production Advanced Technologies Area	194	2.4
502 Technical Civil Engineering	173	2.1
105 Philology 2	162	2.0
401 Sanitary graduates	149	1.8
666 Universities own degrees	147	1.8
104 Philology 1	146	1.8
509 Agricultural Technical Area	143	1.8
206 Comunication	135	1.7
303 Physics and Mathematics	134	1.7
402 Medicine and Odontology	115	1.4
211 Tourism	104	1.3
209 Education studies	99	1.2
301 Chemistry	92	1.1
504 Nautical Area	54	0.7
108 Fine Arts	51	0.6
207 Documentation	46	0.6
403 Pharmacy and Food Science and Technology	38	0.5
106 Philology 3	35	0.4
103 Comparative studies	29	0.4
503 Civil Engineering	29	0.4
511 Aeronautics area	16	0.2
404 Animal Science and Health	13	0.2
510 Agricultural area	9	0.1
555 Double degrees	4	0.0
Total	**8,056**	**100.0**
88 Not applicable	13,564	
Total	**21,620**	

Table 35 shows the crossover between the degree area that is dropped out and the area in which is re-entered. This table allows us to analyze the degree area changes. The results show that Social Sciences and Technical areas are internal drop out between degrees (about 80%). That is, the students that give up a degree in these areas re-enter another degree in the same area. Therefore, there is little mobility between Social Sciences and Technical areas.

However, the data from the Arts and Health Sciences areas show that half of the ones that drop out of them, re-enter university but changing area. In the case of the students that give up an Arts study, either stays in the same area or re-enters a Social Sciences degree (43%). In the case of Health Sciences, half of the ones that give up the studies and re-enter, stay in the same area or pass to a Social Sciences degree (almost 30%) or to studies in the Technical degree area (10% approximately).

The Experimental Sciences area is the one that has a major re-entry in other degree areas: only 32.7% of those that give up this area re-enters a degree in the same area. The re-entry in Social Sciences and Technical degrees area is highlighted (29% and 21%, respectively).

TABLE 35 DISTRIBUTION PERCENTAGE OF STUDENTS THAT RE-ENTRY UNIVERSITY BY ORIGIN DEGREE AND RE-ENTRY GRADE

Knowledge area		Re-entry degree area					
		Humanities	Social Sciences	Experim. Sciences	Health Sciences	Technical	Total
Humanities	Recount	**553**	458	13	12	30	1,066
	% by row	**51.9%**	43.0%	1.2%	1.1%	2.8%	100.0%
	% by column	**55.0%**	13.4%	2.5%	3.8%	1.1%	13.5%
Social Sciences	Recount	333	**2,178**	37	51	96	2,695
	% by row	12.4%	**80.8%**	1.4%	1.9%	3.6%	100.0%
	% by column	33.1%	**63.6%**	7.2%	16.2%	3.7%	34.2%
Experimental Sciences	Recount	64	273	**309**	101	199	946
	% by row	6.8%	28.9%	**32.7%**	10.7%	21.0%	100.0%
	% by column	6.4%	8.0%	**60.4%**	32.1%	7.6%	12.0%
Health Sciences	Recount	12	76	23	**118**	26	255
	% by row	4.7%	29.8%	9.0%	**46.3%**	10.2%	100.0%
	% by column	1.2%	2.2%	4.5%	**37.5%**	1.0%	3.2%
Technical	Recount	44	442	130	33	**2,278**	2,927
	% by row	1.5%	15.1%	4.4%	1.1%	**77.8%**	100.0%
	% by column	4.4%	12.9%	25.4%	10.5%	**86.6%**	37.1%
Total	**Recount**	**1,006**	**3,427**	**512**	**315**	**2,629**	**7,889**
	% by row	**12.8%**	**43.4%**	**6.5%**	**4.0%**	**33.3%**	**100.0%**
	% by column	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Attempting to give an answer to the question of whether the re-entry shows a significant relation with the modality of high school modality and, therefore, if a student's re-orientation in the study areas can be observed, in table 36 we present this data crossover.

The results show that this study re-orientation phenomenon does not occur. We only detect that in the case of the Nature and Health Sciences high school modality an important percentage of students re-enter in the Technical area (19.3%). What we observe in the rest of the cases is a change of degrees in the same area.

TABLE 36 DISTRIBUTION PERCENTAGE OF STUDENTS THAT RE-ENTRY UNIVERSITY BY RE-ENTRY DEGREE AND PRIOR HIGH SCHOOL MODALITY

High school modality	Re-entry degree area					
	Humanities	Social Sciences	Experim. Sciences	Health Sciences	Technical	Total
Vocational training not applicable	27,8%	26,7%	18,2%	18,4%	22,7%	24,6%
No information	22,2%	17,3%	23,8%	21,0%	21,4%	19,9%
Arts	2,2%	0,4%				0,5%
Nature and Health Sciences	6,5%	12,8%	49,8%	56,8%	19,3%	18,3%
Humanities and Social Sciences	39,5%	36,8%	0,8%	3,8%	0,6%	21,4%
Technology	1,9%	6,0%	7,4%		36,0%	15,3%
Total	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**

Finally, table 37 shows the re-entry results according to the university where the student re-enters and the change or maintenance of university.

The data show that the University of Barcelona is the one that receives more student drop out re-entries. The UB, in particular, is a receiver of a quite important percentage (half) of those that had started the studies at the University Pompeu Fabra.

TABLE 37 **DISTRIBUTION PERCENTAGE OF STUDENTS THAT RE-ENTER UNIVERSITY BY DROP OUT UNIVERSITY AND RE-ENTRY UNIVERSITY**

		Re-entry university							
		UB	**UAB**	**UPC**	**UPF**	**UdG**	**UdL**	**URV**	**Total**
UB	Recount	1,485	266	198	144	126	34	62	2,315
	% university of the drop out degree	64.1%	11.5%	8.6%	6.2%	5.4%	1.5%	2.7%	100.0%
UAB	Recount	415	716	89	60	77	26	43	1,426
	% university of the drop out degree	29.1%	50.2%	6.2%	4.2%	5.4%	1.8%	3.0%	100.0%
UPC	Recount	306	245	1,397	103	50	18	43	2,162
	% university of the drop out degree	14.2%	11.3%	64.6%	4.8%	2.3%	0.8%	2.0%	100.0%
UPF	Recount	273	81	28	126	13	6	12	539
	% university of the drop out degree	50.6%	15.0%	5.2%	23.4%	2.4%	1.1%	2.2%	100.0%
UdG	Recount	98	59	34	1	438	9	10	649
	% university of the drop out degree	15.1%	9.1%	5.2%	0.2%	67.5%	1.4%	1.5%	100.0%
UdL	Recount	33	27	18	3	9	216	23	329
	% university of the drop out degree	10.0%	8.2%	5.5%	0.9%	2.7%	65.7%	7.0%	100.0%
URV	Recount	69	32	24	5	8	12	486	636
	% university of the drop out degree	10.8%	5.0%	3.8%	0.8%	1.3%	1.9%	76.4%	100.0%
Total	**Recount**	**2,679**	**1,426**	**1,788**	**442**	**721**	**321**	**679**	**8,056**
	% university of the drop out degree	**33.3%**	**17.7%**	**22.2%**	**5.5%**	**8.9%**	**4.0%**	**8.4%**	**100.0%**

IN SYNTHESIS

On this final note, we present a synthesis of the main appraisal related, firstly, to the student drop out profile at university, while noticing its academic and personal aspects, and, secondly the type of studies that the student has dropped-out of. Ultimately, we focus on the main database limitations.

Student Drop out Profile

Personal aspects

The university studies drop outs affect girls and boys of different age groups almost in the same way. However, in our context, the student drop outs can not be related to the level of studies or with parents employment. In this sense, the sociodemographic profile of the students is not a determining factor in the drop out phenomena. What we can state is that there is almost 3% more drop outs in boys than in girls.

More than half of the students who give up their studies drop out during the first year. This corroborates what other research has made evident: that it is necessary to pay special attention to students in the first year at university and to promote specific retention strategies. The average time that a student who drops out stays at university is a little more than a year and a half.

The OCDE's 2007 report sustains that starting and not finishing a university study program does not necessarily mean failure if the student benefits from the time dedicated in the program to be able to go to another program at an inferior level. In many cases, not achieving a degree does not mean that the acquired skills and competences are lost and not valued in the job market. The report explains the case of Canada, where a year of studies can bring attractive job opportunities to the students.

In our context, one reason which may explain this situation after the first year can be that the students can access their first choice option rather than the available option. Regarding the type of education, it is necessary to highlight a higher drop out percentage in the first university year of technical studies. This aspect should consider the processes and mechanisms of academic promotion that the different study programs and universities regulate.

Academic aspects

The greater number of drop outs are concentrated in students who accessed university from high school while there are fewer drop outs who come from second degree vocational training and the higher vocational degrees. This data is not unusual at all if we consider that these are the most common ways to access university. On the other hand, drop outs percentages are more pronounced in students that went through selectivity in other autonomous communities and in those that have transferred. This should promote student's mobility and student exchanges, given that these students can continue studying in the communities where they came from. Even so, we don't have data that completely confirms this conjecture.

Referring to the relation between the different academic branches, the students who drop out of their studies come from Arts and Social Sciences, as well as from the professional training and of the university entrance examination for those over 25+ years of age. The access grade is not considered a relevant data that helps to explain the university drop out.

The student who drops out of his/her studies usually has a low academic performance: the credits that he/she passes are more or less half of those necessary to be considered a student with an optimum academic performance. In relation to the type of study the students that drop out of Technical and Experimental Sciences degree areas are those that have a lower number of passed credits. This situation is not the same in Health Sciences degrees where students have a higher academic performance.

Ultimately, regarding the possibilities to re-enter other university studies in Catalonia, the analysis shows that more than 60% of the students that drop out of their studies in 2000-2001 have not re-entered the university system. This does not mean that it is not likely that a percentage of these students continue their studies out of the Catalan university area, although we do not have data that corroborate it. The higher number of students that do not re-enter university are concentrated among those that took the selectivity tests out of Catalonia or that moved there. On the other hand, the majority of students that re-enter the university system are those that dropped out of Technical and Health Sciences degree areas.

Type of studies with higher drop out rates

All the Catalan universities are faced with the drop out problem by a certain number of students. There are not many differences between the universities regarding the drop out rate that stands at an average of 33.6%. If we set up a ranking, 37% student drop outs are from the UPC, followed by the UB, the UAB and, lastly, the UdL with a 28% drop out rate. These data are relative because the universities with a more absolute number of drop outs are those that have a higher enrollment rate.

The differences are clearer according to different degree choices. The drop out rates by degree choice oscillate between 20% and 60%, and can be increased a bit more in some engineering courses or diminished in less traditional studies like Oenology or Physiotherapy which present very low drop out rates. We must keep in mind that the degrees can be vary greatly as for discipline typology, education and learning culture, number of students or student/teacher ratio, facilities, student support, etc, and that different levels of satisfaction show, motivation and academic quality, can be crucial drop out factors. Some of the studies that have a higher drop out number are in order of importance: the degree areas of Social Sciences, Technical and Arts, although it is necessary to recognize the wide range of degrees in each area.

Data limitations

The analysis of the results of this research allows us to demonstrate the concern that the entire university system, individual universities, faculties and degrees have on drop out rates through research processes which are vital in order to develop measures to fight this phenomenon. The research limitations are related to the insufficient indicators or variables that allow us to relate the drop out causes in a more significant way, and the lack of possibilities to compare these data with

the global enrollment data. For these reasons, the research results can only generally point out the profile of student who drops out and the percentages and the studies typology of the degree programmes that they dropped-out of. Nevertheless, it is interesting to know what happens with the students that re-enter, although we can only count those that re-enter in the Catalan university system.

We consider it necessary to develop new instruments that allow us to measure the drop out rate in all its complexity; in other words, it is necessary to collect data linked to: a) other academic variables like the learning processes and learning pace, the academic trajectory, the received orientation, the study motivation, the evaluation of the studies done, etc; b) variables on the relationship between the student and the institution and its implication on the drop out; c) institutional variables such as the academic support and the student's orientation, and d) variables of a personal nature such as employment and the student's economic situation and socialization, among other issues. These data would allow for a delve deeper into the causes for dropping out in order to search for new and more effective solutions to this problem.

4. THE SEARCH FOR AN EXPLANATION: DESCRIPTIVE RESEARCH ON THE DROP-OUTS IN CATALAN UNIVERSITIES*

INTRODUCTION

As we previously commented, the statistical exploitation of the AQU's Catalonia database has a series of limitations which are necessary to compensate with further in depth studies. To this end, a further main objectives of this work is to propose some validated and reliable instruments that allow the study the university drop out in all its complexity. This chapter intends to experiment with a proposal of instruments that offer the opportunity to know which student variables or factors affect in a real way the decision to not continue studying so as to take them into account in the elaboration of prevention and/or correction proposals for institutional measures.

DESCRIPTIVE AND INTEGRAL RESEARCH

Thanks to the database provided by AQU Catalonia, we have obtained some useful results in order to describe some characteristic features and a first profile of the students that drop out of their studies at Catalan universities. From this point, and with the objective of facilitating the knowledge of the phenomenon, we have carried out fieldwork that complements the conclusions obtained in the first analysis of the profile and the performance of this student's collective and that adds personal elements in understanding the causes underlying this academic situation. This preliminary and exploratory research, of descriptive and integral character, includes quantitative and qualitative elements from the methodological point of view in the data collection phase. During the period from September to December 2008, we have carried out exhaustive telephone surveys and interviews to students who have dropped-out of their studies and who started during 2000-2001 and 2001-2002 academic years.

The chapter provides a synthesis of the results obtained through the surveys and the descriptive research of qualitative character. In first place, we provide a methodological description of the work that we have carried out which is followed by a presentation of the results obtained, stressing on the drop out causes, the academic factors (previous orientation, motive for choosing the degree

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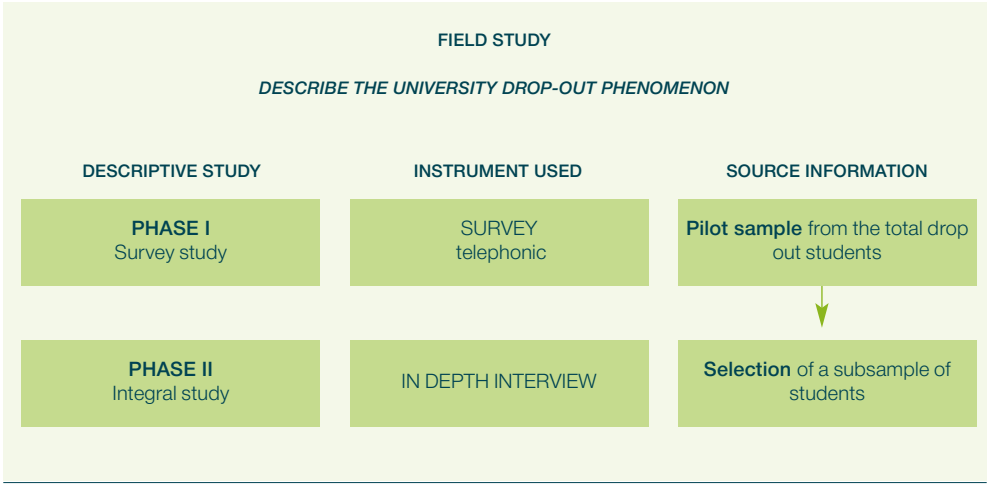
program, degree difficulties, etc) and variables related to the social integration in accordance with the drop out typology. Finally, we reflect on the limitations that we have detected in this pilot study in order to consider them in later research and offer some initial conclusions.

