University access and after: explaining the social composition of degree programmes and the contrasting expectations of students

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Abstract University expansion in higher education has been hierarchically differentiated. There is some concentration of certain social profiles in some degrees of study, so social composition between degrees can vary considerably. This article describes in terms of social composition 10 degrees of four public universities in the metropolitan area of Barcelona. We analyse 857 questionnaires filled in by mid-career students. From the perspective of agent’s decision on the choice of studies, we explore what were the factors that made them choose a concrete degree. We examine several variables that can indicate whether their expectations have been met or not. The results show that the factors predicted by the theory by which working-class (WC) students choose degrees—instrumental motivations and conditions that minimize the risk—are often met. In this regard, the recent structural reform related with the implementation of the European Higher Education Area that removes short-cycles degrees (3 years) could lead to a problem of access for WC students.

Keywords Higher education · Access to university · Working-class · University differentiation

Introduction

Early research on the relationship between social class and education found that working-class (WC) students encounter specific difficulties when progressing through the education
Historically, primary and secondary education have received the most attention, but research on this phenomenon in higher education has been widely developed recently.

Two major approaches to explain the unequal access, progress and graduation of students from different social backgrounds have provided important theoretical arguments and empirical grounds for relating social class and educational success.

The first approach, based on the legacy of Bourdieu and Bernstein, has used the classic concepts of habitus, rules of the game, invisible pedagogy and codes, though broadening the analysis by exploring students’ experiences at university (Power et al. 2003; Read et al. 2003). The second one, within the rational choice framework, has identified factors which affect the choice processes in each intersection of the education system, taking into account actors’ preferences, calculations regarding the risk of actions, and opportunities and constraints which appear in context.

However, both of these approaches have adopted certain analytical elements from the other approach over time. As a result, it’s not difficult to find studies that, from a Bourdieuan perspective for example, consider that greater or lesser dedication to studies depends on the greater or lesser employment opportunities related to the area of study in question; or which explain different attitudes towards getting a university degree as dependent on risks involved for students and their families (Archer et al. 2002; Langa Rosado 2003).

It is also common to see how the rational choice model includes choice criteria linked to social rules or the more or less negotiated assumption of the student’s role. That is, the model has evolved from a very economistic conception of the individual to a model which understands agents in their social context (Gambetta 1996; Sullivan 2001).

Recently, many studies have focused on educational achievement, distinguishing the consequences of the differential output in pre-university stages and which determine the range of choice opportunities (primary or unconditional effects) from decisions actually taken by students depending on their social background (secondary or conditional effects) (Boudon 1983; Kloosterman 2010; Tieben and Wolbers 2012). In many countries, the collection of data by age cohort from the beginning of the 20th century has made it possible to analyse the evolution of inequalities in the access to university in a period of great expansion in higher education—and also great institutional differentiation for many of the university systems in these countries (Shavit et al. 2007; Siano-Kyrgiou and Tsiplakides 2011; Iannelli et al. 2011; Reisel 2011; Triventi 2011; Reimer and Jacob 2010).

In this the basic approach taken is that of individual choice in a context of limited options. Therefore, the goal of this paper is to relate the choice of university studies to the social composition in each degree programme and the progress which the students make at mid-career in their studies.

To that end, the following sections have been included: section two contextualises the Spanish university experience; section three discusses the theoretical principles needed to analyse the results selected for this study; section four looks at the methodology we use, and section five presents the results.

The results include, first, a description and analysis of the factors which students surveyed in the second or third year of their degree programme retrospectively claim to be the reasons for their choice of degree programme; each factor, which previous studies selected

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1 In recent research on higher education, studies on the university experience of so-called non-traditional students (students who do not fit the profile of young white men of middle- or upper-class) stand out, although different universities valorise different versions of what a ‘normal’ student experience is (Brennan et al. 2009) and at times this transforms them into a new kind of institution (Reay et al. 2009a).
as essential in this choice process is analysed by social class. From this analysis, the social composition for each degree programme in the sample is obtained. This social composition is described and used as the basis for classifying and clustering degrees programmes according to the percentage of WC students in them. Finally, student progress at the time of the survey—at the mid-point in the programme—is related to the expectations that led students to their degree choice.

**Higher education context in Spain**

As in most of the countries in Western Europe, in recent years, Spain has undergone an exponential increase in the number of students at university, with almost 40% of the current cohort of young adults being enrolled in higher education.

This increase has only led to a partial decrease in social inequalities. In most European countries, students from low educational family backgrounds have increased their access to higher education, but they are still far behind students from families with higher levels of education (Boliver 2011; Crozier et al. 2008; Eurostat 2009). On the whole, Spanish university students have parents with educational levels lower than in most other European countries. This is due to having the lowest distribution of educational credentials among cohorts of parents of young people of university age compared to those countries. However, the deviation of students toward long or short degree programmes based on their parents’ educational level is very significant; as a result, we find access inequality overlapping with internal stratification in the system (Ariño and Llopis 2011; Triventi 2011).

