Reasons for Course Selection and Academic Satisfaction among Master's Degree Students

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Abstract

This study investigated the relationships between the motivations of master's students and satisfaction with the programme. Participants included 978 students from two Spanish universities. The results showed that the characteristics of the master's programme explained the differences in the reasons for choice and student satisfaction. We found a positive relationship between academic satisfaction and the reasons for self-realization and personal growth. The results allow us to reconsider the process of student guidance and counselling.

Resumen

Este estudio investigó las relaciones entre las motivaciones de estudiantes de maestría y su nivel de satisfacción con una clase. Participantes incluyeron 978 estudiantes de 2 universidades españolas. Los resultados indicaron que las características de una clase de maestría explicaban las diferencias en las razones de los estudiantes para su elección y satisfacción. Encontramos una relación positiva entre satisfacción académica y las razones de auto-realización y crecimiento personal. Los resultados nos permiten reconsiderar el proceso de guía y consejería estudiantil.

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Introduction

The introduction of the European Higher Education Area (EHEA) has changed the structure of university education, and in this new context the master's degree has taken on new prominence. This can be noted in the growth in the number of master's degrees and students at universities in Spain (MCIU, 2019), Europe (Eurostudent, 2019) and worldwide (Jung & Lee, 2019; OECD, 2019). The programmes offered have also diversified in types and purposes (Ariza et al., 2013; Cassuto, 2015). While each country has its own particularities, the expansion in master's degrees is now internationally general in higher education (Glazer-Raymo, 2005; Gordon, 2016; McPherson et al., 2017).

Bodies specialising in the analysis of university systems have recently focused on the master's degree. In Spain institutions such as the Ministry for Science, Innovation and the Universities (MCIU) and the Spanish University Rectors' Conference (CRUE) have collected data on this type of programme. Regional quality assessment agencies have also studied student enrolment (Figuera Gazo & Torrado Fonseca, 2019a), and some studies have a wider scope (Figuera Gazo & Torrado Fonseca, 2019b; OECD, 2019). While such data are important, they cannot show differences beyond variables such as country, region and topic area, nor capture the particularities of transition processes, a topic that recent research has highlighted (Glazer-Raymo, 2005; Gordon, 2016; McPherson et al., 2017; Xu, 2014). In this article we ask to what extent variables such as students' profiles, motivations and satisfaction relate to the different types of master's degrees currently offered by Spanish universities.

Master's Degrees in Spain

Master's degrees provide specialised training in knowledge and competences in specific topic areas. There are two basic types: the academic master's and that oriented towards professional specialisation. The academic or research master's is more general and its purpose is to develop scientific knowledge and research skills in a specific area in preparation for PhD research. The professionally- oriented master's, on the other hand, equips students with skills for their professional careers. Among the latter type, Spanish law[1] further distinguishes those qualifying students to take up regulated professions, with identical contents at all universities; for example the Master in Compulsory Secondary and Sixth Form Education, Vocational Training and Language Teaching (Real Decreto 1850/2009; from here on Master in Secondary Teaching) and the Master in Law (*Real Decreto* 775/2011)[2]. Thus in practice there are three types of master's degree, all with quite different characteristics (Figuera Gazo et al., 2018; Jurado et al., 2019).

According to recent data, the number of students enrolling has grown exponentially, with a 151% increase in the last decade (MCIU, 2019); 205,044 students enrolled in the 2017-18 academic year, while 99,413 graduated in the previous year. Nationwide statistics also show a broad diversity of paths of access to these programmes, in line

with students' ages and academic/professional backgrounds (Hernández & Pérez, 2019). 35.1% of master's students in the 2017-18 academic year were under 25, while 29.4% were over 35, with data revealing a relationship between age and work experience (MCIU, 2019).