FIGURE 3 **FIELD STUDY PHASES**



Information collection instruments

The bibliographical revision carried out has brought up the nonexistence of a standardized system that allows the study and the knowledge of the causes that lead a student in a determinate moment to decide not to continue with the started university studies. Although it is true that concrete experiences have turned up in Spain associated with certain university typologies of open character like the UNED where, logically, the desertion or the drop out is a clear indicator of a worrying institutional failure, these experiences are not under any circumstances directly applicable to the rest of universities.

For this reason, we have created a survey model and an interview script (see appendix 1 and 2) that enclose all the theoretical variables that the different theoretical models consider relevant for the explanation of the university studies drop out.

Picture 2 illustrates the collected information and its level of analysis:

PICTURE 2 ANALYSIS LEVEL IN THE FIELD STUDY

MOMENT	DIMENSIONS	VARIABLES OF THE SURVEY	INTERVIEW INFORMATION
Pre-drop out aspects (*ex ante*)	Personal and family background	Personal: gender, age, marital status Family: studies and parent's employement	Information and activities linked to the university choice Orientation actions and useful tutorships for the university incorporation University and studies choice reasons
	Academic background	Center typology where the student comes from, access way, average grade between the access studies and the access grade	
	Motivations	Degree preference, orientation when choosing, criteria of degree choice (academic, occupational, others)	
During the studies	Academic data	Degree, university, course and study shift	University studies expectations The most useful aids offered by the university Main changes and difficulties at university that lead to the drop out The difficulties found when studying University external reasons that contribute on the studies drop out
	Economic data	Type of financing: scholarships, work and relation with the studies	
	Academic integration	Study dedication: type of student, class attendance, non-attendance motives, hours of study Motivations: satisfaction with the initial expectations, studies utility, motivation to finish Assessment of the integration in the academic life	
	Social integration	Relationships with equals, attendance to social activities	
	Satisfaction	Academic dimensions: taken subjects, teachers, quality of the classes, curriculum and teacher's plannings, tutorships Services dimensions: library, cafeteria, reprographics, classroms equipment, laboratory, professional practice, study classrooms, sport activities, campus, social activities	
In the drop out moment	Personal situation	Age, family and labor situation	
	Academic situation	Course, semester and shift Number of permanence years at university, number of passed credits	
	Motivations	Main drop out reason	

PICTURE 2 ANALYSIS LEVEL IN THE FIELD STUDY (CONTINUATION FROM PREVIOUS PAGE)

MOMENT	DIMENSIONS	VARIABLES OF THE SURVEY	INTERVIEW INFORMATION
Post-drop out aspects (*ex post*)	Employment situation	Employment situation, studies continuation, university re-entry	Aids and resources needed to continue the studies
	Academic situation	Studies continuation, type of studies, university	Ideas to improve the degree program and the learning process
	Re-entry intentions	Re-entry in the university studies, university	Conditions under which one would be able

The survey

To be able to analyze the drop out student's profile in an exhaustive and real way of the, we have designed an exclusively adapted instrument to the mentioned objective; therefore, a primary source information. Precisely, for the quantitative part we have used a model of survey structured in six sections or well differentiated blocks.

The first of them, «**Information on basic personal aspects**», focuses on the personal situation of the ex-student and tries to identify the specific personal features of each polled. There is a second block, «**Information on academic aspects**», which tries to go deep into the academic life that the student took when he was studying, in how he got to university and in what his degree choice was based on. A third block, «**Information on satisfaction aspects**», encompasses information related to the appraisal that the student makes of several aspects related with the institution and the degree program in general. The fourth block of questions, «**Information on economic aspects**», makes reference to the economic and work situation in which the student was when he was at university. A fifth section, «**Information on personal aspects**», also deals with the polled personal features, but it goes much further than the first block, of more general character. In this case, after having maintained a conversation for some time with the ex-student and having established rapport, he/she is asked for his/her marital status, his/her parent's study level, and his/her personal appraisal of the degree. Finally, a sixth section, «**Information on social aspects**», attempts to throw light on the student's relationships in his social environment and his appraisal on his academic life and the university in general.

To finish up, on a more personal and qualitative note, in the last section of the survey we have given the student the possibility to be able to give his/her opinion on any subject that he/she finds convenient or on which he/she expressly wanted to express through comments, suggestions or observations.

The survey consists of sixty-five questions. Except for the personal and academic data, in the majority of questions, the student has to express an opinion on an appraisal scale that ranges from 1 to 10. This way we can collect homogeneous and extrapolative results that allow us to determine the profile of people that drop out of their studies.

Before carrying out the pilot test of the survey, we asked experts on the academic performance in higher studies to validate the content. Their contributions made us correct some punctual questions, without creating repercussions in the global design of the data collection instrument.

Interview in depth

In order to go deeper into the drop out reasons and complement the information obtained in the survey, we have designed a personalized interview model. The interview has been considered as an instrument that helps us to delve in the drop out student's profile as well as in the causes, situation and circumstances that motivated him to take the decision..

The interview script is divided into three big sections: a first descriptive section where we collect the identification data that have already been an object of analysis in the survey but that provide indispensable data to place the interviewer and to be able to characterize the results later; the development which constitutes the corpus will allow us to make an exhaustive research, and a last open section that collects information that can be important for the student.

The interview contains eleven sections, that they reply to the **identification of an explanatory model** of the type of drop out that takes place in the Catalan university system and that allows to corroborate the correspondence with a integrating model of economic, academic and personal accomplishment factors.

We consider the following sections:

1. **Information and activities that the student received** when ho choose the degree and the university: the different academic and personal aspects that were present at that time (non-university studies, university, family, employment, colleagues, friends, etc).
2. **Appraisal on the orientation and tutorship** that have been more effective in the decision to go to university (visiting day, university visits to the high school, family day, campus visits, Education fair, web page, individualized sessions, tutorships with the family, informative brochures, talks and informative sessions, reception day, welcoming reception, orientation conferences, student advisors, individual tutorships, propedeutical subjects, etc).
3. **Degree and university choice motives** (geographical proximity, good reputation, friends and relatives references, for its services, job opportunities, education area, academic degrees, vocation, etc).

4. **Confrontation between the expectations and the university reality**: causes and level of difference, if it is established, between both (yes, no, better than what I thought, why?, etc.).
5. **Appraisal on the aids provided by the university**: talks at the beginning of the course, knowledge of the subjects, student advisors, student's guide, web page, reception day, orientation conferences, faculty assemblies, tutorships, attention to the students, degrees coordination, reception plan, etc.
6. **Main difficulties** that motivated the university studies drop out (the teacher's role, the work and study demand, the role as a student, the control, the evaluations importance, the methodological diversity, the autonomous work, the time distribution and the schedules, etc).
7. **Degree difficulties** when facing the work that the chosen degree implies (program quality, lack of time to study, evaluation ignorance, material excess, lack of study techniques, lack of concentration and motivation, combination of studies and work, transport, etc).
8. University **external reasons** that contributed to the studies drop out (personal, economic, social, etc).
9. **Support and institutional resources** which the student would have liked to have to continue his studies (conference day and reception plans, propedeutic subjects, computer services and libraries, tutorships, scholarships, etc).
10. **Suggestions** in order to improve the education and learning process at university and propitiate the continuity of the studies (time organization schedules, more aids and resources, other evaluation opportunities, study techniques, tutorships and personalized attention, rate reduction, etc).
11. **In which conditions** the student would re-entry the university studies (time flexibility, methodology and suitable evaluations, personalized attention, etc).

The questions have an open character and have been personally carried out. An average of an hour was established to carry out the interviews and we highlighted the importance to collect as much detailed and individualized information as possible.

The study sample

To carry out the field study it has been necessary to make a series of analyses to decide the sampling criteria. In first place, from the database facilitated by AQU Catalunya, we did a drop out analysis by degrees and areas, and, therefore, the sample has been selected through a proportional stratified sampling that takes into account the student's drop outs at the Catalan public universities and the data on new entry students in order to calculate the drop out rates (course 2000-2001) by degrees.

Five degrees (one for each knowledge area) have been selected to guarantee a balanced representation balanced among all the sampling variables (degrees, number of students, universities, etc). The five most representative degrees from the five areas are: Business Administration and Management, Biology, Computer Engineering, History and Medicine (in table 11 we can observe the drop out rate related to each degree).

After choosing the degrees, we have proceeded to the localitzation and selection of the pilot sample. The applied process has been the following one:

1. Identification and selection of the universities that are going to participate in the pilot study: Autonomous University of Barcelona (UAB), University of Barcelona (UB), University of Girona (UdG), Polytechnical University of Catalonia (UPC), Pompeu Fabra University (UPF) and University of Lleida (UdL).
2. Institutional request at the participant universities in the pilot test of the lists of students who dropped-out of their studies in the selected degrees.[18]
3. Once we received the lists, we selected a sample from a random sampling, taking into account a proportionate distribution by students and degrees of each selected.

Before carrying out the telephonic surveys, we gathered a group of pollsters who received a training session on the research aim and its presentation to the ex-students, the important questions of the survey and the possible questions. This guaranteed one only message. Internet was also used as an instrument of data collection because of the impossibility of carrying out some telephone surveys.

[18] We want to thank the help and the collaboration of the different vice deans of the Catalan public universities for facilitating the data on the students who have dropped-out of their studies, which has allowed us to carry out the field study.

To summarize which data have been taken into account and how we have carried out the field study, we present the technical fieldwork's card:

Temporary field: the survey is related to students that entered their university studies in 2000-2001.

Geographic field: we focus on the public Catalan universities.

Population: all the students that entered to their university studies that year.

Size of the theoretical sample: 801 students.

Type of sampling: in multiple stages, random and stratified.

Information collection method: telephone.

Sampling period: September-December of 2008.

Effective sample: 275 students.

Response rate: 35.625%.

Global margin of error: +/- 5.3%.

Confidence level: 95.5%.

Regarding the interviews in depth, it is necessary to say that a subsample was taken that followed the same criteria employed in the case of the telephonic surveys. All the interviewed students were previously polled and showed their predisposition to collaborate in this study. size of the theoretical sample was of thirty students, but the effective sample has seventeen students, who were interviewed during November and December 2008.

The temporary limitations have not allowed us to reach all of the planned interviews. Although we consider that the perceptions of these students can not be representative, they do offer us a more detailed information on their personal and academic situation and of the drop out determining factors. In table 38 we show the distribution of the students who were interviewed by degrees and universities.

TABLE 38 SAMPLE'S DISTRIBUTION BY UNIVERSITIES AND DEGREES

	Business Admin. and Management	Biology	Computer Engineering	History	Medicine
UB		2			
UdG			1	1	
UPF	2				
UAB	2	1	1	1	2
UdL	2				
UPC			2		

FIELD STUDY RESULTS

Next we present the field study results obtained from the survey proposed to the students who have dropped-out of their studies in the Catalan public and the student's contributions in the in depth interviews.

At first, the proposed theoretical sample consisted of 801 **surveys**, but the effective and final sample has ended up with 275 students. We can explain this contrast between the number of surveys carried out and the foreseen ones, on the one hand, because of the period of time that we have had to contact the ex-students and, on the other one, due to having the incorrect telephone numbers for an effective telephone interview, the fact of not finding the ex-student's in the addresses and, in minor proportion, the fact some of them refused to take part in the study.

Even so, although the collected data are not enough representative to be able to take measures in the whole of the universities, they are sufficient to be able to attain the foreseen objective in a first approach to the non-persistence reality. At the same time, we manage to experience an improvement of the knowledge on the personal and academic profile of the students who give up their studies, as well as the causes of this phenomenon with an instrument that makes it possible. Tables 39 and 40 inform of the sample's distribution.

TABLE 39 SAMPLE'S DISTRIBUTION BY DEGREES

Degree	Theoretical sample	Effective sample	
		Num.	%
Business Admin. and Management	292	133	45.5
History	138	53	38.4
Biology	140	43	30.7
Computer Engineering	138	34	24.7
Medicine	93	12	12.9

TABLE 40 SAMPLE'S DISTRIBUTION BY UNIVERSITIES

University	Taxa d'abandonament
University of Barcelona (UB)	44.4%
Autonomous University of Barcelona (UAB)	32.2%
University of Girona (UdG)	8.5%
University Pompeu Fabra (UPF)	6.3%
Universitat of Lleida (UdL)	5.2%
Poly technical University of Catalunya (UPC)	3.3%

From the survey, the profile of the students who dropped-out of university according to their academic aspects is the following: we focus on the students who entered the university system in course 2000-2001 (76.1% in course 2001-2002, 4.8% in course 2002-2003, 0.4% in course 2003-2004 and 18.7% in posterior promotions); the average age is of 22.2 years in the drop out moment, with a standard deviation of 5.075 years, and the number of courses carried out before leaving the studies is 2.14 (with a standard deviation of 1.380).

In 91.9% of the cases we are treating a the voluntary drop out a typology, that is, that he/she was not forced by the permanence regulations of the university. There is, however, 6% that does not give an answer. In regard to the moment in which they decided to abandon their studies, 69.8% dropped-out when the course finished, with independence of the drop out typology.

Of the polled people, 50.7% are women and 49.3% are men, percentages that are close to the student reality. 88% of the students who gave up their studies were single, 70% lived with their parents, 12% lived with other colleagues in a rental flat and 90% did not have children. Students covered from their residence to the university an average of 16.72 kilometers and it took them an average time of 25 minutes to get there. Related to the studies that they did, 34.5% took the

afternoon shift and 3.9% took both morning and afternoon shifts (full-time), and 61.6% took the morning shift.

Regarding their work life, 60% manifested that they worked while they were studying. Out of these, 49.6% worked fifteen or more hours per week and 13.2% less than fifteen hours per week. It is interesting to highlight that of this 60% of students that worked, 67.5% worked in jobs that were not related to their studies.

In the literature about university drop outs, the parent's employment is also reflected as a relevant variable regarding their sons academic life. In particular, regarding the father's employment, it is necessary to highlight that 38% were qualified workers and 19.2% were business or public institutions directors or managers. On the other hand, regarding the mother's employment, the major percentage — of 32.2%— coincides with the father's employment in the sense of exercising tasks as a qualified worker. However, 19.3% did not have a remunerated work.