In the Spanish university system there is a hierarchy among degree programmes and, to a lesser extent, among institutions (attempts have recently been made to introduce these types of differences). Thus, historically, science and engineering degrees have greater prestige than social science or humanities degrees; likewise, long-cycle degrees (between 4 and 6 years) are more prestigious than short-cycle ones (3 years). Differences in prestige can be explained by four factors, found in different combinations in each degree programme: (1) prestige related to subsequent employment; (2) completion difficulty (length of time, rate of failure and drop-out rate); (3) access requirements that are based on the marks obtained in high school and the nationwide university entrance exam, and (4) percentage of vocational training students accepted into the degree programme.

Spanish university students profile is characterized by an under-representation of students whose parents have low education levels (ISCED-O, 1 and 2): 36% of the adult population in Spain have low education levels, while only 26% of students in university come from this background. In contrast, high parental education level (ISCED-6) is over represented: 26.1% of students have parents with a high education level, while this group accounts for only 7.4% of the adult population in Spain. Women make up 54% of university students. Finally, 80% of university students access university through the upper secondary academic pathway and 10% through vocational training (Ariño and Llopis 2011).

At an individual level, two other phenomena must be taken into account. First, Spanish students if they can avoid it, rarely leave home when they enrol at university; hence, they often choose institutions by proximity. Secondly, it is common to combine full-time studies with paid employment. Both phenomena are closely related to the limited number of grants and loans available, which places the total cost of a degree on students and their families.
Theoretical and conceptual references

Factors involved in the choice of degree programme

From an individual perspective, choosing the institution and programme is an important process closely related to certain attitudes and motivations. From an institutional perspective, there is also an emergent effect through which students of different social backgrounds end up coinciding (or not) in the same place; in this way, the social composition of each degree programme, college and university is formed.

In order to understand the process through which this social composition is established, it has to be assumed that the different hierarchizations give greater value and prestige to some institutions and degrees than to others. In some countries this difference is obvious and is caused by the existence of non-university tertiary education, which either continues secondary vocational studies or has less restricted access than its academic counterparts. In this case, there is a binary, or even more diversified system, with a first-tier and a second-tier in higher education (Shavit et al. 2007). There are other systems that, though formally unified, contain degree programmes of very different duration, orientation and even difficulty, and which, in practice, place degrees with different values into a hierarchy. Finally, in some countries, hierarchization is not found among degrees, but among institutions; that is, there are universities with higher prestige than others.

In Spain, the non-divided model with hierarchy based on the duration and difficulty of the studies was prevalent until the last decade. Nowadays, though effort has been made to make the duration of degree programmes equal, some differences related to volume and projection of scientific production have appeared, as has the political intention to introduce competition and hierarchy among universities.

Consequences of such hierarchization and diversification of opportunities are obvious at an individual level, as graduates find different employment conditions and value placed on their degrees in the labour market; but there are also consequences for institutions. According to Reay et al. (2009a) ‘universities and colleges have identifiable institutional habituses in which their organisational culture and ethos are linked to wider educational and socio-economical cultures through mutual configuration processes’. Thus, while different institutions accept distinct levels of student performance and competence, it is also expected that they consolidate the most typical characteristics of the prevailing social group over time.

Within this opportunity framework, the student who has completed higher secondary education must decide whether or not to enrol in university and which degree programme to choose. This is an important moment in the life of young people, and their motivation clearly affects their interest in studying. The main factors influencing this choice and how they are related are shown in Fig. 1. At university the effects described by Bourdieu and Bernstein are considered primary effects, which have already been filtered during pre-university education; however, at this level it is necessary to focus on the secondary effects. The model is broadened not only with intentional factors, but also with “causal” factors linked to personal and social dispositions, as Gambetta (1996) has done.

Preferences

Preferences are formed both by personal factors—some of which, e.g. study disposition, are only partially related to social variables that explain them—and eminently social factors, in particular, those transmitted by the family. The classic aspiration to equal or
exceed family socio-economic status (Breen and Goldthorpe 1997) leads to specific preferences regarding the orientation of the chosen studies, as do other factors related to family attitudes toward different university studies.

Our review of the literature leads us to conclude that WC students often choose their degree based on what they can obtain after graduation (*instrumental motivation*). Their “promotionist” approach involves obvious preferences toward degrees that are likely to provide quicker, clearer and more stable access to the labour market (Boudon 1983; Breen and Goldthorpe 1997).

