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The Transition to University of At-Risk Groups in Spain: The Case of Students from Vocational Education and Training

Pilar FIGUERA¹, Mercedes TORRADO²

Abstract

This paper looks at the process of integration and the trajectories through university of students entering university from vocational education and training within the context of degrees in the Social Sciences. The research involved a comprehensive and descriptive longitudinal study, based on a multi-strategy and systems methodology on two levels of analysis, one macro (the graduating cohort as a whole) and one micro (the analysis of a sample according to the type of student). The analysis was based on the students' perception of their level of adaptation at two key points in time in their first year (the start of the academic year and the end of the first semester), together with student persistence over the first three years of study. The study population was 1,523 students who were taking new Bachelor's-level undergraduate degrees in Business Administration and Management (1,290) and Pedagogy (233) at the University of Barcelona (UB) in the 2010-11 cohort. Students gaining admission through vocational education and training accounted for 20.6% of the total: 260 in Business Administration and Management (20.2%) and 53 in Pedagogy (22.7%). The results show the differences between students from vocational education and training and those from post-compulsory secondary education as regards the various indicators of the transition to university examined in the study. These differences can only be interpreted in terms of the organisational context at study programme level.

Keywords: transition to university, non-conventional university students, vocational education and training, academic adjustment, student drop-out, student persistence.

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Introduction

The last ten years have seen a reorganisation in the international context of university studies that has led to the modernisation of learning systems in higher education in response to the changing needs of society. Within the context of the European Union the changes began with the building of the European Higher Education Area (also referred to as the Bologna Process). Progress towards the modernisation of the university as an institution (a higher education institution) has included an almost total redefinition of learning and of the structure of higher education, and the establishment of quality assurance mechanisms for institutions and their results.

Spain now has a total number of eighty-two (82) universities, distributed over 236 campuses. 62% of the universities are public-owned, although there has been a growing trend towards an increase in private universities over the last three years. There has been an increase in the volume of students in Master's and doctoral programmes and, according to the data on the last two graduating cohorts, the demand for undergraduate places has stabilised. Over the last ten years there has also been an increase in the student population aged over thirty (MECD, 2013) and an increase in admissions to university of students from non-university higher vocational studies (*ciclos formativos de grado superior*, or Tertiary-type B education, OECD, 2013). In overall terms, there has been a substantial increase in the proportion of the adult population in Spain with a higher education and, at 37%, is higher than the OECD average for the 35-44 age groups. This has occurred at a time in history when claims are being made of the social function of the University and the principles of equity and inclusiveness have become its rallying cry (Ariño & Llopis, 2011; EURYDICE, 2011).

In the broader political framework, the value of a knowledge society as the basis of European citizenship is widely acknowledged and impels the member states to develop equity policies in higher education through more flexible organisation, the setting up of alternative ways to improve access and equity, the recognition and accreditation of professional experience and the development of orientation and support programmes, among other things (OECD, 2008). In Spain, these measures have focused on different actions ranging from the development of a new policy for scholarships and study grants (Berlanga, Figuera & Pons, 2013) to the planning of an integrated vocational education and training system that structures the different levels and interconnections so that access to university education is easier and mechanisms are set in place for the return to study and the continuation of learning for adults and workers (Krüger, Jiménez & Molas, 2011), thereby increasing the participation of disadvantaged social groups. The convergence of university and non-university higher education in Spain began in 2006 with legislation that established the principles for and structure of a new national catalogue of vocational training qualifications. New regulations

governing admission to university were laid down in 2010 and cooperation was strengthened between the subsystems of basic vocational training and the University, together with the reinforcement of information and guidance measures. In 2011, bridges were established between the different levels of education to promote integrated frameworks of higher education that enable new models for relationship to develop between the university and vocational education and training, and initial approval was given to the possible validation of ECTS credits.

The conventional path of admission to university has gradually given way to increasingly diverse groups of students: people over 25, 40 and 45 years old, from different channels and backgrounds, social classes and different personal characteristics. Over the last three years, one out of four students formed part of these groups, although the data mask an important range of diversity, with older students and workers predominating in the public distance-learning universities. The distribution according to subject of study is very inconsistent, although in the case of the Social and Legal Sciences, which bring together courses in economics, law, business administration and education, the application of these policies and the different ways of gaining admission have had a more significant impact.

The course that has been set at international level seems to be quite clear, although studies confirm that there are problems and obstacles to modernisation. The report titled *Estrategia 2015* sets out a diagnosis of the situation in Spain and the key problems of high levels of university drop-out and the longer time taken by students to complete their studies (MEC, 2010).