With regard to the type of funding that the students counted on while they were studying, it is necessary to highlight that 55.8% of the polled ones says that their parents funded their studies, while 29.7% worked to be able to pay them and 9.4% had scholarships, fundamentally as an enrolment aid.

Following the dimensions shown in picture 2, the different student profile who has given up university education according to a longitudinal study in time are shown in the following section: pre-drop out, during the studies, in the drop out moment and post-drop out.

Student profile previous to the university studies: pre-drop out aspects

Academic aspects

75% of the interviewed students came from high school (24.9% from the Social Sciences branch, 17% from the Scientific-technological branch and 16.3% from Health Sciences), while only 4.9% came from the 25 or older access test or from VET's. It is necessary to remember these results are conditioned by the sample's composition, where the student's answer rate in the Social Sciences branch is much higher than in the rest of branches. In 15.78% of the cases, the university students entry was by transfer or from previous degrees. Regarding to the high school typology where they studied, almost 50% coursed their last year of secondary school in public high schools, while 20.2% coursed it in private centers and 25.6% in state subsidized centers.

The measured academic capacities from the access grade reflected the following data: the polled students said to have an university access grade of 6.74, with a 0.88 of dispersion, and a previous to the university average grade of 7.22, with a dispersion of 0.93.

Orientation and information level for the choice of a university

76.3% of the polled students accessed their first option degree, 17.1% their second one, 3.1% their third one, 2.3% their fourth one, 0.8% their fifth one and 0.4% accessed their eighth option.

The majority of the polled students accessed the education that they preferred from a series of previous orientations coming from different sources, from the high school or by personal initiative. In table 41, the ranking of the two priority orientations is shown when choosing the university career. The own initiative and the personal interest are the two reasons that had more weight in this type of students.

TABLE 41 MOST VALUED ORIENTATIONS IN CHOOSING A DEGREE

ORIENTATION	Num.	%
Own initiative	174	36.63
Personal interest	146	30.74
Family environment	40	8.42
Orientation by highschool teachers	31	6.53
Friends	25	5.26
None of the above	22	4.63
Advised from people who have studied that degree	20	4.21
Visit to education fairs	8	1.68
Education guide	7	1.47
Visit of a university professor to the highschool	2	0.42

These two options are corroborated in the interviews. The interviewed people manifest that the main information and activities linked to the choice of a university that they received before carrying out the enrolment came from relatives and from people close to their environment. Mainly, these people advised them about the suitability of doing some determinate studies depending on its job opportunities.

> «My father is a doctor and my mother is a nurse, and this conditioned me to study a certain degree. When I asked for information on other degrees they told me that as a doctor I would have more opportunities.» (UAB, Medicine)

The information acquired through the institutional web pages, open house organized by the different universities, leaflets and informative brochures, and education fairs also contribute in the university and degree choice. The talks by university professors, on the studies presentation and the ones carried out in high schools by older students have also helped students to choose their studies and university, even though it has a minor contribution.

Generally, the received information and the activities carried out are positively valued and its utility is highlighted. However, a third of the polled students consider that these aids did help them too

much because they did not orientate them as clearly as they would have wished. In this sense, they would have preferred to have more information on the job opportunities, the degree program and on the subjects.

53.6% polled students that accessed their first option studies and later dropped-out of them affirm that their degree choice was based on a personal initiative in contrast with the 44% that accessed to their second and third option.

Regarding the criteria that they based themselves on to choose a degree that they later dropped out of (table 42), we find that, in first place, the professional expectations and opportunities (both of them add up more than 50% of the whole of chosen criteria).

TABLE 42 CRITERIA BASED ON TO CHOOSE A DEGREE

DEGREE CHOICE CRITERIA	Num.	%
Professional expectations	129	27.98
Job opportunities	110	23.86
None of the above	85	18.44
Access grade	41	8.89
Degree's prestige	25	5.42
Near family household	20	4.34
Family environment	18	3.90
Degree's eassiness or hardness	14	3.04
University's prestige	13	2.82
Degree's duration	6	1.30

The percentages show differential tendencies if we consider the degree's choice order. In this case, 34.6% of the polled students that affirm to have accessed their degrees in second and third option coincide with the access grade, making this one the main criteria.

Eleven of the sixteen students that were interviewed in person also add that the geographical proximity of the universities to their homes is a strong reason when they choose the university. For many students it is important to study near their home, especially if they also work, because if they had to go to study outside they could not be able to keep up with all activities that they carry out in that moment. On the other hand, one third of the polled students also choose a university for its prestige, that is, for its commitment with the environment, its educational policies and its international prestige.

«Studying in this university went well for me because of its proximity to my home.» (UB, Biology)

So, the reasons that justify the degree choice are linked to the vocation, to the job opportunities and to a continuation of second cycle degrees and VET's. However, there are people that chose their studies without being very convinced, because they were guided by high school recommendations, by family influence or by its job opportunities after the degree.

> «I really liked computers and I had worked a lot with these machines. Because of that I thought that I would like to study this degree.» (UPC, Computer Engineering)

Profile during the university studies

Orientation and tutorships at the incorporation period

Students interviewed in person consider the talks and the informative meetings useful since they provide orientation at the moment of university incorporation. The conferences that presented the degrees, the open house days, the faculty reception days, the welcoming day and/or the subjects initial sessions appraised positively, since they allow to clarify doubts and offer a first contact with the university area and knowledge on the degree functioning.

> «The open house day that I attended was a key factor to decide I wanted to study this degree at this university.» (UB, Biology)

Regarding the tutorships, even though they can adopt several modalities (academic, personal, etc), students don't really use them, excluding when they become compulsory (for example in the moment of formalizing the registration), fact that converts them into a mere formality that the students have to follow. It has also been manifested that the necessary information on how to work at the university was received by other colleagues, and not from institutional supports.

The number of people that does not remember and/or considers that there were not any useful orientation and tutorship actions at university is certainly considerable. In this group, there are people who express that they did not received any action of these types, or who did not attend it, or they ignore them or they affirm that when they started to study there was not any.

> «Basically, I do not remember any type of guiding action in particular. The information that I needed to function properly I received from other colleagues and from the web page. It would have been interesting to undertake some activity of this type because at first you are a little bit lost.» (UdL, Economics)

Dedication to the studies and academic integration

A direct factor of the academic performance is the effort and the time that the student dedicates to his studies. According to the opinion of the polled students, their assistance to class had a declining tendency in 58.1% of the cases, constant in 38.9% of the cases and increasing in 3% of the cases. The three main motives that they have manifested as reasons for not attending to classes are because they had access to notes from previous years (16%), because they preferred

to invest that time in other more interesting activities (10.9%) and because the professors did not explain themselves well enough and they got bored (8.6%). These three motives where the ones that were mentioned with more frequency among the polled students, but there are also others motives. Of these motives a lack of motivation is deduced from the students. In this sense, the students who have given up their studies affirm that they dedicated an average of 6.4 hours to it weekly. Curiously, the students who have not overcome the permanence regulations manifest that they dedicated up to 7.83 hours (deviation of 5.98).

In the whole of the sample, the indicators of academic integration (motivation for the studies, utility, implication in the studies and level of satisfaction with the degree and professors) show lower averages than the social integration factors. Likewise, the opinions are homogeneous and coincident given the punctuations of the standard deviations. In table 43 the degree is shown in accordance with certain aspects related with the academic integration, all of them are evaluated in a scale from 1 to 10.

TABLE 43 LEVEL OF AGREEMENT WITH THE ACADEMIC INTEGRATION INDICATORS

ACADEMIC INTEGRATION	Average	Standard deviation
I was motivated to finish my studies	4.65	2.89
I got deceived while I was studying and on seeing the suject content (false expectations)	5.75	3.03
I thought/felt that I had to finish my studies	5.30	3.00
I felt responsible and implicated in my studies	5.78	2.65
I found the studies useful to find a later on job	5.37	2.85
I felt integrated in the academic university life	5.06	2.85

As the literature on university education says, the social aspect of the university is very important and is one of the fundamental parts that make the student experience the university life one way or another. To check out what the students think about social aspects, the survey also proposes some questions regarding this area. In table 44 the results of the average appraisal that is made in a scale from 1 to 10. As we can observe, the punctuations are not very high. In particular, the assistance to social activities has obtained an average grade of 3.37.

TABLE 44 AGREEMENT LEVEL WITH SOCIAL INTEGRATION ASPECTS

SOCIAL INTEGRATION	Average	Standard deviation
I made new friends at university and I felt integrated in a group	6.36	2.93
My attendance to social activities that were carried out at university	3.37	2.55

Regarding the student's satisfaction aspects with the studies and the university in general, the results are shown in table 45. In an analogous way to the rest of the field study, we have used a scale from 1 to 10 for student's appraisal. As we observe, the satisfaction that the polled students have shown regarding the academic aspects (professors, degree programs, tutorship) is inferior to the one related to other institution services. In particular, the best appraised services are the laboratories, with an average of 7.22, and the service of professional practices, with a punctuation of 6.98. The sport activities service and the library have also been appraised very positively, with 6.94 and 6.90 respectively.

TABLE 45 AGREEMENT LEVEL WITH SATISFACTION ASPECTS

SATISFACTION		Average	Standard deviation
Satisfaction with the academic aspects	Coursed subjects	5.81	2.22
	Professor's tasks	5.60	2.16
	Quality of the classes	5.60	2.24
	The subjects syllabus	5.73	2.19
	The degree program	5.61	2.30
	The academic tutorship service	5.36	3.37
Satisfaction with the other institution services	The library service	6.90	2.47
	The cafeteria service	5.97	2.71
	The transportation service	6.20	2.75
	The reprography service	5.83	2.52
	The class materials and settings	5.10	2.29
	The laboratories	7.22	3.51
	The professional practices service	6.98	3.65
	The study rooms services	6.23	2.89
	The sport activities services	6.94	3.42

In relation to the interviews, the main changes and difficulties that students found at university and that meant the studies drop out are linked to the inefficiency of the personal and professional orientation and the motivation. The lack of orientation refers to the advice in the choice of university and of degrees, while the discourage obeys to the lack of conviction in the studies carried out and not enjoying of the academic and university life.

> «The university environment seemed gray and hardly motivating to me. It seemed like everybody took care of their own business and this did not encourage me to keep studying.» (UPC, Computer Engineering)

On the other hand, the degree demands, sometimes, is also a change that the polled students highlight from the university. As a matter of fact, some of them highlight that in highschool they «almost did everything for you but at university you have to do everything on your behalf». Other difficulties correlate, for example, with the exhaustion of official examination announcements of a subject.

The development of a work activity means a second important difficulty in the realization of the studies. The impossibility of reconciling the studies with the work because of the schedules of these two areas is a motive to drop out the university studies. These situations do not facilitate the class attendance, the realization of group assignments, etc., which makes the students end up taking the decision to stop studying.

> «It was impossible for me to make studies compatible with work. The work schedules that I had did not allow me to be able to attend the classes.» (UdG, History)

There are also more particular difficulties, such as health problems, individualism, lack of connection with certain professors, transportation, etc, that are drop out motives in some students. Just in two cases we did not find any change or difficulty at the university that was determining in dropping out of university studies.

On the other hand, the polled students also consider the accessibility and the professionalism of the professors like a help during the studies. However, sometimes there are criticisms on a lack of coordination between the professors of the same subject as for the education and learning syllabus, and that it is necessary to develop attitudes that improve the motivation towards the study. In the same way, in some case the help provided by the same colleagues is considered very important. In return, the lack of scholarships and financial aids is pointed out as a negative aspect in order to be able to continue the studies.

One of the aids that offer the universities and that the polled students consider most useful during the studies are the tutorships, since they provide a suitable and appropriate orientation for the development of the respective studies. Despite this, we recognize in some cases the poor use of this service.

> «I keep very good memories of the individual tutorships that I carried out with the professors of my degree. They were useful to me because they provided some good orientations.» (UAB, History)

More than a third of the interviewed people highlighted the fact of not remembering any type of institutional help while they were studying. Of these, some recognize the existence of help services offered by the university, but, in any case, any of them resorted to any aid while they studied.

Situation at the drop out moment

We can affirm that in the moment of dropping out of the university studies, the polled students had an average of 63.97 credits passed, that is, as an average, they had completed the first academic year; but this is not global, since the standard deviation is very high, of 68.12 credits. This result fully coincides with what the literature on university drop out says. In 91.9% of the cases there has been a typology of voluntary drop out typology of abandonment voluntary, that is, that it was not forced by the university's permanence regulations. There is, however, 6% that does not answer. Regarding to the moment in which they decided to give up their studies, 69.8% dropped-out after finishing the course, with independence of the drop out typology.

Reasons for drop out

In answer to the key question of the survey about which was the main reason that made the student decide to give up the university studies, 28.8% affirmed that it was the lack of motivation that made them drop out (table 46).

TABLE 46 MAIN REASON TO DROP OUT OF STUDIES

DROP-OUT REASONS	%
Lack of motivation	28.8
Work reasons	18
Non-fulfilled expectations	16
Others	14
Schedule incompatibility	8.4
Family reasons	5.6
Economic needs	4
Opportunities that are offered	3.6
Family pressure	1.6

The whole of drop out reasons have been classified, in accordance with the type of attributions that the polled students have stated, in internal causes (lack of motivation and non-fulfilled expectations) and external causes (the rest of categories), in which the given explanation is related with factors that are out of reach to the student. 44.8% of the sample attributes the drop out decision to internal causes.

The analysis of the student's profile according to the attribution of the drop out causes shows important differences:

- 100% of the expelled students referred to external causes.

- 60% of the students who accessed their first option degree and 75% of those that accessed to their second and third option claim their drop out decision to external causes, compared to 89% of the students who accessed their degrees in «other options», that claim this decision to internal causes like their lack of motivation for the studies.
- 20% of the students who attribute the drop out decision to internal causes affirm that the main reason of their studies choice is the access grade, in front of 9% of the students who attribute the decision to external causes.
- The family influences and the academic environment in the choice of the studies are more important in students that indicate as a drop out reason the lack of motivation or the non-fulfilled expectations.
- The analysis by degrees shows different results. The Biology (59%) and Computer Engineering (75%) students attribute the drop out decision to internal causes. At the other extreme, we find that Business Management and Administration students (60%), attribute the drop out to external causes.
- Men and women make similar attributions; however, the analysis by ages does show differences. Thus, the average student's ages who affirm to have given up the studies for external causes is higher (average of 29.2).
- The attendance rate and the dedication to the studies are factors that differentiate two groups of students according to their attribution.
  - 63% of the students who attribute the drop out decision to internal causes studied at full-time and their attendance average stood between 50% and 70%, with a strong declining attendance tendency (63%).
  - 58% of the students who attribute the drop out decision to external causes studied had a part-time dedication and 55% worked fifteen or more hours weekly. Their attendance average was inferior.