In contrast, students from higher social classes are not as worried about the future and therefore usually choose their course of study without considering it. In fact, since studying at university is part of their parents’ lifestyle, it is easy for them to choose with a more *expressive motivation* (Read et al. 2003). As instrumental and expressive motivations are not mutually exclusive, the difference is due to one of them being more important than the other.
Social pressure, mostly from the family, is a key factor in understanding the choice and the objectives pursued. This effect is found both in WC students, who have experienced family opposition to studying, and in middle-class students, whose parents take for granted that they will go to university, with the resulting anxiety caused by the fear of disappointing them (Langa Rosado 2003; Troiano 2005).

Relative cost

The financial cost to students and/or their families for a degree can vary greatly, and it is necessary to calculate its relative weight based on their economic situation. Direct costs for studying (fees, academic material, etc.), indirect costs (transportation, accommodation, etc.) and opportunity costs (salary not received for the time not spent in paid employment) are, therefore, taken into consideration; at the same time, the weight of expenses is relative to the income received by students or their families. This expense can be compensated for by policies to promote higher education, such as grants.

But this is not the only issue related to cost. Langa Rosado (2003) made a major contribution highlighting the sense of indebtedness students may feel toward their families as an explanation for certain decisions they make during their studies and as a factor in differentiating two sorts of experiences at university. On the one hand, WC students experience university as a privilege; in addition, they may experience guilt over being a burden to their families. This leads to higher levels of distress, linked to the fear of failure. On the other hand, students from higher classes experience university as a right, delaying their adult social responsibilities. In this sense, the time they spend in university and the support they receive from their families are seen as legitimate, leading to less distress.

Odds of success

You cannot predict the odds of success unless there is the possibility of actually carrying out the activity. In access to university, there are certain requirements which determine the options available. The first one is to have the appropriate credentials; the second is to have the required “access marks” (different combinations based on the average of secondary education and the university access exam marks) for one or more degrees. These options depend, therefore, on previous academic achievement and are the result of the primary effects of social background on performance.

In the same way, primary effects play a role in the information which students have about their own academic capabilities. These perceived capabilities, together with the duration of studies and the available information about the level of difficulty (needed effort to pass courses, failure rate and drop-out rate, etc.) form the basis on which students build their appreciation of the odds for success ascribed to each possible option/degree.

Numerous researchers, particularly in the United Kingdom, have highlighted the importance of social factors beyond the strictly academic ones in their analysis. Thus, when there are pronounced differences in prestige and social distinction between institutions, students also evaluate their social proximity to the institution. Hence, a process of self-selection occurs related to the fear students may have of not fitting into a specific university social context. Many studies, particularly in the United Kingdom, have stressed the importance of social factors other than the strictly academic ones in their analysis. For example, when there are pronounced differences in prestige and social distinction among institutions students also evaluate their social proximity to the institution. In other words, a process of self-selection occurs based on the fear students may have of not fitting into a
specific university social context and on the greater academic difficulties they foresee in certain programmes (Voigt 2007). Thus, only those who feel they are equal to the other students, or think they are capable of handling their own difference, dare to choose high prestige institutions. This is clearly the case of many older and WC students, who say they choose institutions where they will feel comfortable (Reay et al. 2001).

Balance between risk and preferences

According to the meritocratic model, the degree choice should be clear: those with higher marks choose higher prestige degrees and institutions. This mechanism alone should lead to a lower presence of WC students in degree programmes with higher access requirements, as these students generally have lower average marks than other students. However, what many studies also find, as might be expected, is that WC students with marks high enough to choose higher prestige degrees and institutions do not do so. In contrast, students from more advantaged classes even with poor academic records do not hesitate to enrol in high prestige universities (Power et al. 2003; Siano-Kyrgiou and Tsiplakides 2011).

Here is where other factors become relevant. University students try to minimise the risk (economic, academic and/or social risk) entailed by their decisions. For students with high family incomes and/or with reduced costs for studying, the option of accepting low odds for success or extending their studies becomes viable (Leathwood and O’Connell 2003).

In contrast, WC students completely depend on external circumstances to reduce costs (living near their university, grants policies, low fees, etc.), and they can only reduce the relative costs of studying by working, which paradoxically may reduce their odds of success. As a result, they try to minimise risk and maximise the odds of success by other available means: such as enrolling in university when their own capabilities guarantee their success, choosing shorter degree programmes, those that are perceived as easier, or programmes without added social difficulties.

Finally, not only risk analysis, but also preferences are part of the final balance. If motivation plays a role in the final decision—such that among WC students, high levels of motivation offset higher risks, while middle-class students with low motivation are willing to just give university study a try, because they do not risk as much—then it would be expected that WC students would have higher levels of motivation than other students. This is a strong hypothesis; a weaker alternative would be, for instance, that WC students’ motivation is far more instrumental.