Different reports and memoranda have commented similar things, pointing to differential trends associated with the type of university and degree programmes. The problems are more acute in certain groups that are more vulnerable to risk (“at-risk” groups) and they confirm that transition trajectories, the risk of student drop-out and persistence have different results among certain student profiles, characterised as “non-conventional”. Different authors confirm a higher drop-out level among working and older students (Chen & Carroll, 2007; Crawford & Harris, 2008; Torrado, 2012; Gairín *et al.*, 2014). Other groups that are vulnerable include disabled students (Figuera & Coiduras, 2013) and those from minority groups and a disadvantaged social background, who have to adapt to a new context and style of life (Cabrera, Burkum, La Nasa & Bibo, 2012, Rowan-Kenyon, Bell & Perna, 2008; Bowen, Chingos & McPherson, 2009, Belloc, Maruotti & Petrella, 2010). For certain students, gaining access to university is an once-in-a-lifetime opportunity, as economic conditions limit the readjustment of academic failure.

According to Ariño (2014), these results question the reality of the social dimension in Spain. Access to university has been broadened, but democracy is relative as the major inequalities occur prior to access; it is selective because there is an unequal distribution of the different social classes according to branches of

knowledge; and it is segregative in that the final results are different according to the student's social background.

The conclusions of Cabrera, Burkum, La Nasa and Bibo (2012), from their work with American students from ethnic minorities and disadvantaged groups, run along the same lines. They conclude that the determinants of persistence and graduation vary according to the socio-economic level of the students, with their prior academic background being a key distinguishing factor. This variable includes not just knowledge and understanding, but also the skills to manage the demands of academic life, so the more a student perceives a mismatch between his or her abilities, skills, knowledge and understanding and the requirements of the study programme, the higher the risk of failure and drop-out. The difficulties that working students have in managing academic demands are a key factor as far as dropping-out is concerned (Nonis & Hudson, 2010; Figuera & Torrado, 2013).

Different studies on persistence at university have also confirmed the role of a series of personal protective factors that contribute to an increase in the resilience of those in disadvantaged groups, as they influence the way in which individuals deal with academic demands, the effectiveness with which they use the resources and the emotional impact of the process and the outcomes. These variables include self-esteem, stress and self-efficacy (Ojeda, Navarro & Flores, 2011; Hong & Haefner, 2012). González, Álvarez, Cabrera and Bethencourt (2007) conclude that students who drop out tend to show a lower level of persistence as regards completing their studies, they are less able to deal with set-backs and they are less satisfied and less capable of putting off immediate rewards for later fulfilment. The levels of satisfaction, academic adjustment and motivation in the first year of a study programme are undoubtedly an important predictor of persistence (Morrow & Ackermann, 2012; Gairín *et al.*, 2014). Lent and various collaborators (Lent, Taveira, Singley, Sheu & Hennessy, 2009) go into more detail on the determinants of satisfaction and the adjustment of university students. Their findings confirm that students who are satisfied and academically adjusted feel competent at what they are doing (self-efficacy expectations), they know that they will obtain benefits from doing it (outcome expectations), they can get involved and participate in developing the task at hand (goal-based activity) and they have the necessary resources and support that will help them to achieve their objectives (perceived support).

Aside from the responsibility and the background conditions of the student, study of the influence of institutional factors and the social climate offers interesting insight into understanding the process of transition and its outcomes. Institutional support, study characteristics, the relationship with teaching staff are factors that facilitate persistence at university (Yorke & Longden, 2008; Karp, 2011; Scott-Clayton, 2011; Lillis, 2012), and their influence is even more significant in the case of minority groups (Tinto, 2012; Cabrera, Pérez & López,

pending publication). Recent studies have analysed the influence of the social support of friends and companions and concluded that these are variables that make a significant contribution to increasing the individual's personal resources that help them cope with transition (Strydom & Mentz, 2010; Karp, 2011).

Over the last few years, researchers have begun to work contextually (in academic groups and contexts) in order to ascertain the complex interaction between personal and contextual factors. Their findings attempt to find the keys to designing effective measures for the retention of students who are at risk of dropping out. This study looks at two different disciplinary contexts and attempts to answer the following questions: What is the admission rate of students from vocational education and training? What is their perception of the process of academic and social adjustment during their first year at university? What is their persistence rate and drop-out rate in subsequent years? What differences are there between them and their companions who enter university via "conventional" paths of admission?