Regarding the academic and social integration at university, the statistical analysis brings to light significant differences in five of the eight indicators. The most significant difference is related with the item «I got deceived while I was studying and on seeing the subject's content», with an average of 7.28 for the group that claims the drop out decision to internal causes in front of an average of the 4.66 for the group who claims it to external causes (table 47).

TABLE 47 COMPARISON BETWEEN INTERNAL AND EXTERNAL DROP OUT REASONS

REASONS	Internal cause	External cause
I was motivated to finish my studies (*)	4.03	5.10
I got deceived while I was studying and on seeing the subject's content (false expectations) (*)	7.28	4.66
I thought/felt that I had to finish my studies (*)	4.82	5.63
I felt integrated in the university academic life (*)	5.88	4.62
I made new friends at university and I felt integrated in a group (*)	6.86	6.00

For more than one third of the interviewed students in person, the expectations regarding to the university studies worsened. The main reasons of this situation were due to the fact of it not being clearly convinced that theyreally liked the chosen studies, to a lack of interest and to the impossibility of reconciling the academic with the work life. In some cases they manifested that the educational methodology was not suitable, that the studies were similar to the ones in high school, that the schedules were unsuitable or that it was impossible to access other studies of second cycle.

> «My expectations worsened because on the first period of four months I had to do five subjects and I only liked the professors of two of the subjects. I stopped attending Physics, for example: we did not study anything new, all we did was already done in high school.» (UAB, Biology)

Other people consider that their expectations improved and were positive. In this sense, they affirm to have enjoyed the studies acquiring knowledge, especially during the last years of the degree due to seeing a major linking of the studies with the professional practice. Likewise, the fact that the students perceive that the studies can provide them a good professional future contributes to the improvement of the expectations.

> «From all of us that started the degree, very few finished. The two last years are the best because you see how everything can be applied in practice.» (UAB, Computer Engineering)

On the other hand, there are also people who did not see how their expectations modified. Regarding this, they express that they already had created their expectations before entering into the university and that there were some subjects that they liked more than others.

The main difficulties that the polled students found in their degree were the lack of time and the impossibility of reconciling the academic life with the work life. According to the students who worked, they did not have enough time to do it, some timetables coincided with their work hours, they could not attend certain classes, the attendance was important in some subjects, they could not carry out group works or they did not have class notes.

«For me it was not easy at all to meet up with colleagues in order to do group assignments, because I also had to work at the same time.» (UPF, Economics)

The evaluation systems also mean a difficulty in the study for some students. Thus, the concentration of the evaluation responsibility in one only examination is criticized and a major flexibility of the evaluation is required, especially in the case of those people who study and work at the same time.

Other more concrete and particular difficulties have to do with the personal discourage, the lack of economic resources and of scholarships to face the studies, the death of a close relative, the dispersion of the equipments throughout the campus (classrooms, offices, etc) and the overcrowding of some classrooms. Only two of the interviewed students did not find any problem when they wanted to study.

«I dropped-out because of a personal issue on motivation. I was not clearly convinces on the degree aims.» (UdL, Economics)

The external causes at university that lead to the studies drop out are concentrated in the difficulties in reconciling studies and work, with the consequent lack of time. Afterwards, there are a series of personal reasons, like the discourage or the wanting to do other studies, which also explain the drop out.

«The timetables that the university offered were not compatible in order to study and work at the same time.» (UAB, Economics)

Other external causes and of a more concrete character that justify the studies drop out are the lack of external motivation, the willingness to sit public examination contests, the lack of economic resources, the geographical distance between the home and the center of studies, the transportation problems in private transport, the fact of having suffered an accident or the family advice and orientations to change studies.

Post-drop out situation

Academic and work situation

At the moment that the survey is made 83.4% of the polled students work. This is a high percentage, but it has to be taken into account that the sample is formed, mostly, by people who started to study in course 2000-2001 and, therefore, eight years have passed since they took the decision to give up their studies. 37.7% of these people combine work with their studies.

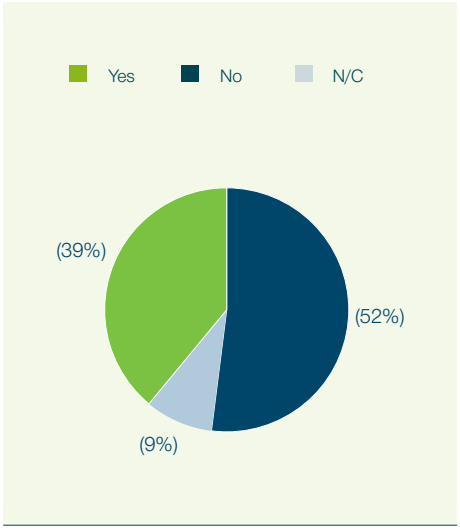
39.1% of the sampled people has continued studying after giving up a degree. In this case, almost three quarters go back to university. Another outstanding aspect is that often there has been a re-entry at the same university. Table 46 illustrates the situation of this sample.

Re-entry intention

Once the polled student has been asked about all the formerly mentioned areas and has picked up the information referring to academic, satisfaction, economic, personal and social aspects are collected, the final part of the survey includes two questions that make reference to a possible re-entry to the university system. They are two questions to know if, after a previous drop out experience, the student would be willing to go back and to continue studying at university. With these answers, we can find out if the polled people had such a bad experience that he/she does not want nor can attempt to go back to studying again or if he/she would be willing to try it again.

Next we attach two graphs that show the answers to these questions. As we can see, 39.1% of the people who gave up their studies would be willing to go back to university and continue the same studies (graph 4),. On the other hand, 71% of the polled people would also be willing to go back to studying, but it would have to be in other degrees in order to continue studying (graph 5).

GRAPH 4 **WOULD YOU RE-ENTER UNIVERSITY TO CONTINUE THE DEGREE YOU DROPPED-OUT OF?**



GRAPH 5 **WOULD YOU RE-ENTRY UNIVERSITY TO DO OTHER DEGREES?**

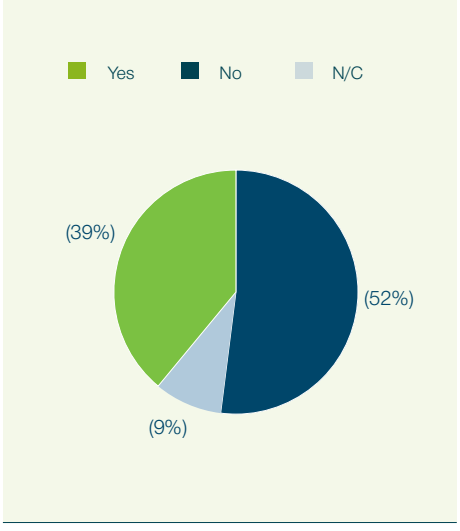


Table 48 collects the relationship between the university where they currently study and the one that they left. As we can see, the highest percentages show that normally the re-entry takes place in the university where they already studied. We can explain this fact because the students say that they appraise the proximity between their residence place and the university.

TABLE 48 RELATION BETWEEN THE DROPPED-OUT AND THE CURRENT UNIVERSITY

Current university	University that they dropped-out of						
	UAB	UB	UdG	UPF	UdLl	UPC	Total
UAB	48.3%	8.7%	0.0%	20.0%	100.0%	0.0%	**29.9%**
UB	34.5%	47.8%	33.3%	20.0%	0.0%	25.0%	**35.8%**
UdG	0.0%	26.1%	66.7%	40.0%	0.0%	0.0%	**14.9%**
UPF	6.9%	4.3%	0.0%	0.0%	0.0%	0.0%	**4.5%**
UdL	3.4%	8.7%	0.0%	20.0%	0.0%	0.0%	**6.0%**
UPC	3.4%	0.0%	0.0%	0.0%	0.0%	75.0%	**6.0%**
URV	3.4%	4.3%	0.0%	0.0%	0.0%	0.0%	**3.0%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

However, the supports and institutional resources that the interviewed students would wish in order to be able to continue their studies belong to the orientation area. In this sense, more informative talks on the university functioning and the future job opportunities, tutorships (in its several modalities) and the advice of other students in their last courses are claimed.

> «Maybe in that moment it would have been worthy to receive more support with tutorships and orientations, more support to reorient the personal situation in the university and not only in the started studies.» (UAB, Medicine)

In order to be able to reconcile studies and work, more opportunities are claimed in this line.As far as the combination of studies and work was possible, the studies could be continued. Therefore, it would be convenient to offer alternatives to the attendance classes or to enjoy reductions in the working days, for example. Other supports that are claimed are linked to a reduction in the degree tasks, to help in the transportation or to a major flexibility in general.

> «Maybe a degree program with less work, or simply distributed in more time, for the ones who work would be a good alternative.» (UAB, Computer Engineering)

The polled students bring ideas to improve the processes on education and learning that go from different evaluation opportunities to offer a greater diversity, a major follow-up of the students at the beginning of their studies, a reduction in the number of students for class group, an

improvement of the computer materials of the classrooms, the incorporation of activities linked to the professional practice and a major accessibility of the professors.

> «There should be more implication in order to provide major orientation in the first years and not only in the last ones and orientation on the labor market.» (UB, Economics)

Ideas to improve the university are also proposed, like the improvements in the motivation of the students towards the study, the specialization of the studies, activating work orientation strategies in the first courses, a professor increase to reduce large class groups, the existence of alternative degree programs for the students who work, the re-ordering of the timetables and the introduction of propedeutical subjects and reinforcement classes.

Near half of the interviewed people re-started their studies in other degrees, but the main condition that those who would want to reenter has to do with the existence of programs that allow the conciliation of the academic and work activities. Others claim an increase of the financial aids to be able to study, a major linking of the university with the businesses, the incorporation of methodologies that don't imply a full attendance, a more personalized attention, the promotion of aids to study abroad or the promotion of a more autonomous work on the part of the student. Finally, four people of the sample that for the time being they would not go back to university, even though they never closed the door to this possibility.

> «If I had a major flexibility in my work schedules, I believe that I would be capable of going back to the degree that I left and finish it, but this is unfortunately not possible for the time being.» (UB, Biology)

RESEARCH CONCLUSIONS AND METHODOLOGICAL LIMITATIONS

The university studies drop out research has as a final aim to be able to offer corrective measures that allow to propitiate a knowledge about which actions, the same university institution, should undertake to improve student's retention in the university educations, so that it is possible to attain a higher level of success than the current one regarding this aspect and to carry out posterior actions to the university entry that help students to continue and to finish their studies.

In the concretion of this chapter, the main contribution is the elaboration of two research instruments that did not exist before: the survey and the interview (see annex), and that they allow us to undertake new posterior researches.

The realization of the surveys has allowed us to approach the profile of the people who gave up their university studies, which has been extendedly described in this chapter. On the other hand, the interviews help us to broaden the knowledge of the circumstances in which the drop out and its causes were produced.

The data obtained, in spite of its quantity limitations by the reduction of the surveys and the foreseen interviews in the initial sample, allow us to make a first focus and location of the problem that is object of study, and provide appropriate and effective measures that help to reduce the drop out rates of the university studies.

The main difficulties in being able to obtain a major number of data have been linked to the need to have a more extense time to make the research. Likewise, it has been difficult to have the collaboration of the people who gave up their studies, probably for emotional reasons, of distance or, simply, of lack of culture to facilitate information.

AS A SYNTHESIS

Finally, we finish this chapter aiming briefly some of the significant questions which the results obtained from the field study allow us to advance.

About the realization of the research

The instruments used (survey and interview) have helped to complement the conclusions extracted from the analysis of students database who have given up the university education. The possibility to collect different type of information, that is beyond the institutional one, from the same student allows us to understand the complexity of the drop out phenomenon and, at the same time, to ascertain the different theoretical models and the explanatory factors. This first pilot test has demonstrated the importance of this type of study to understand why determinate students decide in a determinate moment to give up the started university studies and, also, to detect methodological limitations in which it would be necessary to solve in further applications. These limitations are related, on the one hand, with the need to collect more information about what causes the drop out, the personal consequences that it entails, the re-entry reasons, etc, and, of the other one, with the sample of the study. The fact of having worked with a reduced sample has made it impossible to analyze and to study in depth the drop out of minority collectives, as now those that access university though «25 years or older», the students of second degrees or students with some sort of handicap, among others.

About the incorporation in the university studies

Students choose the university studies mainly for own initiative and personal interest based on the orientations from relatives and close people to their environments. The selection of the university is usually justified by geographical proximity reasons, while aspects such as the prestige and the educational policies of each institution are relegated to a second term.

About the drop out reasons and some strategies

The obtained results, that have to be considered as a guidance given the pilot sample used related to the total drop outs at our universities, point out the fact that the lack of motivation for the studies, measured directly by a question and indirectly by the order of the degree choice, is the factor that explains better the decision to drop out of them. The lack of motivation has a direct incidence in the academic integration, fundamentally with a decrease of the assistance to class or to social activities, and in the attribution of the success or the academic failure. Moreover, the fact that the moment when the decision is taken is concentrated in the majority of cases during the first semester reinforces the importance of the retention actions by the universities.

More than half of the people who gave up their studies had a lack of conciliation between the academic and work activities; the rest attributes the drop out to internal causes (lack of motivation and non-fulfilled expectations). The vast majority worked in employments that were little or not at all not linked to the studies carried out. However, other reasons for which the assistance to class starts to decrease usually has to do with the fact that other colleagues facilitate class notes, the realization of other activities of interest, the boredom or the existence of a determinate non shared educational methodology. In any case, the great majority of the drop outs are usually of voluntary.

A strategy of education and learning that the person who gives up the studies appraises and at the same time claims is the tutorship. It is for the type of orientation that it provides, addressed to the improvement of the formative development. On the other hand, it also seems suitable to promote orientation strategies that facilitate the incorporation at university, like informative talks, open house, reception day, etc.

About the return to university

An important information for the universities is the possible re-entry of those people who have left the studies, or to re-entry the studies that they gave up or to go back to different degrees. In this sample the re-entry is not a characteristic feature: less than a quarter of the polled students have continued their university studies. The intention of re-entering the university again is present or, at least, the polled people answer this way in front of the question that asked if they would be willing to re-enter the university again, but the data still demonstrates that the drop out and non-reincorporation rates are still very high.

Therefore, the fact that these ex-students have an open door to re-enter the same university or that they have that intention to do it, is a satisfaction indicator regarding the quality of the institution. To make this possible, it would be important to start off mechanisms that allowed the conciliation between the work and academic lives. In this sense, they write down as possible aids development measures of non-attendance methodologies, personalized attention or a more autonomous work on the part of the student.

We must not forget students that have no intention of re-enter or to go back to study at university because they represent an important percentage (61.9%). Different formative measures should be taken for this type of students.