Research methodology

The research on which the results of this article are based comes from an analysis of ten degree programmes at four public universities in the Barcelona Metropolitan Area through questionnaires given to 857 students. The questionnaire, with seventy questions covering different topics, was developed based on the analysis of 80 interviews with students from the same degree programmes. Discourses about their perceptions and motivations are

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2 We have chosen two degrees from each area of knowledge along the hard-soft and pure-applied lines (Becher 2001): Architecture, Telecommunications Engineering, Chemistry, Biology, Social Education, Business Studies, Pharmacy, Nursing, Translation and Interpretation, and Humanities.
reflected in the questions. The questionnaire was handed out in classes at the beginning of 2010 and analysed with the SPSS programme.

The following table offers a brief view of each degree (Table 1).

The analytical strategy followed in this paper is developed in three phases (Fig. 2).

In the first phase, certain indicators from the questions in the student questionnaire are chosen. These questions are retrospective, since they refer to prerequisites, intentions at the moment of choosing a degree programme, and predictions at the beginning of the process.

### Table 1 Completion outcomes of degrees analysed

| Degree                                           | Official length of studies | Dropout rate (%) | Success rate a (%) |
|--------------------------------------------------|---------------------------|------------------|--------------------|
| Architecture                                     | 5                         | 5                | 75                 |
| Telecommunications Engineering                   | 3                         | 29               | 63                 |
| Biology                                          | 4                         | 4                | 93                 |
| Chemistry                                        | 4                         | 20               | 64                 |
| Social education                                 | 3                         | 16               | 80                 |
| Business studies                                 | 3                         | 19               | 53                 |
| Humanities                                       | 4                         | 16               | 77                 |
| Translation and Interpretation                   | 4                         | 6                | 82                 |
| Nursing                                          | 3                         | 5                | 81                 |
| Pharmacy                                         | 4                         | 16               | 69                 |

*Source* Catalan Information System of Universities and Research (Sistema d’informacio d’Universitats i Recerca de Catalunya)

a Percentage of students who completed their studies within the length of time established

### Table 2 Dimension and indicators used in the first and third phase

| Dimension                          | Indicator                                      |
|------------------------------------|-----------------------------------------------|
| Reasons to choose a degree         | Contrast of expectations                       |
| Balance                            |                                               |
| Preferences                        |                                               |
| Social and personal aspirations    | Motivation of choice                          |
|                                   | Aspired economic and social position          |
|                                   | Parental support                              |
| Study disposition                  |                                               |
| Risk                               |                                               |
| Relative cost                      | Studies financing                             |
|                                   | Need to work                                  |
|                                   | Studies cost                                  |
| Success odds                       |                                               |
| Opportunities                      | Access pathways (previous marks)              |
| Capacities                         | Previous marks                                |
|                                   | Perception of own preparation                 |
| Difficulties and duration          | Duration of studies                           |
|                                   | Difficulty index                              |
The previously presented model of analysis (Fig. 1) includes variables such as preferences, risk calculation and balance. It tries, therefore, to answer the question: what criteria do students use to choose a degree programme?

In the second phase, the degree programmes are described and classified according to their social composition; the reference is the percentage of WC students enrolled in each programme.

Finally, in the third phase, degrees are described according to indicators related to actual progress (mid-point) in the studies. These indicators tackle the same areas which comprised the initial criteria of degree choice (preferences and risk calculation) and refer to typical characteristics of the different programmes. This is how the question of whether these studies really fulfil students’ expectations is approached (Table 2).

Results

To show the results in the clearest way, the surveyed students have been split into two groups: in one group are students of WC background, whose parents are skilled and unskilled manual workers (22 % of the total); and in the other group are the rest of the students: middle-class and upper-class (MC + UC), whose parents are in middle-class stratum (54.5 %), or are large or small employers (7.5 and 16 %, respectively).

As in Goldthorpe’s classification (1992), the social class variable is based on the parents’ jobs (it was verified that family educational level was consistent with the resulting classification).

Students are placed in the WC’ category when both parents are skilled or unskilled manual workers, or when one parent is and the other is unemployed or their employment status and occupation is unknown.3

Based on the theoretical background presented in the previous section, we took into consideration whether in the current Spanish context4 there are also differences in access among university students. If this is the case, WC students would choose a degree programme based on utilitarian motivations granting greater importance to future employment. In addition, they would make their choice bearing in mind the economic cost, which must be economically feasible, and judging access and progress at university to involve the minimum possible risk. Below we present the specific questions used to address these issues.

Do WC students choose a university degree taking these criteria into account?

In this first phase of analysis, factors were analysed with social class as the independent variable, with the influence of sex also controlled for. In this sense, sometimes data shows how specific trend is intensified by sex—or is rather specific for men or women—but without any statistical interaction with social class variable. Social class relations are the focus of this article, although taking into account social class and sex together deserves further analysis in other research work.