Method

This article presents an analysis of the integration into university life of students of Social Sciences at the University of Barcelona (UB) who gained admission to university through vocational education and training (*ciclos formativos de grado superior*). Bearing in mind the complexity of the phenomenon, this involved a comprehensive and descriptive longitudinal study, based on a multi-strategy and systems methodology on two levels of analysis, one macro (the graduating cohort as a whole) and one micro (the analysis of a sample according to the type of student). The study presented here analyses their integration into university life based on the students' perception of their level of adaptation at two key points in time in their first year (the start of the academic year and the end of the first semester, Feb/March), together with student persistence over the first three years of study.

The degree programmes selected for the study were the undergraduate Bachelor's level degree in Business Administration and Management (BAM), which is one of the degree programmes with the highest drop-out rates, and the undergraduate Bachelor's level degree in Pedagogy, which is also in the Social Sciences but has different characteristics as far as the types of student are concerned. Both degree programmes are run by the University of Barcelona.

The instrument

Throughout the research work, various instruments were used to gather both quantitative and qualitative information so as to obtain a better understanding of student integration at university in their first year. The article sets out the various results obtained in an integral and complementary way on two levels:

a) At the micro level: two questionnaires, *Integration at university*, which was administered at the beginning of the first semester in the academic year, and *First semester assessment*, administered at the end of the first semester, were used to analyse the students' perception of adjustment at the start of the year and half way through the year. The variables examined in this article are: (1) the students' expectations of self-efficacy, measured by use of a 10 item scale; (2) academic satisfaction, using a 7 item scale; (3) initial academic adjustment, using one single item; and (4) their perception of support, using a 9 item scale. In all cases, the rating scale was from 1 to 5 (5 points). The different scales of adjustment follow the scales of Lent *et al* (2009). The questionnaires were administered in a classroom setting during the 2010-2011 academic years, and participation was voluntary.

b) At the macro level: the information came from the institutional data-base for the entire student population (N=1523), the socio-demographic data provided by each student at registration and the indicators on academic performance. The academic data refer to the first three academic years (2010-2011, 2011-2012 and 2012-2013) and were provided retroactively at the end of each academic year.

The population and the sample

Out of the 1,523 students in the cohort, 64% of the students gained admission to university through the conventional route of the post-compulsory secondary school leaving certificate and the university entrance exam. The rest came from minority groups: 2.8% were mature students in the 25-45 age group, 20.5% from vocational education and training, 12% from other studies they had partially completed, and 0.8% were taking a second degree.

At the micro level, just over 50% voluntarily filled out the two questionnaires administered at the beginning and end of the first semester (see table 1). According to the type of student and means of access, the participation percentages were somewhat higher for the degree programme in Pedagogy (56% at the beginning of the year and 60% at the end of the first semester). The participation rate was slightly lower in the second questionnaire and, for both study programmes, was lower among students who gained access through vocational education and training.

Table 1. *Study population and sample*

		Total Cohort	Total Post-compulsory secondary education “conventional”	Total Vocational education “non-conventional”
<i>MACRO</i>	<i>Population</i>	1523 <i>BAM 1290</i> <i>Pedagogy 233</i>	974 <i>BAM 838</i> <i>Pedagogy 136</i>	313 <i>BAM 260</i> <i>Pedagogy 53</i>
	<i>Sample</i> Beg. of first semester	785 <i>BAM 655</i> <i>Pedagogy 130</i>	534 <i>BAM 451</i> <i>Pedagogy 83</i>	151 <i>BAM125</i> <i>Pedagogy 26</i>
	<i>MICRO</i>			
	<i>Sample</i> End of first semester	791 <i>BAM 651</i> <i>Pedagogy 140</i>	561 <i>BAM 472</i> <i>Pedagogy 89</i>	122 <i>BAM 107</i> <i>Pedagogy 32</i>

Data Analysis

The SPSS® Statistics 20 programme was used to analyse the data. Non-parametric testing was used to check the compliance of the parametric assumptions for all the variables.

Results

Personal characteristics

To start with, the student profile for the entire population of both study programmes was different in terms of gender (89% females in Pedagogy), previous academic background (a higher entry grade in BAM) and first-choice quality (choice of admission, higher for BAM). A closer examination of the student profile according to the path of admission to university qualifies the results. Regardless of the degree programme, students from vocational education and training are often older (aged 24 on average), they combine their academic studies with some kind of work (46% in BAM and 50% in Pedagogy, a difference of more than 13% compared to post-compulsory secondary education students) and they come from a lower middle family background, above all in Pedagogy.

Academic adjustment in the first semester

The period of academic adjustment during the first semester of the first year at university constitutes the critical period as regards the foundations on which the students' subsequent persistence at university rests. During the first few months, students compare what they were informed about with their expectations and the realities of studying at university, and any preliminary intention to drop out begins to take shape. The opinions expressed by the students in the first questionnaire on their integration at university show distinct and significant results ($p < 0.05$). The students in Pedagogy felt more adapted (a mean of 4.01), they felt more supported (mean of 3.95) and in general felt more satisfied academically speaking (mean of 4.05).