5. RETENTION STRATEGIES*

INTRODUCTION

Facing the drop out phenomenon, many universities have been designing for some time to implement and evaluate institutional plans and strategies to improve the retention and to increase the persistence of the students. The retention is considered a determining factor of prestige, credibility and economic stability of the universities and, consequently, of the university system. This is like this because, on the one hand, the retention assures high benefits to the university and to the society through the stable maintenance of the student's enrolments to guarantee the university budget; and, of the other one, because the satisfaction of the students and their implication in the formation contributes to the fact that they carry out and finish their studies with success. However, the retention is a necessary but non-sufficient condition. As Tinto (2005) states, the preventive strategies, supportive or correctives, but the reaffirmation of the important bases of the higher education are the secret of the retention.

This chapter emphasis in the need to set in a context and to diagnose the concrete needs of improvement for each institution, since not all the institutional retention programs and strategies that develop are applicable to our organizational and learning cultures. From here, we present a set of proposals or programs of prevention intervention that combine institutional catchment policies, admission and accompaniment of the student with the psycho-pedagogical advice and the student's academic support, the redesigning of the degrees and activities of high impact, the continued formation of the professors and the social offer of the university.

TYPOLOGY OF RETENTION STRATEGIES

From the undertaken actions in order to increase the retention and to improve the academic performance in different university systems, we must say that many of them are proposals that have to do with the improvement of the academic performance, adaptation and social integration, the orientation and the advice to the student, and that they are carried out in different moments of their formative process. In a synthesis exercise, Cabrera *et al* (2006) identify the following typology of actions:

* The authors of of the final versionof the chapter have been: Joaquín Gairín, Mònica Feixas and David Rodríguez.

a) **Actions that help the social and institutional adaptation**. With this type of actions it is a matter of fostering the student's social life, that is why the programs are directed to the organization of entertainment and cultural events; to introduce the institutional culture; to identify and develop the psychological processes that take place during the social and academic integration, or to take the differential characteristics of the several cultural groups of the students into account when designing actions.

b) **Student's adaptation actions**. Here we include actions thought to recruit non traditional students.

c) **Tutorship university programs**. They are related with modules of basic formation in skills (study habits, critical reading, social skills, research works, etc) sent to new entry students (mainly of degree, but also of postgraduate courses).

d) **Information programs and pre-university orientation** on the degree characteristics. These programs intend to broaden the information to the future students or to the new enrolled ones about the requirements for the degree, the competences which are necessary to develop, the profile of the graduate, the itineraries, the practices, the final projects, etc.

e) **Advice and study support programs**, especially training in strategies of learning and of psychological support. In this line, the proliferation and the enlargement of the services of information and university orientation are highlighted, as well as the development of programs of «curricular infusion».

f) **Institutional actions**. There are numerous directed experiences to the organizational redesign of the universities, in which they are foreseen strategic lines of performance as well as the incorporation of the necessary resources and infrastructures for its development. Among these, the ones related with the direct training of the responsible people for the execution of actions, as for the creation of the figure of the «leader of campus», highlight the training of the ones that help in the retention in the processes of help to the students, or the creation of learning communities. In our context, the experiences of the programs of students advisors can be included in this point.

g) Guides of **actions centered on the improvement of the social integration** of students that foresees practices in eight areas: academic advice, practices and administrative policies, recruitment, development of the professors, system of reward of the professors, information programs and orientation to the student, residential life and programming of matters related with the students.

h) Finally, actions **aimed to students of non attending universities** or registered in distance courses.

On the other hand, the National Audit Office (NAO, 2007) of the United Kingdom orders the strategies for the retention by whether if they are addressed to improve the information management; to increase the commitment to the institution and to the students towards the improvement of the processes of learning; to increase the support of the academic offer throughout student's orientation and tutorships, for the structural conditions for the learning, for the support of specialists, etc., or to broaden the offer of learning:

1. **Information Management**: the majority of institutions collect and spread information on their drop out rates in every course or faculty. Others use the information of the students, for example, on assistance, to identify students in risk of dropping-out of their studies. A minority of institutions carry out regular exercises to identify in a premature way the students who can give up the studies and to attempt to help them to establish the real reasons of their decision, especially when it is ascertained by a common motive.

2. **Strategic commitment with the retention**: it is important that the institutions have a clear strategic approach and that all the staff members understand it and accept it, so that they notice that the commitment with some major levels of retention can affect the way they work. Many institutions carry out activities to increase the retention, but a strategy is not always clear to all of the institution's staff members. Even when the strategy can seem clear there can be parts of the organization that demonstrate a major commitment than others.

3. **Student's commitment**: the students have to promise themselves to attend the class sessions and to fulfill their autonomous work. The universities can communicate this to the students and make a follow-up of those cases in which the commitment seems that is not ensured.

4. **Support to the academic offer**: the duly gifted tutorship systems help the students in an individual way to identify the extra support and the structures that they have within their scope to improve the opportunities of success. The institutions often offer preregistration courses and opportunities of learning support, but many find it difficult that the students use these services that would help them to «keep in the course» and to have a good performance. This can be given because sometimes the students as well as the academic staff consider that these services are destined to offsetting a «deficit» in a student's competence or skill. However, the universities can improve the promotion of these services as positive options to increase the possibilities of a good learning.

5. **Broadening the learning options**: some institutions, in particular those with a high percentage of non traditional students, are more flexible allowing that the students choose the options of learning that fits them better with their personal circumstances, for example through systems of understanding modules. There are other innovative methodologies, like the use of visual cases, which help to motivate the student (Triadó, 2008).

6. **Specialists and financial support**: all institutions have special services, like health, psychological or of social welfare. On the other hand, besides the ordinary financial aids, economic support is given through special scholarships, especially for students with bad economic situations. Some institutions are more proactive to offer financial support than others.

France also insists on some public devices to fight against the failure and the drop out. These correlate especially with tutorships carried out by students of second or third cycle, who are due to several objectives: *a*) the «membership» in terms of Coulon (Beaupère *et al*, 2007); *b*) giving support along the year; *c*) helping to reinforce the contents of the subjects, and *d*) to help the orientation in the event of absenteeism or "décrochage" («fall out»). The strategies include information and orientation workshops in the realization of projects, of study habits, to treat specific difficulties, etc, or of re-orientation towards another degree.

In any case, the existing diversity in the organization of the higher education institutions recommends that before presenting a concrete strategy proposal, we must examine the possible transfer from instruments and policies to the corresponding context. Stolk, Tiessen, Clift and Levitt (2007) point out this diversity in four big areas: the institutional approaches, the policy and the local government organization of the university systems; the organization of the studies; the funding, and the student population:

- Regarding the territorial organization of the university systems, there are countries like the United States where the higher education operates like a market with a wide and mixed offer of private and public institutions, in which the length, the quality and the variety of the courses and the price structures for each course makes it difficult to make a classification of this offer.
- As for the studies organization, it is different for countries where modular systems based on credits (Netherlands) are offered than in countries where the universities have mostly a fixed curriculum (Ireland). The autonomy and the own accreditation that these universities offer in some countries gives them more flexibility in the offer of different type of courses and on its organization. This flexibility as well as a modular system and the possibility of institutional evaluation researches seem to have a positive impact in student's retention.
- Financial aid varies depending on the countries. While in some countries it is necessary to pay the enrollment, in others countries like Ireland the budget to pay those costs come from the government. In Netherlands, the enrollment fees are fixed in the public universities and variable in the private ones, and can change according to the course and the university. It has been proved that some types of fees can have a negative impact on retention, especially in student from minority groups.
- Finally, the student population also varies according to the countries: there is countries where the student collective is very homogeneous (Ireland) and other countries like the United States, Australia or the Netherlands that have groups of students of ethnic minorities. This diversity can be considerate when comparing the percentages of retention between groups.

As we previously said, this variety directly prevents the transferring of any institutional action. Every possible approach to the design of retention strategies has to consider, an initial diagnosis that facilitates a profound knowledge of the political and socioeconomic characteristics of the institutional context and of the specific reality to which must give an answer to, and, from this point, determine the main priorities, objectives, interventions and resources that allow the strategy implementation.

SOME RETENTION STRATEGIES IN CONTEXT

In the Catalan university system context, we make an approach to the strategies delimitation depending on if they are done from the university system or are promoted by the institution. A part of these strategies are from the psyco-pedagogic area, this typology allows us to put in order some of the improvement, satisfaction and retention strategies more addressed to the university community, as well as to bring up new ones that have not yet been sufficiently tested. We classify them depending if they are generic or if they are confined to a specific time period (the pre-entry, the first year and during the university career).

In the first case, the university system's measures to facilitate the retention have to do mainly with the studies organization. The change of study plans that we are currently undergoing represents a good moment to reflect on the suitability of the modularity or the flexibility of the student's itineraries, for example through a double way: slow or fast. However, this requires the establishment of new financial aids to help the study of students with less income. The idea to continue promoting researches on the drop out, performance or satisfaction at university and, if it is proper, to establish a unit or observatory for the research in these subjects is highly suggested.

Also the diagnosis actions allow us to detect weaknesses in one or several aspects of the organization and the student's academic training. The evaluation program on the degrees directed by the Catalan University Quality Assurance Agency (AQU) has the aim, among others, to detect the degree's weak and strong points in order to design improvement plans that influence on the retention. These plans have to appear afterwards in the internal planning agreements. Through the program contract with the Catalan government, one of the financial funding ways is the extraordinary resources, which are conditioned to the achievement of some objectives. For the degrees that have high drop out rates, these objectives are linked to the capacity to improve the retention.

On the other hand, the university system actions that are precisely addressed to the students according to the moment in which they are at university are for different purposes. There are some that intend to promote the information systems and pre-university orientation and the joint with the previous studies, and others that allow to diagnosing the non-satisfaction reasons and can solve potential temporary or definitive drop out situations. These last purposes allow the

identification of students in a risk situation, especially when we are treating with a non-traditional student to whom alternative systems can be provided. The satisfaction happens when we ensure a quality education with activities of high academic and social impact; the mobility among students can contribute in generating a major motivation towards the chosen studies.

In second place, we suggest actions that are addressed to the totality of the community of a same university. Thus, the university should strategically commit with the retention, to know how to: insuring its staff, in their professional intervention area, know the complexity of the drop out phenomenon to be able to contribute in reducing it; improving the systems of the student's academic record (or to ask for new data in the enrolment survey); look for and share good practices; watch over the quality of the academic programs and the motivation of the students, and committing themselves with the professional and pedagogic development of the professors.

More specifically, the universities organize strategies to inform, to attract and to accommodate better the students who are interested to carry out higher education studies (open house, preregistration actions, freshman conferences, reception day, linguistic reception for the foreigners, student advisors, orientation and psycho-pedagogical units, etc). We also find actions to create social and academic support networks and promotion of the social life, like learning communities, as well as impulsating the participation and the implication of the students in university tasks. It is important to assure that all the services destined to the student are accessible and known. Finally, a study about the mobility between the university and the main urban areas can inform of the type of displacements that are carried out and of their duration.

In the line of the psyco-pedagogical type of actions, the availability of tutorship plans is positively appraised by degrees or faculties, plans of personal development and/or orientation services and psycho-pedagogical services by centers. There are strategies that are carried out during the pre-entry that are related with the information and orientation contribution on the options, the itineraries, the knowledge branches, etc. The diagnosis and the own competence self-knowledge in the degree profile actions area also amplified, or of formation and tutorship referred to the learning strategies, for example. Complementary actions can be carried out to develop certain competences (social, intellectual, methodological), reinforce study habits, show specific techniques and promote cooperative work.

In an attempt to synthesize some of the main proposals, we present a classification of the actions and strategies from two variables: time (before the arrival at university, during the first year of university and in the course of the university life) and reference area (university system and institutional area) (table 49).

TABLE 49 STRATEGIES TO IMPROVE STUDENT'S RETENTION AT UNIVERSITY

	UNIVERSITY SYSTEM'S ACTIONS	INSTITUCIONAL ACTIONS
General	Establishing sustainable scholarship programs and loans for the students with less income. Organizing the studies in a modular way, more enrollment flexibility (slow/fast way or part-time full-time studies). Promoting programs and studies on the causes, the effects and the solutions of the university drop out. Creating an office for the the retention research. Evaluating the degrees. Considering the part time enrolled students and their persistence in the forecasts of registrations. Providing alternative systems for the non-traditional students.	Improving the record systems of the academic record of the students. Committing in strategies for the retention. Insuring the university staff and making sure they know the drop out causes and factors and can develop strategies to reduce it. Developing programs that encourage and share good practices and reinforce a culture of learning (prizes, ceremonies). Committing with the professional development of the professors and encouraging their pedagogic perfection of the professors. Creating information and university orientation services, also for centers. Elaborating plans of university tutorships. Incorporating plans of personal development (PDP). Designing activities of high academic impact.
Pre-entry	Promoting the systems and programs of information and pre-university orientation. Improving the joint and the connection with the levels of previous studies (basically high school, A levels and VET). Improving the systems of transportation between the institutions and the main urban areas.	Promoting strategies for student catchment (open house, fairs, web of future students, visits...). Stimulating the reception of the students (linguistic reception for foreign students, psycho-pedagogic advice unit, conference day, reception and welcoming, preregistration actions). Inform and orientate on the degrees and the knowledge branches, and about the several options. Improving the self-knowledge of the profile of the students. Adapting the formative levels (introductory and propedeutical subjects, competence workshops).

TABLE 49 STRATEGIES TO IMPROVE STUDENT'S RETENTION AT UNIVERSITY (CONTINUATION FROM PREVIOUS PAGE)

	UNIVERSITY SYSTEM'S ACTIONS	INSTITUCIONAL ACTIONS
First year	Go deep into the drop out diagnosis elaborating suitable measurement systems.	Improving the mechanisms of detection of possible students in risk to give up their studies. Generating academic and social support networks and learning communities. Fostering the social life of the university students, favoring the integration in the social and academic aspects. Implicating all the staff in the student's retention. Implicating the students in groups and university tasks. Assuring that all the services destined to the students (academic, economic, personal and social) are accessible and known by all students. Promoting the work in small groups to promote the sense of belonging and identity. Intensifying the programs of advice and support to the study during the first year, and complementary actions for the development of competences and study habits.
During the university degree	Encouraging the mobility between institutions. Providing/facilitating intermediate exits with certification.	Establishing student's follow-up systems. Perfecting the cognitive and meta-cognitive processes. Considering the different rhythms and styles of learning. Watching over the use of participative and collaborative methodologies, promoted with the TIC, and using them for monitoring the progress and performance of the student closely, and making a continued evaluation.

Next we make emphasis in some concrete strategies that can contribute in improving the retention, in accordance with the context of the characterization of the drop out. Many of them have to do with previous contributions on the connection between the high schools and the university and the orientation and the tutorship at university (Figuera and Torrado, 2000; Alsina *et al*, 2001; Dorio, Figuera and Torrado, 2001; Figuera, Dorio and Forner, 2003; Feixas and Guillamón, 2004; Gairín, 2004; Gairín *et al*, 2004*a*,*b*,*c*; Gairín, 2005; De Miguel *et al*, 2005; Álvarez González i Fita, 2005; Rodríguez Espinar *et al*, 2005; Rodríguez Espinar, 2006; Álvarez *et al*, 2006; Álvarez González i Forner, 2007, and Figuera and Rodríguez, 2007).