3 The WC is, therefore, slightly under-represented in the sample, since the situation of a parent who is a manual worker and a parent who works in another occupational category was not considered WC.

4 The surveyed students were enrolled at university before the beginning of the crisis (the majority in the 2007–2008 academic year).
It also must be kept in mind that the results shown come from a survey carried out in students’ third year; as a result, the lack of data on students that dropped out in previous years can lead to a distortion in the results.

Preferences

More WC students chose their degree programme considering the future occupation to which they could gain access after graduation than other students (WC: 44 %/MC + UC: 35 %).\(^5\) In addition, they showed reduced academic motivation—choice of degree programme based on interest in its contents—(WC: 41.5 %/MC + UC: 50 %). Consequently, WC students follow a different tendency from the other students regarding their reasons for choosing to attend university.

In the same sense, WC students aspire to improve their economic situation in relation to their parents (WC: 73.5 %/MC + UC: 48 %), whereas other students are content to maintain the same economic situation as their parents (WC: 10.2 %/MC + UC: 33 %). Though the relationship is not so obvious, this tendency can also be seen regarding students’ social aspirations: WC students want to have a higher social status than their parents (WC: 38 %/MC + UC: 33 %), while other students are content with the same social status as their parents (WC: 28 %/MC + UC: 38 %). Aspirations are related to real improvement opportunities; there is greater room for improvement among WC students, both economically and socially, than among middle-class and upper-class students.

The parents’ attitude toward their children’s studies reveals small but interesting differences. First, middle-class and upper-class parents have always been more confident that their children would graduate from university than WC parents ("They have always thought that I would graduate" WC: 31 %/MC + UC: 42 %), as if they "normalise" going to university, taking it for granted. Among WC parents, those with a “supportive” attitude regarding their children’s choice to attend university stand out ("They have always encouraged me to continue studying" WC: 56 %/MC + UC: 48 %). They therefore have a proactive starting point, without assuming the result of graduating. In contrast, receiving little support from their parents, which part of the literature identifies as typical among WC students, is really reduced: only 3 % of WC parents would have preferred their children to work instead of going to university.

Relative cost

Focusing on the cost of studying, the differences based on social class regarding working while studying stand out. WC students are highly focused on the need to finance their studies, accommodation, and transportation ("I need to work quite a lot" or “a lot” WC: 70 %/MC + UC: 48 %).

How university studies are financed also differentiates university students. WC students finance their studies working throughout the academic year (WC: 28 %/MC + UC: 17 %) or during their holidays (WC: 22 %/MC + UC: 11 %), while other students mainly finance their studies through contributions from their parents (WC: 40 %/MC + UC: 70 %). Although less than a quarter of students finance their studies through grants, there are also differences depending on social class background (WC: 18 %/MC + UC: 9 %).

The cost of university has an additional consequence—a feeling of debt arising from this situation (Langa Rosado 2003). Within our student sample, most of the students whose

\(^5\) An asterisk is added when the difference is statistically significant.
Educations are financed by their parents reveal they feel indebted to them, but in WC students this tendency is greater, a much higher percentage believes they owe their family something for the financial efforts they have made (WC: 56 %/MC + UC: 34 %*).

Regarding the actual cost of studies for students and their families, direct (fees, school material) and indirect (transportation and accommodation) costs have been analysed separately. When the total degree costs are high (more than 400 Euros a month), WC students are under-represented (WC: 24 %/MC + UC: 30 %). This difference is due more to indirect than to direct costs. That is, WC students try to avoid the higher cost of choosing a university far from home in order to save on accommodation and transportation costs.

Odds of success

When access conditions are considered, WC students state more frequently that they think they had an insufficient or very insufficient level of education before starting their university studies (WC: 3.5 %/MC + UC: 1.1 %*). In contrast, other students are more represented among those who think they had a high level (WC: 77 %/MC + UC: 84 %).

Regarding their own capacities, as a whole WC students have lower marks than other students (with low access marks, WC: 70.6 %/MC + UC: 44 %* and with high access marks, WC: 12 %/MC + UC: 25 %*). As a result, they have fewer possible options (opportunities) than other students. Moreover, a higher percentage of WC students gain university access through Advanced Level Specific Vocational Training (WC: 22 %/MC + UC: 10 %*); in other words, to degree programmes with lower access requirements.

To examine the hypothesis that WC students choose degree programmes which pose the minimum risk, results from students who studied in short-cycle programmes (3 years) have been analysed. Students were asked whether they would have enrolled if the degree programme were 4 years. The results show that half of WC students stated they were completely sure they would have enrolled, in comparison to 59 % of MC + UC students in the same situation.