The way and conditions in which “non-conventional” students gain access to university is totally different, or at least that is how they see it, in relation to the “conventional” students. The differences according to the type of student and their background can be seen in the context of the Business Administration and Management (BAM) degree programme: compared to students from post-compulsory secondary education, students from vocational education and training felt their self-efficacy expectations were lower (a mean of 3.70, compared to 3.53, on a scale from 1 to 5, $p = 0,015$), they were less satisfied (3.68 compared to 3.46, $p = 0,002$) and their perception of initial adjustment was lower (3.70 compared to 3.32, $p = 0,000$). The situation for students of the degree in Pedagogy was uniform and there was no uneven perception according to the paths of admission.

Table 2. Results of initial integration according to the path of admission and degree programme from the first student questionnaire on integration at university

Degree programme	Dimensions	Post-compulsory secondary education Conventional mean (SD)	Vocational education Non-conventional mean (SD)	Man-Whitney U test (p)
BAM	Self-efficacy expectations	3.70 (0.48)	3.53 (0.56)	$U = 22983.0$ ($p = 0.015$)*
Post-compulsory secondary education (n=451) Vocational education (n=125)	Initial academic adjustment	3.70 (0.64)	3.32 (0.77)	$U = 20568.0$ ($p = 0.000$)**
	Initial motivation	3.67 (0.84)	3.49 (0.99)	$U = 25694.5$ ($p = 0.104$)
	Perceived support	3.69 (0.45)	3.55 (0.55)	$U = 22900.0$ ($p = 0.017$)*
	Academic satisfaction	3.68 (0.57)	3.46 (0.68)	$U = 22239.0$ ($p = 0.002$)**

REALITIES IN A KALEIDOSCOPE

Pedagogy	Self-efficacy expectations	3.78 (0.46)	3.94 (0.40)	$U = 875.5$ ($p=0.170$)
Post-compulsory secondary education (n=83)	Initial academic adjustment	3.99 (0.53)	3.92 (0.69)	$U=1017.5$ ($p=0.596$)
	Initial motivation	4.04 (0.72)	4.08 (0.80)	$U = 1048.5$ ($p=0.814$)
Vocational education (n=26)	Perceived support	3.96 (0.40)	3.89 (0.38)	$U = 886.5$ ($p=0.346$)
	Academic satisfaction	4.00 (0.50)	4.09 (0.49)	$U = 928.00$ ($p=0.281$)

The means were calculated from the arithmetic mean of the responses for each scale in the questionnaire. * significant at the level of 0.05 **significant at the level of 0.01

At the end of the first semester, it can be clearly seen that there were two different microsystems as regards the conception, organisation and development of teaching and learning; the impact of the difficulty and standards required in studying for a degree; and the importance of contextualisation. Again, it was only in the Business Administration and Management programme where students from vocational education and training had a lower level of perception of adjustment to university (a mean of 3.60 compared to 3.36, on a scale from 1 to 5, $p = 0.011$).

Table 3. Results of the assessment of student integration at the end of the first semester according to the path of admission and degree programme

Degree programme	Dimensions	Post-compulsory secondary education Conventional mean (SD)	Vocational education Non-conventional mean (SD)	Man-Whitney U test (p)
BAM Post-compulsory secondary education (n=472)	Self-efficacy expectations	3.64 (0.65)	3.65 (0.69)	$U = 24227.5$ ($p=0.575$)
	Academic adjustment	3.60 (0.73)	3.36 (0.86)	$U=21341.5$ ($p=0.011$)*
Vocational education (n=107)	Motivation	3.31 (0.88)	3.24 (0.94)	$U = 24547.0$ ($p=0.681$)
	Academic satisfaction	3.65 (0.48)	3.55 (0.55)	$U = 22266.0$ ($p=0.119$)
Pedagogy Post-compulsory secondary education (n=89)	Self-efficacy expectations	3.88 (0.53)	3.88 (0.54)	$U = 1327.5$ ($p=0.564$)
	Academic adjustment	4.02 (0.60)	3.84 (0.45)	$U = 1198.0$ ($p=0.099$)
Vocational education (n=32)	Motivation	3.75 (0.71)	3.69 (0.82)	$U = 1349.5$ ($p=0.629$)
	Academic satisfaction	3.99 (0.37)	3.92 (0.37)	$U = 1197.5$ ($p=0.242$)

The means were calculated from the arithmetic mean of the responses for each scale in the questionnaire. * significant at the level of 0.05 **significant at the level of 0.01.