Programs on transition from high school to university and university reception

The beginning of university studies is one of the crucial moments in the integration of the students into the university and, therefore, a fundamental factor in the drop out reduction. The accumulation of negative experiences, the excess of information, the difficulty in arriving to the center, etc, can overflow the new-entry students and lead them to giving up their university studies.

The first year experience is especially important because the transition between highschool or other access ways to the university has to be a gradual process, that allows students to have information about the possibilities that the new formative can provide them and, also, of the necessary tools to easily adapt themselves to the university culture. Obviously, the interinstitutional coordination facilitates this transition and allows a certain continuity in the education-learning area.

Likewise, the transition to the university is fruit of a personal growth process and means the improvement of a series of obstacles, as well as the occasion so that the students demonstrate their capacity to adapt themselves to new contexts. However, we can not suggest that this process is exempt from risks if we consider that the transition means the step from a controlled situation in which the person is already adapted to another one where there are many uncertainties and the stereotypes (mostly negative) and where the reference frames are ignored.

In order to achieve a directed and planned transition, we recommend the design of an action plan that integrates several actions that are already carried out in many faculties and degrees and to propose others, as well as several support tools designed to facilitate the task of the ones responsible for tutorships in the several degrees and complementary advice materials.

The several performance proposals of the transition plan and reception, mainly directed to potential university students and the first course students, can not be carried out without considering the responsible professor's role and functions of organizing the orientation in high school and the first tutorship (degrees coordination, first course coordination, students and academic ordering vice-deans and vice-chancellors, and last the responsible ones for the student's catchment, welcome and reception programs).

The Plan reaches the different moments in the highschool-university transition process, that is, from the student being in highschool upto the successful end of his first higher education year. This includes actions such as the orientation and support in the A-level research work and the establishment of cooperation agreements between high schools and universities (Argon Program), the information and university reception programs (for example, the open house, etc) and the reception programs for the first course students.

Next, we suggest some actions that intend to illustrate the contents of this transition and reception plan:

- **Previous actions to the university entry**

  The universities have multiplied their actions directed to increase the connection with highschool, and even though some of these actions have the purpose of university promotion and students catchment, they also facilitate orientation and, therefore, help the transition. Some of the possible actions previous to the university entry| are: open house, visits to the campus, family day, participation in the Education fair, web of future students, etc.

- **Pre-course activities (or propedeutical)**

  It is a matter of courses that the several degrees offer to the new students to palliate the possible lacks of previous necessary knowledge to do determinate the degree's subjects. In some cases voluntary tests are proposed so that they help themselves appraise their knowledge and consequently perform.

  The propedeutical courses are especially indicated when the students have not done a determinate subject in the pre-university studies that becomes necessary for the chosen studies. They are also suitable when they want to strengthen determinate basic knowledge. However, a certain caution in the proliferation of these courses is necessary, since they do not stop being an indicator of an evident disarrangement between highschools and universities that perhaps it would be necessary to try and solve through other pathways.

  Some of these pre-course activities can be:

  - Informative sessions in reduced groups, programmed with the enrolment process and in which specific teachers and even experienced students intervene.
  - Propedeutical subjects, addressed to improve the knowledge of the degree options, the academic basis or the study techniques, to learn to write up reports, to solve problems, to prepare examinations, and other options that help the students to optimize their efforts.
  - Study techniques sessions, directed to go deeply into concrete aspects like the degree work strategies or the study techniques.
  - Subject guides, as development programs that collect usual aspects (objectives, subject matters, methodology and evaluation), together with others like the detailed description of the meaning of the subjects, the previous requirements, the basic bibliography, the works structure, examples of evaluation tests, etc.

- **Reception activities**

  At present, the universities develop diverse actions to accommodate the young students: they provide them information about the registration, the university and its services (sports, cultural, sanitary), the structure of the studies (main, compulsory, optional subjects, specialties or itineraries), the degree duration, the scholarships, the work opportunities, the institutional supports (psycho-pedagogical teams, tutorships, etc) and the student's associations.

  So, in this third point, the following actions can be considered:

  - Initial reception actions, like games, visits, informative or knowledge meetings, etc, directed to break the individual isolation of the students and to facilitate contacts between the people of a same group.
  - Informative sessions in small groups, in which a teacher and some veteran students inform the first year students of questions that are considered basic (information about the studies, the student representation, the rights and duties of the students, the functioning of determinate services and programs, the scholarships, etc). Methodologically, the exposures are combined with activities in reduced groups (which, for example, solve cases for which determinate training is needed) and student's questions are replied.
  - Web and/or students network, where diverse information of interest can be found: the student's guide, the frequently asked questions about the European Higher Education Area, the practical guide of entry, information on accommodation, the link to « study support » (web of the Educational Innovation Unit in Higher Education), forums, support services, etc.
  - Linguistic reception to the foreign students (e.g., Erasmus).

- **Different tutorship modalities**

  The diversification of tutorship modalities is fundamental in transition and reception plan. The function of the Plan would be to give coherence to the several modalities and to provide concrete examples and tools for its application.

  The importance and the amount of tutorship actions which are necessary to be developed at university and that constitute a whole unit with own entity and differentiated from the rest. We present some in the following epigraph.

Orientation and tutorship programs at university

The orientation and the tutorships are some of the most important processes and strategies of information and orientation in the reduction of the university drop out. However, in our context they have been poor, inappropriate and not exempt of limitations: there are few services of orientation for adult students and of continued formation; the students enrolled out of deadline have specific problems that sometimes are not solved correctly, and there is an insufficient understanding on the part of the students on the courses demands.

Students have to perceive that they have a suitable support on the part of the university and that this can reply to the wide range of academic, social and personal needs of the university student.

The desirable orientation is the one that facilitates the development of the person along their degree. The education or development for the degree is the one that provides:

- an integral attention to the people along the different stages of their development;
- an integration along all the formative process and not only in determinate stages of this process;
- a major interconnection with the social and work environment, and
- a more realistic answer to the society demands.

And it includes:

- the integration of the degree development into the university curriculum;
- the collaboration between the university and the institutions to keep on giving answer to the new needs that keep on being generated, and
- developing new competences that give answer to the personal and social needs.

The tutorship programs at university usually combine the informative dimension with the formative and the interdisciplinary dimension. The first helps the students to find an answer to a cumulus of questions linked to the academic institution and the work area, in order to take professional consciousness; the second makes possible that the student gets to knows himself, puts his capacities on trial, reflects on his personal and professional expectations, and assumes a responsibility with the society; and the third dimension propitiates the projection of the interdepartmental and approaches in the educational practice. These programs are sustained in:

- The help offer to the students that incorporate for the first time at university, without expecting that they ask for it.
- The intervention from the orientation area to answer the needs of these students and to fulfill needs.
- The interdepartmental approach and the team work, linked to the disciplines of the area, for an inter-departmental projection.
- The incorporation of last course students in the project to be first grade student's advisors.
- The projection of the training received in their vital cycle and in their professional future.

Some of the types of concrete tutorships are:

- The tutorships between equals: the students of higher courses advise first course students, while sharing experiences and information. It is an easy way to integrate the new students into the campus life and to help them to establish study rhythms and techniques, to prepare examinations, etc.

- Personalized tutorships: it proposes that determinate degrees with an important failure rate develop personalized tutorships. This tutorship modality is based on the personal and direct relationship between the student and the tutor and combines the academic orientation with the personal advice. It is a tutorship modality with potential; even though several studies point out that the students usually make a very restricted use of it if it is implanted in a generalized way. Therefore, it is reserved for the students who request it voluntarily and it also implicates its compulsory character, for concrete cases (students that have failed or those that have not attended to a number of examinations of official announcement in determinate subjects, students in special situations, 25 years and older, etc). In any case, the teacher/tutor becomes the reference person to whom it is necessary to direct any doubt or question.
- Virtual tutorship: it is becoming a versatile resource of great potentiality, in constant progression and very useful for determinate questions related with the learning and the orientation, or as a complement of other tutorship modalities or as a self-training or self-orientation resource.
- Tuition for students with learning difficulties: it is addressed to students that don't pass certain tests, that don't succeed in their studies, and that consider dropping-out of university and need a very specific help.

Presence of high impact academic activities

In relation to the academic quality of the university programs, an important part of the literature about the university drop out suggests that, if these programs are well brought into action, it can imply students to levels that increase their academic performance and have effects in their learning results in the degrees, in significant learning measures and in the studies persistence. These activities of high impact can include seminars during the first year as well as intellectual experiences between teachers and students, learning communities, learning services, research, live abroad and other experiences that are related with diversity, the practices in institutions and/or courses and specific and innovating projects. The activities of high impact can be effective with the students because:

- because by its nature, it puts students in the situation to ask for interaction with teachers and colleagues on subjects and important subject matters, normally along different periods of time;
- usually, they ask that the student invests a great amount of time and efforts to tasks with a concrete and demanding objective;
- taking part in one or more of these activities increases the probabilities that students experience the diversity through the contact with people of different enties and origins;
- the students frequently receive feedback on their performance, even though the high impact activities structures and the environments are different;
- taking part in these activities offers new opportunities so that the students see how the learning works in different environments, in and out of the campus.

The possibility of each student taking part at least in two high impact activities during the university degree studies, one of them during the first year and the other later on, related with their specialization area, can improve the participation and the implication of the student in the studies and the academic success. Ideally, the curriculum of each degree should consider them and they should be promoted, since often they are activities with a low level of participation.

Some examples are the collaboration scholarships with university departments that the educational administrations offer like the ones from the Spanish Education Ministry: http://www.boe.es/boe/dias/2008/06/30/pdfs/A28877-28880.pdf) to link students to researches or practices related with their studies, or the programs of «internal students» (like the one promoted by the University of Seville), in virtue of which the professors can offer the students, since the first course, the collaboration in researches or as a teaching support.

Training programs for the university professors

The quality of the academic program and of the process of education-learning is directly linked to the university performance and, as we have seen, to the drop out rates. Thus, for example, some unstructured programs, some poor group dynamics, an inappropriate curricular design, some unappropiate methodological and evaluation strategies, a lack of coordination between the professors of a same degree, a scarce practical activity or a lack of relation between the contents and the reality are factors that influence on the students motivation and performance (Martínez, 2001). A part of the strategies to ensure the academic satisfaction and the educational quality has to be linked to a good training of the university professors in pedagogic competences. Besides the varied and continued educational training offer, the implantation of the EEES is an exceptional opportunity to update the competences and the educational approaches of the professors.

Some examples for the initial training and the update of the university profesors are:

- The Unit for Innovation in Higher Education Teaching of the Autonomous University of Barcelona (UAB), which has the purpose of promoting the educational competences of the university professors related to the education-learning process (design/planning, development and evaluation).
- The training program of the university professors of the University of Barcelona (UB), with a wide and diverse proposal of formative activities to each official announcement.
- The compulsory «reception program» for the new entry educational staff of the Polytechnic University of Catalonia (UPC), that, as far as presenting the UPC as an organization, it promotes the academic competences of this staff.
- El Initial Training in Higher Education Teaching of the Pompeu Fabra University (UPF),, which has the purpose to facilitate the didactic adequacy of the teachers in the characteristics of the new EEES.

In the international area, the case of England is remarkable, where all teachers who want to give classes have to have a certificate of pedagogic training. At King's College London, as an example, the pedagogic training of the teachers is promoted across the King's Learning Institute (http://www.kcl.ac.uk/learningteaching). This institute has established a certificate of educational sufficiency (Statement of Teaching Proficiency) that considers the teacher's value in four big areas: (1) strategies and didactic techniques and session management; (2) subject knowledge and application; (3) evaluation and follow-up, and (4) professional knowledge and development.

Social programs

From the several university drop out models and studies that we have revised, have repeatedly highlighted the importance of the social factors in the university student's success and, therefore, in the reduction in the drop out rates (Spady, 1970; Tinto, 1975; Bean and Eaton, 2001-2002, and Glogowska, Young and Lockier, 2007). The main causes of the university drop out that we have commented on are the social and personal difficulties to adapt to the university environment and to new lifestyle or to making new friends at university, and personal or family problems that influence the studies with other priorities and opportunities.

According to Braxton and Mundy (2001-2002), one of the characteristics of the university institutions with effective retention programs are their commitment with the development of social and educational support communities where the students integrate themselves as competent members.

In this sense, some of the policies that have been initiated from universities from all over the world are (Berger, 2001-2002, and Kuh, 2001-2002):

- Providing personal and social support to facilitate the integration of the new students into the university community.
- Assuring that all the services to the student (from personal to financial) are operative and accessible.
- Providing the students clear information and communication pathways on the objectives, the values, the policies and the procedures of the campuses.
- Offering the students the possibility to take part in the decision making that affects them.
- Actively implicating the students in the political life of the university.
- Strengthening the relationships with the external context.
- Promoting the studies on the university experience beyond the classrooms fringe.

Taking into account these policies and, from a much more operating level, some of the strategies and actions that can help to counterbalance the drop out social causes are:

- Creating communities and social networks that promote the relationships and the communication among the students. Using of one of the multiple social software that the ICT offer us can help us carry out this task.
- Developing tutorship programs between equals or tutor teachers.
- Improving the information systems for the families, so that their importance during the incorporation of the student in the university environment is reinforced.
- Creating a cultural and social agenda in the university campus. The Cultural Year of the UAB (http://www.uab.es/anydelafisica/default.htm) is an example of this type of proposals.
- Promoting the students assemblies and associations creation with capacity of decision and participation in the social, cultural and political life of the university (for example, sport teams, musical formations, theatrical groups, chess clubs, or student councils).

GENERAL CONCLUSIONS AND FUTURE CHALLENGES

CONCLUSIONS

The educational administrations and the society are conscious of the political, economic and social problems that the university degrees drop out means. As an international phenomenon, then, these problems are not foreign to the Catalan university, as the theoretical explanations issued along all of this report demonstrate it. In checking out the amplitude of the empirical studies carried out by several European and American universities, corroborate the success of promoting any type of effort that allows to know the drop out causes in order to offer, consequently, the strategies that, in an individual or collective way, can be undertaken to reduce it.

I. THE STATE OF THE QUESTION

Statistics and international analyses of different researches demonstrate that nowadays a significant percentage of the population accesses the university degrees, but that, at the same time, the number of people who give up their studies too soon also increases (about 29%), influenced often by work causes. Different reports of the OCDE and other organizations have alerted of the high drop out rates and the unavoidable consequences that derive from it, social as well as personal ones.

Since there is an existence of different realities, the drop out phenomenon can be analyzed from geopolitical and sociological point of view:

1. *From the European perspective*, the access to the university and the interest in obtaining university degrees has significantly been increased, with a wide range of programs that guarantee the advance in the knowledge society, a better and major transition of from secondary school to university and an acceptable increase of success in the higher degrees.