Combining both variables, an analysis has also been carried out to further explore the hypothesis that there is higher risk aversion among WC students. First of all, the general distribution of students in this sample shows the preference for long-cycles over short-cycles: short 46 %/long 56 %. But when students with lower access marks are selected, then the distribution reverses: short 67 %/long 33 %; and this tendency is even more pronounced among WC students (short 74.6 %/long 25.4 %, see Table 3).

The differences are not statistically significant—except for the corrected typified residuals in each cell, the sample has been dramatically reduced after every selection in the process of analysis, but note that this data pattern tends to confirm the predicted hypothesis.

Table 3 Presence of WC and MC + UC students with lower marks in short and long-cycle degree programmes

| Source | Authors |
|--------|---------|
| Students with lower marks | |
| Middle-class and upper-class | |
| Short-cycle | 64.4 % (112) |
| Long-cycle | 35.6 % (62) |
| Working-class | |
| Short-cycle | 74.6 % (53) |
| Long-cycle | 25.4 % (18) |

6 Filtered result, only corresponding to those students whose parents pay for their university education.
Given the theory of relative risk aversion, the goal is to classify degree programmes in order to group those which have easier access, higher graduation rates and/or are more likely to lead to employment, the hypothesis being that WC students self-select themselves and choose these types of degree programmes.

With these data, examples of choice models are shown for both academic and social reasons; though in most cases it is difficult to define to what extent the choice results from one factor or the other. Moreover, it is difficult to distinguish mark selection in degree programmes with a high demand and the social self-selection decision made by WC students. In this sense, it can be stated that on some occasions, social selection is mixed with academic effects.

Finally, combining preferences, costs and risk, students obtain a balance regarding access to university. In this case, we asked a question about how sure they were about studying. In response, most students said that they were convinced they wanted to attend university, though there were also differences depending on social class. WC students stand out among those who were hesitant (WC: 16 %/MC + UC: 9.5 %*) and middle-class and upper-class students stand out for being sure about studying (WC: 53 %/MC + UC: 67 %*).

Second question: Which kinds of degree programmes do WC students choose?

Starting from these differences, WC students tend to choose certain kinds of degree programmes, which can be categorized into three groups: those with a very low percentage of WC students (10 % or less), those with a low percentage of WC students (between 20 and 25 %), and those with the highest percentage of WC students (between 30 and 35 %) (Table 4).

Regarding degree programme chosen, in the first group Pharmacy and Architecture are high-risk degrees due to their duration (between 5 and 6 years) and difficulty (failure rates, socially perceived effort required, etc.), while Biology and Humanities, without dismissing the effect of length of time to complete the degree (4 years), are, in this case, programmes in a university seeking prestige and excellence. WC students are concentrated in short-cycle degrees (3 years), as is the case for the three degrees in the last group (Table 5). These results reveal the same tendency as found in a recent Euro student report showing

| Table 4 Social composition of degree programmes |
|-----------------------------------------------|
| Up to 10 % of students from WC families        |
| Biology 5.9 %                                 |
| Architecture 7.2 %                            |
| Humanities 8.8 %                              |
| Pharmacy 10.7 %                               |
| Between 20 and 25 % of students from WC families |
| Translation and Interpretation 19.6 %         |
| Chemistry 25 %                                |
| Business studies 25.1 %.                      |
| Between 30 and 35 % of students from WC families |
| Social education 30 %                         |
| Telecommunications Engineering 31.7 %         |
| Nursery nursing 33.7 %                        |

Source: Authors

* Springer
that in 3 year degree programmes, the percentage of students with parents with low education levels—up to the first cycle of secondary education—is 10 points higher than in degree programmes of 4–6 years (Ariño and Llopis 2011).

Third question: Do degrees really meet WC students’ expectations?

Preferences

In the table below (Table 5), there is a classification of different variables which are significantly related to the classification of degree programmes according to their WC social composition. Social composition is influenced by age profile as many other studies have ascertained; WC university students are usually older.

It has been confirmed that in degree programmes with more WC students, the perception of difficulty finding employment after graduation is lower than in programmes with a social composition with higher social status. It can be assumed, therefore, that WC students believe that their chosen degrees offer a better, clearer and quicker path to employment. There are also verifiable differences regarding personal and social aspirations. In degree programmes with a large majority of MC + UC students, a high proportion of students intend to continue academic study after graduating, study a language or study in a foreign country. On the other hand, in degree programmes with a medium to high social composition of WC students, a higher proportion of students have more specific and professional aspirations (master and specialized courses).

| Degree social composition | Total (%) |
|---------------------------|-----------|
| >10 % WC                  | 31        |
| 20–25 % WC                | 34        |
| 30–35 % WC                | 20.3      |

### Current employment expectations

- **Difficulties in finding an appropriate job:**
  - >10 % WC: 36.7 %
  - 20–25 % WC: 34.5 %
  - 30–35 % WC: 20.3 %
  - Total: 31 %