The longitudinal study of these two groups of students enables changes in the socio-cognitive factors before and after they found out their academic outcomes to be examined. A large percentage were satisfied when they started their studies and they continued to be satisfied one year later, although the highest level of cohesion was at the end of the first semester. Academic satisfaction in the students of vocational education and training in the second semester was conditioned more by their perception of their abilities to successfully deal with the academic challenges they had to face than by the grades they obtained. Predicting academic satisfaction at the end of the first semester was directly connected, in the Business Administration and Management degree programme and for both groups of students, with the perception of being able to cope with on-going academic demands after receiving their academic results.

Academic performance in the first year

The analysis of academic performance and persistence after the first year shows clearly distinctive results according to degree programme, type of student and path of admission. The transition products used were: the examination rate (the number of credits the students were examined in compared to the number of credits the students were enrolled in), success rate (number of credits passed out of those examined), the performance rate (credits passed out of those enrolled in) and formalisation of enrolment in the second year (continues studying as to dropping out in the first year).

The academic outcomes (according to the different rates calculated) of students from vocational education and training, in general, were lower than the “conventional” group of students and, regardless of the degree programme, these students often fail to sit examinations. In the first year, the difference in academic success (success rate) for the first and second semester between the types of student was greater and statistically significant in the Business Administration and Management degree programme, with differences of around 20%, whereas in Pedagogy, however, the results obtained in the second semester were similar, regardless of student type.

Academic performance is clearly a differentiating factor of these groups of students and also of the degree programmes examined in the study. The overall academic outcomes of the students of Pedagogy were better than those of the students of the Business Administration and Management programme (performance rate $BAM = 65.55$, performance rate Pedagogy = 88.97), and students from vocational education and training were less successful than conventional students. Along the same lines, the academic outcomes of the students from conventional paths of admission, regardless of degree programme, were significantly better (mean_{BAM} = 72.25, mean_{Pedag} = 95.20) compared to non-conventional students (mean_{BAM} = 51.13, mean_{Pedag} = 80.59).

Table 4. Examination rate according to the academic semester, degree programme and path of admission.

Performance indicator	Degree programme	Path of admission	Mean (SD)	Man-Whitney U test (p)
Examination rate first semester	BAM	Post-compulsory secondary education N= 838	74.07 (28.76)	U= 70112.5 (p=0.000)**
		Vocational education N=260	55.57 (33.62)	
	Pedagogy	Post-compulsory secondary education N=136	94.44 (14.84)	U= 2386.0 (p=0.000)**
		Vocational education N=53	81.96 (28.48)	
Examination rate second semester	BAM	Post-compulsory secondary education N= 838	91.26 (24.14)	U=82980.5 (p=0.000)**
		Vocational education N=260	80.63 (32.55)	
	Pedagogy	Post-compulsory secondary education N=136	96.29 (15.88)	U=2875.5 (p=0.003)**
		Vocational education N=53	85.22 (32.86)	

* significant at the level of 0.05 ** significant at the level of 0.01

Table 5. Success rate according to semester, degree programme and path of admission.

Performance indicator	Degree programme	Path of admission	Mean (SD)	Man-Whitney U test (p)
Success rate first semester	BAM	Post-compulsory secondary education N= 838	96.99 (12.53)	U=90283.0 (p=0.000)**
		Vocational education N=260	90.99 (22.46)	
	Pedagogy	Post-compulsory secondary education N=136	97.44 (12.41)	U=2803.0 (p=0.001)**
		Vocational education N=53	90.33 (24.31)	
Success rate second semester	BAM	Post-compulsory secondary education N= 838	74.30 (31.77)	U=58059.0 (p=0.000)**
		Vocational education N=260	52.40 (35.50)	
	Pedagogy	Post-compulsory secondary education N=136	97.65 (13.24)	U=2456.50 (p=0.000)**
		Vocational education N=53	92.75 (14.97)	

* significant at the level of 0.05 ** significant at the level of 0.01

With regard to the drop-out rate in the first year, the percentage varies according to the degree programme and type of student. The drop-out rate was substantially lower among students from vocational education and training in the Pedagogy programme (20.7%) compared to students of the Business Administration and Management programme (29.6%). “Conventional” students however usually continued their studies (over 90% of cases). The analysis of performance according to persistence after the first year shows significant differences in all cases (see table 6). These results confirm the idea that students from vocational education and training, as a group, have a higher risk of dropping out of certain study programmes more than others, and that they make up a group with personal and academic realities that call for special attention.