   Even so, we can deduce from different reports of the OCDE and other organizations that even though the rates of European students in higher education have been increased, we must acknowledge that more than 30% of the enrolled people give up or does not finish the undertaken studies. As a matter of fact, the survival rates (calculated from the number of graduates and the number of new enrolled students) are around 71%, and Spain overcomes them in 3% (data of 2008).

2. *From the prospect of the American continent* (USA and Canada), the data on persistence and performance, the drop out of specific collectives and the academic as well as non academic factors are analyzed. In the first case, there is a significant number of students who change of center or give up their studies; in the second case, a great amount of students combines studies and work (between 52% and 62%) and dedicates only half a day to both tasks. The academic and non academic factors are carefully analyzed because of its relation with the retention rates. The researches of the Latin American part of the continent (that suffer a lack of institutional data that prevents from developing rigorous studies) demonstrate how severe the drop out problem is. For example, only 43% of those who graduated in higher education, admit that they did it in the established period to do it, except in Cuba.
3. *From other but not less significant perspectives*, we must consider that Spain is not a country that attracts many international students, even though it has a greater proportion of international students in the advanced research programs than other countries. We also observe a certain delay in the women's expressed university aspirations. As consequent, it is evident that although the enrollment fees at universities are low, there is a whole segment of the population that should benefit from more public loans or from scholarships in order to avoid their drop out.

The research attempts to give, not only to Catalonia, but also to the rest of Spain and other international countries, an answer to these questions and to many others such as political, economic, family and pedagogic ones. Following the suppositions made clear in the previous chapters, this empirical study has reached enough concrete conclusions on this state of things and, on this basis —but without despising the doubts that still soar on the affirmations of the report —, we propose university managers and researchers some suggestions to reduce the possible harms of the university drop out and to continue investigating more thoroughly its causes and effects, in order to avoid the drop out and favoring the retention.

II. SCOPE OF DROP OUT IN CATALONIA

The drop out analysis, and therefore, of the academic persistence, at the Catalan university, in a macro scale (or generic for the whole of universities) as well as in a micro scale (specific areas), has considered significant variables that are present before leaving the course (socio-demographic and academic), as well as which are the degrees that are more often dropped-out of (typical demands of that degree and academic performance) and which was the students situation after the drop out.

The *generic analysis* demonstrates that there are no significant differences between the Catalan universities, since the drop out, as a social phenomenon, affects all educations and degrees with little significant differences in relation to the rest of Spanish universities. However, we do find differences between the different studies and degrees. Taking into account that we have to make prudent comparisons because not all the data comes from the same years, we can conclude, on

the one hand, that the drop out distribution corresponds in a 40% to the Social Sciences area, in a 29.6% to the degrees in the Technical area and in a 17.2% to Humanities; and on the other, that the drop out rate is higher in rest of Spanish universities (according to the data of the Spanish University's Vice-Chancellors Conference CRUE, 2008).

The *specific analysis*, that is based on the student's profile at each moment of his academic trajectory, demonstrates that, regarding the age, the people between 26 and 30 years of age are less persistent in their studies because of work causes and economic situations. Regarding the gender, it is demonstrated that the boys are less persistent than the girls (51% versus 48.6% drop out, respectively). The social origin does not seem to have great influence upon the persistence rates (we must clarify that the high percentage of no answer does not allow us to extract clear conclusions). Depending on the high school modality, 18.4% of the people who have gone thru a university entrance examination out of Catalonia and 29% of the people who transferred to other communities or countries from which we don't have data. The students coming from the Vocational Education Training and the 25 years or older systems present a quite significant figure (14.17%) of the total drop outs. On the other hand, the drop out affects in a higher degree those students who have had a lower access grade. Finally, we can affirm that the drop out rates by degrees fluctuate between 20% and 60%, and that the analysis gets complicated when the huge variety of studies and their conditions are taken into account.

From the analysis of the academic dynamics, we can ascertained the following tendencies: *a*) that, in quantitative terms, the student who comes from A-levels drops-out of the university studies more than the students coming from the higher grade of Vocational Training Education; *b*) that there is a significant drop out rate among those people who come from other autonomous communities; *c*) that Humanities and Social Sciences are the most favorable drop out areas; *d*) that drop out and low level of academic performance are very correlated; *e*) that more of 60% of the people who give up their studies do not re-enter the university system again.

From the typology of studies, we detected that all the Catalan universities suffer the drop out consequences, and that the differences between them are not very significant. The gradation goes from more to less starting at the UPC, the UB, the UAB, etc, with the UdL, in last position. These results vary when analyzing the degrees (with figures that fluctuate between 20% and 60%), even though the education-learning cultures, the didactic approaches, the planning and the programming of the curricula, the facilities and many other variables make the comparative basis very heterogeneous. This heterogeneity often prevents the scientific comparison.

These two types of analysis at a macro and micro scale are very indicative, but, at the same time, are maybe a little limited by the fact that the data with which it has been worked on have not allowed to create more and better indicators not even to originate more variables, and, especially, because they can not compare themselves with those of the global enrollment. As a matter of fact, only a part of the population has been studied: precisely the one that drops-out of their university studies.

III. TOWARDS A DEEPER DROP OUT UNDERSTANDING

From the research methodology, it has believed convenient to compensate the study of the data base with a field study by survey (through a survey and an interview). In effect, an accurate approach of the analysis levels has made possible the creation of two instruments: the survey, the contents of which have been validated by experts and consists of six sections that collects basic personal information, academic, of satisfaction, economic, specific personal and social factors; and the interview, structured in eleven sections that aspire to identify the drop out explanatory model. Through these instruments five degrees related to different areas of education have been revised.

The results of the field study with the survey and the interview have made evident the importance to bring up this type of studies to extract arguments that explain why people do not persist in the started studies and why the need of counting with a wider sample appears. The drop out motives or of no persistence consist especially in the lack of motivation for the studies and, therefore, in the posterior difficulty in fully integrating into the academic and university life; in the difficulties in reconciling the academic and the work life; in the lack of economic independence; in the fact that the institutions do not offer interesting programs from the practical and methodological point of view; in the lack of services that get close to the student, as the tutorship, the reception programs or the professional orientation previous to the entry and in posterior stages (in medium and long terms), and in the lack of connection with the reality of the work and business world (prospects of work insertion congruent with the study plans).

The specific stories that have been examined have approached us to understanding the student that drops-out (holistic vision) and to the circumstances that accompany their decision, either voluntary or imposed. In this sense, the decision to give up their studies concentrates in a concrete time of the student's academic trajectory (58% of the students that give up their studies does it in the first year of the degree). However, the decision to drop out obeys to a process, that is, to a set of personal and contextual circumstances that influence on the decisions in a significant way.

This analysis allows confirming the thesis of the existence of moments of special sensitivity facing the drop out decision and the need to reinforce the orientation and the personal and academic tutorship at university. The first year of university is especially a critic. The first university experiences mean a first balance of the «congruence» between the students options and elections and are essential to contrast the adequacy of their projects and reality expectations; the implications about the motivation, the action engine, are clear. In this first year, the relationship of the students with their peers and the integration into the academic learning environment and in the dynamics of the new academic community significantly contribute in constructing a belonging feeling.

IV. STRATEGIES AND RESOURCES TO FAVOR RETENTION

The advance of the European and American studies allows broadening the range of strategies and resources to strengthen the retention, some of which can be adapted and implemented to our universities. The interventions directed to improve the persistence at university have to do with the orientation in the studies choice and of university (before the entry) and with orientation during the incorporation at university. To suitably orientate or guide the student in the choice of studies and university, either in the concrete entry moment or during all the process of incorporation to the centre's culture, it is important for student retention.

So that this transition towards the university studies becomes satisfactory, it is necessary to start off transition and reception plans that incorporate tools and the necessary supports to avoid the drop out. These plans have to count, specifically, with the institution implication and the commitment, but also of all the university community. In this sense, it is necessary to achieve the complementary action with diverse orientation (university, center or faculty and degrees).

Studies support

The continuity of the studies is often conditioned by the studies support that students receive. Thus, all those supports that emanate from guiding actions become important for the personal and academic development of the students. The combination of guiding and advice interventions addressed to the students as a group or in a personal way, like the welcoming and reception day, the psycho-pedagogic attention among others are key to offer a better information and guide in the studies. A plan of university tutorship integrates these objectives and makes them possible through various modalities of personal, academic and professional attention and didactic and organization resources.

The management and the academic quality

The flexible organization of the studies and the implantation of modular systems seem to have a positive impact in the student's retention. The poor motivation for the studies is also related with the quality of the academic program. Because of that, it is necessary to especially revise the educational methodologies and to insure pertinent activities, with updated contents and learning with higher impacts, making more use, of education-learning reflexive strategies, collaborative and innovative, with the complement of new technologies and more autonomous work of the student.

Higher education funding

The work needs and the economic limitations often make the university continuation impossible. There is a whole segment of population that should benefit from higher public loans or scholarships of diverse nature in order to avoid that they gives up their studies, and it would be necessary to put financial charges aside which can have a negative impact on students, whenever this is possible.

Attaining high retention rates benefits not only the institution and the society, but also students that will not live failure situations and will increase their performance. The comparison between countries, institutions and student population shows significant differences in the institutional approaches, policies and organization, in the studies plans, in funding and in the student's typology. For these reasons, it is complex to promote concrete pedagogic solutions of generic character. Even so, we have suggested global and specific strategies distributed in the four moments of the academic trajectory, we have presented the contributions of different institutions in several countries, and we have emphasized the programs and actions that we believe that are more suitable for the Catalan universities: *in the secondary schools*, preparatory actions for the transition and the training in generic work and study competences; *in the universities*, propedeutical activities, reception and tutorial, social support programs, services and associative and community dynamics, besides other complementary activities of high intellectual and academic impact. These strategies, obviously, require a specific training of the teaching staff.

V. DECALOGUE OF FUTURE PROPOSALS AND CHALLENGES

The research process has also continued to shine light on shortcomings which require further reflection on innovative proposals and challenges.

From the methodological perspective

1. It is necessary to have more data on the internal and external life circumstances of the students who drop out of the university education, and to validate and make the data collection instruments reliable (some linked to the enrollment documentation). This research should bring up the study from a longitudinal and/or process prospect from the referential data of the global population and reinforce the systematization and the coordination among all the Catalan university institutions.
2. The research results will be able to be extrapolated to the problems of other universities if more indicators can be constructed, in consonance with the made proposals, that make comparative studies possible and that consider the university students as well as the pre-university students.
3. The research brings up the thesis that the drop out is a multi-factor phenomenon, in the sense that its explanation arises from the interaction of a wide set of personal and contextual factors. This interaction explains the importance to validate integrating models that facilitate the elaboration of precocious diagnosis instruments, the identification of the risk collectives and the design of intervention proposals suitable for the different realities.

As for the specific proposals to improve the data and the current system's indicators, we differentiate between the entry and/or trajectory indicators coming from the person (students) and the ones coming from the institution (degrees/center).

	PERSON	SYSTEM
ENTRY INDICATORS	*The previous academic background*: global and specific performance, knowledge on the transversal competences. *Of motivation*: motivation and expectation level	*Of the origin centre's profile*: socio-cultural context of the students and indicators of the center's quality *Of the transition support actions* (typology of actions and support strategies the decision making)
TRAJECTORY INDICATORS	*Of dedication*: assistance to the academic activities, time dedicated to study *Motivation and expectation*: motivation and expectations on success levels *Academic integration*: management skills on the personal study, satisfaction with the institution, interaction with the teachers *Social integration*: level of interaction with the equals and satisfaction *Social and family support*	*Theoretical profile of the degree* access and level of adjustment to the student's profile *Of the transition support and retention actions* (typology of actions and quality indicators, classroom atmosphere...) *Of the study plan characteristics*: planning and education organization plans, evaluation and demand criteria, profile of the teaching staff

Associated challenges

R1. Establishing a permanent observatory on the university drop out in order to foresee it and reducing it.

R2. Promote and fund researches linked to the university drop out phenomenon that collect data to search for indicators that allow comparisons and to elaborate valid and reliable measuring instruments.

From the organizational structure of the institutions

4. In the previous period of university entry, it would be necessary to watch over a major congruence among the secondary school studies and the higher education through all the academic and personal transitions favoring mechanisms. Likewise, it is necessary to reinforce the tutorship at the end of the non compulsory secondary school in order to foresee illogical attitudes of students in risk of dropping out of their studies and which could easily be avoided. At the same time, these interventions should connect with the university orientation services (guaranteeing an accurate follow-up of all the students during the first year) and with a major information to the families.

5. Besides institutional and academic reception performances for the students who incorporate at the university system, the universities should intensify the diversification of tutorial modalities: *between equals* (student advisors who share experiences, information, etc); *personalized* (to solve any type of doubt or question from the direct student-teacher relationship); *virtual* (as a complement to other modalities, for the self-training, etc); for students *with learning difficulties* (to offer help and support to the students who need a very specific help), and of others like *sessions* of study techniques, of tests preparation, etc.
6. It would be necessary to improve the pedagogic and organizational quality of the higher education studies through a temporary progression before the students enter, during their degree and after they have achieved the degree, favoring the several transitions to the utmost; carrying out improvements which facilitated partial attendance and flexible methodologies that allowed the autonomous work of the students who need to reconcile work life and academic life, and to establish different formative itineraries and personal development plans depending on the idiosyncrasy of each student.

   Likewise, it would be necessary to develop more flexibility in the university programs that foresaw the figure of the part-time student, so that the access and success at university were facilitated to those collectives that for diverse reasons (economic, occupational or familiar) can not access it following the traditional majority approaches. Obviously, this type of offer means a cost that the university system will have to appraise.

   It is also necessary to foster the university associations, so much from the academic point of view (study groups, thematic networks, etc) as for sociocultural (musical groups, theater, cinema, etc) and sport ones as well. In this way, the feeling of belonging to the university is stressed and the drop out probability is reduced.
7. This improvement of the pedagogic and organizational quality should affect the access systems, contents, educational methodologies, evaluation systems of the teaching staff and of the students, guiding system and follow-up of the graduates work insertion. At the same time, it is necessary to reinforce the academic and personal orientation with university and center tutorship plans that include in a contextualized way the detection of needs, which specify the objectives and which delimit the typology of tutorship actions in relation to the several moments, the organizational aspects and the evaluation.

Associated challenges

R3.Connecting the orientation system of the secondary education with the university system one to favor the transition.

R4. Going deep into the curricular and organizational implications of the university access for people of 40 years and older and without secondary school studies.

R5. Reinforce the relationships between university and students from the social, political and academic point of view since the first course, for example with the creation of new collaborative students profile.

R6. Watching over the continuous training of the university teaching staff in communication competences, in the use of educational methodology, in tutorship strategies and in curricular diversification according to the typology of students.