- **With difficulties or doesn’t know:**
  - >10 % WC: 15 %
  - 20–25 % WC: 20 %
  - 30–35 % WC: 14 %
  - Total: 16 %

- **Not many difficulties:**
  - >10 % WC: 28.3 %
  - 20–25 % WC: 20.4 %
  - 30–35 % WC: 58.5 %
  - Total: 34 %

### Intention to continue studies

- **Master:**
  - >10 % WC: 66 %
  - 20–25 % WC: 63 %
  - 30–35 % WC: 72.6 %
  - Total: 66.7 %

- **Doctoral program:**
  - >10 % WC: 26 %
  - 20–25 % WC: 11 %
  - 30–35 % WC: 17.6 %
  - Total: 43.2 %

- **Study language abroad:**
  - >10 % WC: 57 %
  - 20–25 % WC: 48.8 %
  - 30–35 % WC: 37 %
  - Total: 48 %

- **Studying in a foreign country:**
  - >10 % WC: 52 %
  - 20–25 % WC: 34.50 %
  - 30–35 % WC: 20.1 %
  - Total: 35.7 %

- **Specialized courses:**
  - >10 % WC: 52.6 %
  - 20–25 % WC: 46.5 %
  - 30–35 % WC: 73 %
  - Total: 56 %

The data are in the same order as in the initial model of analysis (Fig. 1) and as in the operationalisation proposed in Fig. 2.

**Bold** Significant corrected residuals (±1.96)

**Source** Author(s)

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7 When students answered the questionnaire, before the complete implementation of the Bologna Process, master programmes had a professional orientation, different from the academic orientation of doctoral studies.
Students’ expectations after graduation regarding further academic study and professional prospects are related to both initial expectations on entering university and to the modelling they experience in their interactions with fellow students and teachers. In this sense, the data should be analysed as a result of the interaction process between institutions and their actors (Hatcher 1998).

Relative cost

The differences regarding student work profiles in each group of degree programmes are clear. The more WC students there are, the more hours they work in the labour market. Institutionally, in only three of these programmes are students allowed to study and work in a paid job at the same time: Social Education, Translation and Interpretation and Business Studies. Nevertheless, in programmes with a high percentage of WC students, many study and work at the same time, even though it is not institutionally supported. This is the case in Nursing (55% of students work a half-day or more) and Telecommunications Engineering (37%).

Odds of success

Regarding the difficulty of studies, a difficulty index has been prepared in order to summarise the results and to understand differences among programmes (Table 6). This index takes into account students’ marks in the university and the perceived difficulty of their studies—both overall and considering specific aspects of study which might create difficulty: exams, workload, competitiveness and effort.

It is assumed that WC students try to minimise their risk and do not choose very difficult degree programmes. This hypothesis is proven in most cases, especially in degree programmes with a low percentage of WC students where difficulty levels are high, and in programmes with a high percentage of WC students where the difficulty index is low (Table 7).

Although the results are quite consistent with the suggested hypothesis, there are two obvious exceptions. Humanities, despite having a low difficulty index, is not chosen by WC students, and Telecommunications Engineering, which has a high difficulty index, has a high percentage of WC students. These cases could be due to incorrect assumptions made by students due to a lack of information or mistaken beliefs. However, these results are more understandable if they are complimented by the results found in a study by Sanchez-Gelabert and Navarro (2012). In their study they use data obtained from students surveyed 4 years after graduation. Results show that employment is insecure in Humanities. In other

Table 6 Combining studying with work

| Combining studying with work | Degree social composition | Total (%) |
|------------------------------|---------------------------|-----------|
|                              | >10 % WC                  | 20–25 % WC | 30–35 % WC |
| Full-time student            | 55.6 %                    | 33.2 %     | 33.3 %     | 40          |
| Part-time work               | 9.3 %                     | 30 %       | 33.3 %     | 24.7        |
| Full-time work               | 0.8 %                     | 8.9 %      | 17 %       | 8.8         |

Bold Significant corrected residuals (±1.96)