Table 6. Performance rate in the first year according to degree programme, path of admission and persistence

		Performance rate first year				
Degree course	Path of admission	Entire population mean (SD)	Man-Whitney U test (p)	1st year drop out mean (SD)	2 nd year persistence mean (SD)	Man-Whitney U test (p)
BAM	Post-compulsory secondary education (N=838)	72.25 (29.30)	U=63503.0 (p=0.000)**	19.31 (21.77) N=107	78.19 (23.49) N=731	U=3419.5 (p=0.000)**
	Vocational education (N=260)	51.13 (32.14)		16.85 (21.23) N=77	64.24 (25.19) N=183	U=1058.5 (p=0.000)**
Pedagogy	Post-compulsory secondary education (N=136)	95.20 (13.44)	U=2205.0 (p=0.000)**	68.75 (34.82) N=10	96.90 (8.70) N=126	U=298.5 (p=0.007)**
	Vocational education (N=53)	80.59 (29.81)		26.33 (23.28) N=11	93.82 (8.58) N=42	U=0.000 (p=0.000)**

* significant at the level of 0.05 ** significant at the level of 0.01

On applying the university’s regulations dealing with student progress and continuation and bearing in mind the types of drop-out according to Torrado (2012), drop-out from the degree programme in Pedagogy is characteristically of a voluntary nature (66.7% of cases) and therefore associated with factors of a personal and/or motivational nature, but never associated with academic failure. On the other hand, in Business Administration and Management, drop-outs in the first year were associated mainly with academic and organisational factors (of the drop-out total, 23% were students who failed to sit any exam, while 26.6% sat the exams, but failed all courses). These percentages show a similar pattern to that of

paths of admission: students from vocational education and training in Business Administration and Management dropped out due to academic reasons (63.6%), whereas students from vocational education and training in Pedagogy voluntarily dropped out (54.5%).

From the longitudinal point of view, monitoring of the population over the first three years made it possible to identify students who definitively dropped out in the first three years and also to establish drop-out trajectories according to the path of admission to each degree programme. As can be seen from the table below, the first year is the most critical and where there is the highest risk of students dropping out of university, regardless of the degree programme. In the case of non-conventional students the risk was higher compared to those who entered university via the conventional way; in Business Administration and Management degree programme, these were the majority.

Table 7. Population distribution according to persistence over the three years, degree programme and path of admission.

		Situation regarding persistence until registration for 2013-14			
Degree course	Path of admission	1st year drop-out	2nd year drop-out	3rd year drop-out	Persists 4th year
BAM	Post-compulsory secondary education (N=838)	90 10.7%	62 7.4%	31 3.7%	655 78.2%
	Vocational education (N=260)	74 28.5%	43 16.5%	13 5%	130 50%
	TOTAL (N=1290)	221 17.1%	126 9.8%	53 4.1%	890 69%
Pedagogy	Post-compulsory secondary education (N=136)	10 7.4%	9 6.6%	1 0.7%	116 85.3%
	Vocational education (N=53)	10 18.9%	4 7.5%	1 1.9%	38 71.7%
	Total (N=233)	29 12.4%	15 6.4%	3 1.3%	186 79.8%

The highest number of drop-outs, as reported in numerous other research papers, was concentrated in the first academic year. In general and over each academic year, academic performance was lower for students who dropped out than for those who persisted in their studies.

Conclusions

One of the objectives of university policy at national and international level has been the diversification of the means of access to university in order for there to be greater equity in the university system. In the case of Spain, the measures implemented have contributed to a significant increase in the percentage of students gaining admission via non-conventional means, in particular the presence of students from vocational education and training, older age groups and students who work and study. The results of this study shed light on the integration of these students and point to the need for complementary support measures to ensure a genuinely inclusive university.

In line with previous studies, the results of this study on student adjustment during the first few months at university shows that students from conventional paths of admission to university perceive more difficulties, they are less satisfied and they have lower expectations of success than students from post-compulsory secondary education. Significant differences are evident in the case of the Business Administration and Management degree programme.

Academic performance is clearly a differentiating factor for these groups of students and also for the degree programmes examined here. The academic outcomes show the weakness of students from vocational education and training in the Business Administration and Management programme. These students find that their initial projections (in the form of expectations) get confirmed in outcomes whereby the gap gets bigger over time (over semesters of study), compared to students from post-compulsory secondary education. This situation is different to that of students in Pedagogy.

The results show that the university system is not homogeneous, and evidence exists of different microsystems as regards the conception, organisation and development of teaching and learning, which are variables that undoubtedly condition student adjustment and either facilitate or inhibit the students' academic integration and their possibilities of social interaction (Lillis, 2012; Johnston, 2013). According to the latest research by Tinto (2012), the key variables are: course characteristics, pedagogical support and guidance, the student work-load, the quality of teaching and teaching staff and the atmosphere in the classroom, variables which were assessed more positively by students of Pedagogy according to the data obtained in our research (Dorio & Corti, pending publication).