From the administrations and the social agents

8. Politicians, administrations and institutions, in collaboration with the universities and the highschools, should assume the difficulties and the negative consequences that the student drop out entails from the economic, sociological and personal perspective, and to introduce the pertinent changes to reduce the impact.
9. In students support and orientation systems the business organizations and the unions have very much to say, to the professional orientation of the youngsters and should consider themselves as active subjects. These interventions should offer the students academic information and professional specifies about the contents, the job opportunities and the advantages of the different careers and degrees that they are within their scope.
10. Social agents, institutions and media —conscious of their responsibility and influence on the population— should promote joint actions to increase the university persistence figures, as a counterpoint to the manifest interest in the catchment of new inscriptions.

Associated challenges

R7. Establishing connection and collaboration policies among administrations (Work, Education, universities, social agents) that allow effective curricular university flexibility.

R8. Developing strategies and instruments linked to the accreditation and the homologation of the work experience of the adult people.

R9. Creating an office to promote the retention of the minority collectives.

R10. Promoting services and orientation of the companies in the process of university student incorporation, as well as the contact between companies, unions and universities to appraise aspects related with the university training and its linkage to the work world.

The research team expects that the obtained results help in understanding the scope of the university drop out based on the series of global data and to appraise the diverse institutional realities. It expects to also have given answer to fundamental questions, like: why does a person give up their studies?; is there a typology of student who drops-out of the university education?; which are the sociological, economic and family causes that lead to the drop out?; which are the variables and factors that have a fundamental role in this phenomenon?, and which psycho-pedagogic and didactic strategies are necessary to apply in order to increase the retention?

In spite of the research approach, the collected data and its analysis many of the objectives that were wished have been attained, more researches in relation to this aim would still be necessary in order to be able to understand better the etiology and the solutions of such a complex and current phenomenon. Thus, we can consider questions like: does the university drop out in Catalonia constitute a true problem for the Administration and for the citizenship? is the drop out soon after having started the career or once it is already started a great concern to the politicians responsible for the tertiary educational sector and those of the work area? And is it a phenomenon worthy of being analyzed? is the same importance given to the retention policies than the student catchment ones? When approaching these questions, it is necessary always bear in mind that, very often, the figures of each country or of each university conceal different enough realities.

> «The secret of the most successful retention programs is not a secret in any way, but the reaffirmation of some of the important basis of the higher education. There is neither a great secret and nor a great mystery to be discovered. Although the successful retention programs require some competences and a considerable effort, they do not require sophisticated machinery. It is within reach of all institutions to pay a serious attention to the nature of their educational mission and what duty it entails. The successful retention is based on a successful education» (Tinto, 1990, p. 4)

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Appendix 1: SURVEY TO EVALUATE THE UNIVERSITY STUDENTS WHO DROPPED OUT THEIR STUDIES

Information on basic personal aspects:

1. ID:
2. Gender: a ☐ Male b ☐ Female
3. Age: _____years
4. Are you currently working? a ☐ Yes b ☐ No
5. Are you currently studying? a ☐ Yes b ☐ No
   5.a. Are they university studies? a ☐ Yes b ☐ No
   5.b. Which degree? _____
   5.c. At which university? _____

Information on academic aspects:

6. Degree you were studying: _____
7. University where you were doing your studies: _____
8. Academic year when you entered the university: _____
   a ☐ 2002-2003
   b ☐ 2003-2004
   c ☐ 2004-2005
   d ☐ 2005-2006
   e ☐ 2006-2007
9. Academic year when you dropped-out of the university:
   a ☐ 2002-2003
   b ☐ 2003-2004
   c ☐ 2004-2005
   d ☐ 2005-2006
   e ☐ 2006-2007
10. How old where you when you dropped out your studies? _____
11. Number of years that you studied at the university before you dropped out: _____
12. Was it a voluntary drop out or you were expelled by the system (permanence regulations):
    a ☐ Voluntary b ☐ Expulsion

13. What semester were you in when you decided to drop out of your studies?:
    a ☐ September-January b ☐ February-June
14. In what shift were you studying in?: a ☐ Mornings b ☐ Evenings
15. How did you carry out your studies?: a ☐ Full-time b ☐ Part-time
16. Through which access mode did you enter university?:
    - i ☐ Scientific-technological
    - ii ☐ Biosanitary
    - iii ☐ Social Sciences
    - iv ☐ Humanities and Linguistics
    - v ☐ Double option Scientific-technological-Biosanitary
    - vi ☐ Double option Social Sciences-Humanities and Linguistics

    a A-level / GCE A-level
    - vii ☐ Scientific-technical
    - viii ☐ Health Sciences
    - ix ☐ Humanities
    - x ☐ Social Sciences
    - xi ☐ Arts
    - xii ☐ Double option Scientific-Technical- Health Sciences
    - xiii ☐ Double option Humanities-Social Sciences

    b 25 years and older
    - i ☐ Scientific-Technical
    - ii ☐ Health Sciences
    - iii ☐ Humanities
    - iv ☐ Social Sciences
    - v ☐ Arts
    - vi ☐ Double option Scientific-Technical-Health Sciences

      (only in the case of retaking the academic data of previous years option CI [double option Scientific-Technical-Health Sciencest])
    - vii ☐ Double option Humanities-Social Sciences
    - viii ☐ Double option Humanities-Arts
    - ix ☐ Double option Social Sciences-Arts
    - x ☐ Triple option Humanities-Social Sciences-Arts

    c Vocational Education and Training
    - i ☐ Medium degree
    - ii ☐ Higher degree

    d Others: _____

17. University access grade: _____
18. Type of centre where you studied your last secondary school year:
    - a ☐ Public
    - b ☐ Private
    - c ☐ State-subsidized school
19. Average grade of the studies previous to university: _____
20. Preference order in the assigned degree:
    - a ☐ First option
    - b ☐ Second option
    - c ☐ Third option
    - d ☐ Fourth option
    - e ☐ Fifth option
    - f ☐ Sixth option
    - g ☐ Seventh option
    - h ☐ Eighth option

    20.*b*. If you were not assigned your first or second option that you wanted, which were the studies that you wanted to access?
21. Which two orientations did you give priority to choose this degree?
    - a ☐ Orientation received by the secondary school teachers
    - b ☐ Visit of a university teacher in the secondary school center
    - c ☐ Visit to education fairs
    - d ☐ Advice from people who have done these studies
    - e ☐ Friends
    - f ☐ Family environment: advice, family tradition...
    - g ☐ Higher Education guide
    - h ☐ Own initiative/ vocation
    - i ☐ Personal interest
    - j ☐ Others: _____

22. In which two criteria did was your degree choice based on?
    - a ☐ Access grade
    - b ☐ Degree duration
    - c ☐ Degree's simplicity or difficulty
    - d ☐ Proximity to the family home
    - e ☐ Job expectations
    - f ☐ Job opportunities

g ☐ Family environment
h ☐ Prestigious degree
i ☐ Prestigious university
j ☐ Others: _____

23. What was the number of passed credits when you decided to drop out of your degree? ____
24. Which was your attendance rate when you decided to drop out your studies?
    a ☐ -20%
    b ☐ 20-50%
    c ☐ 50-70%
    d ☐ +70%
25. Which was your attendance tendency when you started your studies?
    a ☐ Increasing
    b ☐ Decreasing
    c ☐ Constant
26. If you did not attend to some classes, which were the two main reasons?
    a ☐ Timetable incompatibility with other subjects
    b ☐ They vaguely contribute to my education
    c ☐ The teachers did not explain correctly and I was bored in class
    d ☐ I preferred spending my time in more interesting activities
    e ☐ I had notes from previous years so I didn't have to go to class
    f ☐ I preferred going to the academies
    g ☐ Others: _____
27. Which was the main motive/detonator that made you drop out of your studies?
    a ☐ Timetable incompatibility
    b ☐ Work reasons
    c ☐ Family reasons
    d ☐ Economic necessities
    e ☐ New opportunities
    f ☐ Lack of motivation
    g ☐ Expectations were not accomplished
    h ☐ Family burden
    i ☐ Others: _____

Information on satisfaction aspects:

Grade on a scale from 1 to 10 the following aspects related to your studies and the university in general:

	-									+ Dnk/Dna
28. The coursed subjects	1	2	3	4	5	6	7	8	9	10
29. The teachers task	1	2	3	4	5	6	7	8	9	10
30. The classes quality	1	2	3	4	5	6	7	8	9	10
31. The subject's syllabus	1	2	3	4	5	6	7	8	9	10
32. The degree program	1	2	3	4	5	6	7	8	9	10
33. The academic tutorships	1	2	3	4	5	6	7	8	9	10
34. The library service	1	2	3	4	5	6	7	8	9	10
35. The cafeteria service	1	2	3	4	5	6	7	8	9	10
36. The transportation service	1	2	3	4	5	6	7	8	9	10
37. The reprography service	1	2	3	4	5	6	7	8	9	10
38. Available material and equipment in the classrooms	1	2	3	4	5	6	7	8	9	10
39. Available laboratories	1	2	3	4	5	6	7	8	9	10
40. Professional practices service	1	2	3	4	5	6	7	8	9	10
41. The study rooms service	1	2	3	4	5	6	7	8	9	10
42. The sport activities services	1	2	3	4	5	6	7	8	9	10

Information on economic aspects:

43. Which was your job situation while you where studying?
    - a ☐ I worked less than 15 weekly hours
    - b ☐ I worked 15 weekly hours or more
    - c ☐ I did not work

44. Did you work on something related to your studies? a ☐ Yes b ☐ No

45. Which was your parent's employment?

	1. Father	2. Mother
a. Business or public institution director or manager		
b. Technician or university associated profession		
c. Qualified worker		
d. Non-qualified worker		
e. Without a compensated employment		
f. Unemployment		
g. Other		

46. With which finances did you count on to pay your studies?
    - a ☐ My parents paid for them
    - b ☐ I worked to be able to pay them
    - c ☐ I had a scholarship

    Type of scholarship:
    - i ☐ Enrollment scholarship
    - ii ☐ Displacement scholarship
    - iii ☐ Residence scholarship
    - iv ☐ Material scholarship

Information on personal aspects:

47. Which was your marital status when you dropped out of your studies?
    - a ☐ Single
    - b ☐ Married / lived with my partner
    - c ☐ Separated/divorced
    - d ☐ Widow

48. Which was your family situation when you dropped-out of your studies?
    - a ☐ Without kids
    - b ☐ Kids dependency
    - c ☐ Single parent situation

49. Which was your parent's studies level?

	1. Father	2. Mother
a. Without studies		
b. Primary studies		
c. Primary or first degree on VTE		
d. A level or second degree on VTE		
e. Graduate or technical engineer		
f. Doctor, graduate, engineer or architect		

50. How many weekly hours did you dedicate to your studies? _____

Grade on a scale from 1 to 10 how much do you agree with the following statements:

	-									+ Dnk/Dna
51. I was motivated to finish my studies	1	2	3	4	5	6	7	8	9	10
52. I got deceived while I was studying and on seeing the suject content (false expectations)	1	2	3	4	5	6	7	8	9	10
53. I thought/felt that I had to finish my studies	1	2	3	4	5	6	7	8	9	10
54. I felt responsible and implicated in my studies	1	2	3	4	5	6	7	8	9	10
55. I found the studies useful to find a later on job	1	2	3	4	5	6	7	8	9	10
56. I made new friends at university and felt integrated	1	2	3	4	5	6	7	8	9	10

Information on social aspects:

57. With who did you live with while you while you where studying at university?
    - a ☐ With your parents
    - b ☐ With flat mates in a property apartment
    - c ☐ With flat mates in a rent apartment
    - d ☐ Alone in a property apartment
    - e ☐ Alone in a rent apartment
    - f ☐ In the university campus
    - g ☐ Others: _____

58. How many kilometers were there between the place where you lived and the university?_____

Asses your agreement on the following aspects:

	-									+ Dnk/Dna
59. I felt integrated in the university academic life	1	2	3	4	5	6	7	8	9	10
60. The information about the bureaucratic processes (functioning explanations, diverse information, etc)	1	2	3	4	5	6	7	8	9	10
61. My attendance in university social activities	1	2	3	4	5	6	7	8	9	10

62. Would you re-enter university to follow the studies that you dropped out of?
    a ☐ Yes b ☐ No
63. Would you re-enter university to course other studies? a ☐ Yes b ☐ No
    63.b. Which studies? _____
64. Would you be willing to participate in a research on university drop out? a ☐ Yes b ☐ No
65. Comments, suggestions and observations:

_____

_____

_____

_____

Thank you for your opinions and assessments.

Your answers will be treated with confidentiality.

Appendix 2: IN DEPTH INTERVIEW PROTOCOL

General data

University where you studied:
Faculty/center:
Course in which you dropped out of your studies:

Age	Gender (M/W)	Degree you where studying

Access way to university				
A level (modality)	2nd degree	25 years and older	VTE	Others (specify)

Development

A. Which information and activities did you receive linked to the degree and university choice before registering yourself? How do you value them?

(From high school, family, university, friends, etc.)

B. Which orientation and tutorship actions where most useful when you incorporated into university? Why?

(conference days, university visits to the high school, family day, campus visits, Education fairs, web pages, individualized sessions, tutorships with the families, informative brouchers, talks and informative sessions, reception conferences, reception day, orientation conferences, student councilor, individual tutorship, propedeutical subjects, etc.)

C. Which of the aids that the university offers where more profitable to you while you where studying? Why?

(talks at the beginning of the course, knowledge on the subjects, student councilors, student's guide, web page, reception conferences, orientation conferences, faculty assemblies, tutorships, students attention, degree coordination, reception plan, etc.)

D. Why did you choose the degree and the university where you studied?

(geographical proximity, good reputation, friends and family references, for its services, for the job opportunities, for the education environment, for the academic degrees, vocational, etc.)

E. Which where your expectations towards the university studies?

(typology, studies motivations, etc.)

F. Which were the main changes and difficulties that you found at university and that made you take the decision to drop out?

(the role of the teaching staff, the demand of works and studies, the role as a student, the control, the importance of the evaluations, the methodological diversity, the autonomous work, the time distribution and the schedules, etc)

G. Which difficulties did you face when you where studying?

(program quality, lack of study time, evaluation ignorance, material excess, lack of study techniques, lack of concentration and motivation, studies and work combination, transportation, etc)

H. Is there other reasons, external to the university, that contributed to your studies drop out? Which ones?

(personal, social, economic issues etc.)

I. What kind of supports and institutional resources would you would of liked to have in order to continue with your studies?

(conferences and reception plans, propedeutic subjects, computer services and library assistants, tutorships, scholarships, etc.)

J. Which ideas would you contribute with to improve the education and learning process at university to fight against the studies drop outs?

(time and schedule organization, more support and resources, other evaluation opportunities, study techniques, tutorships and personalized attention, rate reduction, etc.)

K. Under which conditions would you be able to re-enter the university studies?

(time flexibility, adequate methodology and evaluation, personalized attention, etc.)

Observations

Other issues you would like to comment on:

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