Source Author(s)
Table 7 Analysed degree programmes according to difficulty index

| Difficulty index | Low | Middle | High | Total |
|------------------|-----|--------|------|-------|
| 10 % WC          |     |        |      |       |
| Architecture     | 11  | 21     | 43   | 75    |
| %                | 14.7% | 28.0% | 57.3% | 100.0% |
| Pharmacy         | 9   | 32     | 34   | 75    |
| %                | 12.0% | 42.7% | 45.3% | 100.0% |
| Humanities       | 16  | 28     | 11   | 55    |
| %                | 29.1% | 50.9% | 20.0% | 100.0% |
| 20–25 % WC       |     |        |      |       |
| Chemistry        | 12  | 38     | 39   | 89    |
| %                | 13.5% | 42.7% | 43.8% | 100.0% |
| Translation and Interpretation | 29 | 48 | 19 | 96 |
| %                | 30.2% | 50.0% | 19.8% | 100.0% |
| Biology          | 1   | 17     | 26   | 44    |
| %                | 2.3% | 38.6%  | 59.1% | 100.0% |
| 30–35 % WC       |     |        |      |       |
| Business studies | 32  | 56     | 35   | 123   |
| %                | 26.0% | 45.5% | 28.5% | 100.0% |
| Telecommunications Engineering | 5 | 19 | 27 | 51 |
| %                | 9.8% | 37.3%  | 52.9% | 100.0% |
| Social education | 24  | 34     | 19   | 77    |
| %                | 31.2% | 44.2% | 24.7% | 100.0% |
| Nursing          | 43  | 59     | 29   | 131   |
| %                | 32.8% | 45.0% | 22.1% | 100.0% |
| Total            | 182 | 352    | 282  | 816   |
| %                | 22.3% | 43.1% | 34.6% | 100%   |

*Bold* Significant corrected residuals (+ 1.96)

*Bold and cursive* Significant corrected residuals (− 1.96)

*Source* Author(s)
words, though it is a degree with generally easy access and a low difficulty index, WC students do not choose it because resulting employment quality is very low. The opposite is the case with Telecommunications Engineering. It is a degree with a high difficulty index and high progress costs, but taking into account that it is a short-cycle degree and that likely employment is obviously secure, we can deduce why there is a high percentage of WC students in this degree programme.

With the analysis of the total balance, it is clear that preferences converge for WC students: expectations of higher professionalisation and orientation to the labour market are met; and regarding risk, it can be reduced by cutting the economic cost of studying by working at the same time and choosing degree programmes that are easier to complete. There is, therefore, a connection between balance-degree choices made by students when they enrol in university and between balance-evaluation made by students when they are in the middle of their studies.

Conclusions

Although university expansion in recent years in Spain has led to the growing presence of WC students in university, their access to and progress in university is slightly different between middle-class and upper-class students.

Regarding access, we have found that there is a process of self-selection among students in particular degree programmes depending on their social background. On the one hand, this is due to the academic admission requirements, as the average marks of WC students are lower than those of other students; thus, education inequalities as primary effects become apparent. On the other hand, when making decisions about continuing studies and choosing degree programmes (secondary effects), WC students try to minimise the risk linked to adverse economic conditions. As a result, they choose programmes that are easier to complete (as they require fewer years of study) and with clear professional profiles, but not so much based on the other characteristics as students with lower grades still enrol at university if their marks allow them to do so; thus, no process of over-selection by access marks can be seen. In addition, WC students tend to avoid more prestigious degree programmes, where they may feel like outsiders both academically and socially.

Thus, we can see that all the theoretical and empirical approaches discussed at the beginning of this study contribute to explaining the unequal access of WC students from our sample to the different degree programmes analysed, but the decision often made by WC students to choose short-degree programmes (3 year degrees) is the one which has shown to have the greatest weight in this context. The diverted structure of the system is the relevant point here and, as on many other occasions (Shavit et al. 2007) it reveals its ability to provide clear opportunities for social mobility, however, at the expense of providing the possibility of status confirmation, as well.

During the third year of studies, students’ opportunities and preferences are also different depending on their social background. As shown in previous research regarding students’ experiences, the stress due to the scarcity of resources affects WC students: it becomes academic stress and affects the way students experience their time at the university. There is, therefore, some consistency between students’ initial perceptions and actual objective conditions. Despite this general statement, variations in difficulties experienced are often small and they also depend on the degree programme. This may be the result of a process of homogenisation among students from different backgrounds,
which could happen before beginning university or after, through the socialisation process they have all undergone in their first 3 years of study (Reay et al. 2009b).

Degree programmes with different social compositions project different social images that are maintained over time and determine the choices of subsequent prospective students. Thus, we can expect that the student body in these programmes will continue to manifest the most typical characteristics of the prevailing social group over time (Reay et al. 2009a). And more importantly, this process could consolidate academic requirements and aspects of the organizational and social climate that contributes to again attracting similar students in terms of social background. This seems to be the case for the programmes with a higher proportion of WC students, but at the present time the implementation of the Bologna Process is bringing about the unification of degree programmes in terms of length (4 year bachelor degrees, with some exceptions). It seems clear that this major structural reform will involve institutional changes, but perhaps more relevant will be the changes triggered in the decisions made by potential students from WC backgrounds. The current context of rising university fees along with the current economic crisis—with high unemployment rates among families with low education levels—generates further challenges for WC students in gaining access to the Spanish higher education system.

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