Another of the important results of the study is the relevance of the first year in the students' decision to either drop out or persist in their studies. The work of Woosley (2003) and Castaño, Gallón, Gómez and Vázquez (2008) highlights the value of the students' initial experiences at university as regards the shaping of their mind-set and expectations regarding their degree studies. Our results confirm that the most significant drop-out rates occur in the first year and decrease significantly in the following years for both degree programmes. In all cases, low-level academic performance appears to be associated with drop-out, and drop-out levels are consequently higher among students from vocational education and training, although the causes of drop-out may be of a different nature according to each case. The analysis of academic trajectory does confirm however that, as a group, they are an at-risk group (have a high risk of dropping out of university).

Spanish universities are aware of the problems involved and many institutions have established student orientation and integration programmes and strategies. As Michavila (2012) points out, however, these types of action do not in general address the needs of special populations. Furthermore, the actions are frequently fragmented. It is therefore important to draw attention to approaches and strategies for intervention that are more holistic and comprehensive. We concur with Johnston (2013) who, in line with ecological and systems approaches, points to the need for students to be slowly and progressively introduced and absorbed into university life and for there to be a consistency of setting and context achieved through transition projects and holistic retention programmes that involve all staff with responsibilities (administration and services, academic managers and coordinators, institutional officers and teaching staff) and that encompass all of the dimensions of learning (curriculum design, teaching, guidance, tutorials). The responsibility for intervention clearly involves the institution itself and the teachers and those involved in student counselling and guidance, who will need to facilitate the connection between learning, the university culture and the systems of preliminary access and admission.

In order for these objectives to be achieved, the different educational contexts and settings also need to be assessed, an analysis made of the role of the different institutional and organisational elements that address the transition to university, and new guidelines put forward for student progression, above all, for minority groups.

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References

- Ariño, A., & Llopis, R. (Dirs.) (2011). *Universidad sin clases? Condiciones de vida de los estudiantes universitarios en España (Eurostudent IV)*. Madrid: Ministerio de Educación.
- Ariño, A. (2014). La dimensión social de la educación superior. *Revista de la Asociación de Sociología de la Educación*, 7(1), 17-41.
- Belloc, F., Maruotti, A., & Petrella, L. (2010). University drop-out: an Italian experience. *Higher Education*, 60 (2), 127-138.
- Bowen, W.; Chingos, M., & McPherson, M. (2009). *Crossing the finish line: Completing College at America's Public Universities*. Princeton, NJ: Princeton University Press.
- Cabrera, A. F.; Burkum, K. R.; La Nasa, S. M., & Bibo, E. (2012). Pathways to a four-year degree: Determinants of degree completion among socio-economically disadvantaged students. In: Seidman, A. (Ed.). *College Student Retention: A Formula for Student Success (pp. 155-209)*. Westport, CT: Praeger Publishers.
- Cabrera, A. F.; Pérez, P., & López, L. (pending publication). Evolución de perspectivas en el estudio de la retención universitaria en los EEUU: Bases para la retención. In: Figuera, P. (coord.). *Persistir con éxito en la universidad: de la investigación a la acción*. Barcelona: Laertes.
- Castaño, E., Gallón, S., Gómez, K., & Vázquez, J. (2008). Análisis de los factores asociados a la deserción estudiantil en la Educación Superior. *Revista de Educación*, 345, 255-280.
- Crawford, K., & Harris, M. (2008). Differential predictors of persistence between community college adult and traditional aged students. *Community College Journal of Research and Practice*, 32, 75-100.
- Chen, X., & Carroll, C. D. (2007). *Part-time Undergraduates in Post-secondary Education. 2003-04*. US Department of Education: Institute of Education Sciences. National Center for Education Statistics.
- Eurydice (2011). *La modernización de la educación superior en Europa 2011: financiación y dimensión social*. Eurydice. Brussels: European Commission.
- Dorio, I., & Corti, F. (pending publication). El primer año en la universidad. La experiencia de los estudiantes In: Figuera, P. (coord.). *Persistir con éxito en la universidad: de la investigación a la acción*. Barcelona: Laertes.
- Figuera, P., & Torrado, M. (2013). El contexto académico como factor diferenciador en la transición a la universidad. *Revista Contrapontos*, 13(1), 33-41.

- Figuera, P., & Coiduras J. L. (2013). La transición a la universidad: un análisis desde la diversidad de las voces de los estudiantes. *Revista de Educación*, 362, 713-736.
- Gairín, J., Triado, X. M., Feixas, M., Figuera, P., Aparicio-Chueca, P., & Torrado, M. (2014). Student drop-out rates in Catalan universities: profile and motives for disengagement. *Quality in Higher Education*, 20(2), 165-182.
- González, M. C., Álvarez, P., Cabrera, L., & Bethencourt, J. (2007). El abandono de los estudios universitarios: factores determinantes y medidas preventivas. *Revista Española de Pedagogía*, 236, 71-86.
- Hong, B.S. Shull, P.J., & Haefner, L.A. (2012). Impact of perceptions of faculty on student outcomes of self-efficacy, locus of control, persistence, and commitment. *Journal of College Student Retention: Research, Theory & Practice*, 13, 289-309.
- Johnston, B. (2013). *El primer año de universidad. Una experiencia positiva de transición*. Madrid: Narcea
- Karp, M.M. (2011). *How non-academic supports work: four mechanisms for improving student outcomes*. Community College Research Center, Columbia University.
- Krause, K.L., & Coates, H. (2008). Students' engagement in first-year university. *Assessment and Evaluation in Higher Education*, 33(5), 493-505.
- Krüger, K., Jiménez, L., & Molas, A. (2011). *La función social de la educación superior en la sociedad del conocimiento europea*. Downloaded on 15 October 2012 from http://www.ub.edu/geocrit/la_funcion_social.pdf
- Lent, R. W., Taveira, M.C., Singley, D., Sheu, H., & Hennessy, K. (2009). Social cognitive predictors of academic adjustment and life satisfaction in Portuguese college students. *Journal of Vocational Behavior*, 74, 190-198.
- Lillis, M.P. (2012). Faculty emotional intelligence and student-faculty interactions: implications for student retention. *Journal of College Student Retention: Research, Theory & Practice*, 13, 155-178.
- MEC (2010). *La Estrategia Universidad 2015. Contribución de las universidades al progreso socioeconómico español 2010-15*. Madrid: Ministerio de Educación.
- MECD (2013). *Datos básicos del sistema universitario español. Curso 13-14*. Ministerio de Educación, Cultura y Deporte
- Michavila, F. (2012). *Análisis de las Políticas y Estrategias de Acogida e Integración de los Estudiantes de Nuevo Ingreso en las Universidades Españolas*. Programa de Estudios y Análisis del Ministerio de Educación Cultura y Deporte. Available on <http://www.catedraunesco.es/estudios-y-proyectos>.
- Morrow, J. A., & Ackermann, M. E. (2012). Intention to persist and retention of first-year students: The importance of motivation and sense of belonging. *College Student Journal*, 46(3), 483-491.
- Nonis, S., & Hudson, G.I. (2010). Performance of college students: Impact of study time and study habits. *Journal of Education for Business*, 85, 229-238.
- OECD (2008). *Tertiary Education for the Knowledge Society. Volume 2*. Paris: OECD.
- OECD (2013). *Panorama de la Educación. Indicadores de la OECD 2013. Informe Español*. Madrid: Ministerio de Educación, Cultura y Deporte.
- Ojeda, L., Navarro, R., & Flores, L. (2011). Social cognitive predictors of Mexican college students' academic and life satisfaction. *Journal of Counselling Psychology*, 58, 61-71.

- Rowan-Kenyon, H., Bell, A.D., & Perna, L.W. (2008). Contextual influences on parental involvement in college going: Variations by socioeconomic class. *The Journal of Higher Education*, 79 (5), 564-586
- Scott-Clayton, J. (2011). *The shapeless river: does a lack of structure inhibit students' progress at community colleges?* CCRC working paper, no. 25.
- Strydom, J.F. and M. Metntz (2010). *Focusing the student experience on success through student engagement*. Council on Higher Education: Pretoria.
- Tinto, V. (2010). From theory to action: Exploring the institutional conditions for student retention. In: Smart, J.C. (Ed.) *Higher Education: Handbook of Theory and Research* (pp. 51–90). Memphis, TN, United States: Springer Netherlands.
- Tinto, V. (2012). *Completing college: Rethinking institutional action*. Illinois, Chicago: The University of Chicago Press.
- Torrado, M. (2012). *El fenómeno del abandono: el caso de ciencias experimentales en la Universidad de Barcelona*. Doctoral thesis. Universidad de Barcelona. Available on: <http://hdl.handle.net/10803/134955>
- Yorke, M. & Longden, B. (2008). *The first-year experience of higher education in the UK*. York, UK: The Higher Education Academy.
- Wosley, S.A. (2003). How important are the first few weeks of college? The long-term effects of initial college experiences. *College Student Journal*, 37(2), 201-207.