In Spain, the tendency to move directly from a bachelor's to a master's degree is increasing (Hernández & Pérez, 2019; Figuera Gazo & Torrado Fonseca, 2019b). The latest MCIU data (2019) show that during the 2015-2016 academic year 22.8% of students enrolled on a master's immediately after finishing their bachelor's degree. This is changing the profile of students taking master's courses, along with the meaning they assign them; the master's becomes a further stage of their professional specialisation (Figuera Gazo & Torrado Fonseca, 2019b). In Spain this shift has brought with it the consolidation of official master's programmes as an almost compulsory alternative to on-the-job training, resulting in the growth of courses on offer (Hernández & Pérez, 2019); a general trend accompanied by diversification in the types of degrees available (Figuera Gazo et al., 2018).

Reasons for Choice

The reasons for students' choices of degree are seen as an indicator of their expectations of the programme. As Deci and Ryan's (2000) self-determination model suggests, motivations can be intrinsic or extrinsic. *Intrinsic reasons* relate to factors such as self-realisation, the acquisition of a wider education or seeking a new educational experience, while *extrinsic reasons* relate to externally-imposed conditions, social recognition and the quest for economic and professional benefits. These values motivate students' actions and help consolidate their life goals (Bailey & Phillips 2015; MacFarlane, 2018; Wang et al., 2016).

Various recent studies have found relationships between reasons for choice and academic satisfaction (Bailey & Phillips, 2015; Doña & Luque, 2019; Hardré et al., 2019; Ulas & Yildirim, 2018). Hardré et al. (2019) conclude that the degree of correspondence between objectives for taking a master's degree and the perceived benefits of the programme determines students' satisfaction. Other studies have found a positive relationship between intrinsic reasons for choice and academic satisfaction (Cabrera et al., 2014; Doña & Luque, 2019). Some analysts have explained the relationship between motivation and satisfaction through the notion of commitment: thus students' initial motivations influence their engagement and commitment (Gutiérrez et al., 2018; Suhlmann et al., 2018), which in turn affect academic satisfaction (Arizaga & Luna, 2019; Ulas & Yildirim, 2018).

Satisfaction with Master's Degrees

An international literature review revealed significant interest in studying transition processes, academic persistence and achievement at this level. Academic satisfaction, a measure of adaptation and wellbeing related to persistence, is a prominent variable in the research (Figuera Gazo, Torrado Fonseca, et al., 2019; Lent et al., 2017; Ojeda et al., 2011; Ojeda et al., 2012; Vergara-Morales et al., 2019).

Students' satisfaction is based on their assessment of their university experience (Santini et al., 2017; Wilkins et al., 2016). Studies of this factor have taken two main perspectives: service quality and psychological wellbeing (Vergara-Morales et al., 2019). The *service quality* approach has analysed students' assessment of whether the institution meets their expectations (Duarte et al., 2012). In *psychological wellbeing* approach, satisfaction is a cognitive component of wellbeing involving students' assessment of their university experience on the basis of their aspirations and achievements (Almeida et al., 2020; Brown & Lent, 2016; Silva et al., 2019; Vergara-Morales et al., 2019). Findings suggest that these assessments flow from the interaction of personal and contextual factors.

Analysis of student satisfaction according to academic context variables shows promising results. Thus a relationship has been found between satisfaction and teaching methods the type and quality of student-teacher relationships (Silva et al., 2019; Tinto, 2017). Other topics are the university's educational culture (Figuera Gazo & Torrado Fonseca, 2019a; Griffioen et al., 2018; Vela, 2015); the type of master's degree (face-to-face, blended or virtual: Figuera Gazo, Llanes Ordóñez, et al., 2019; Filak & Nicolini, 2018); and organizational aspects of the curriculum (Cassuto, 2015; Xu, 2014) and university facilities (Cruz et al., 2019; Gordon, 2016; Silva et al., 2019). Lastly, external factors such as class atmosphere, peer relationships (Figuera Gazo & Torrado Fonseca, 2019b; Rienties et al., 2014) and socialisation processes (Hardré et al., 2019; Tompkins et al., 2016), variables that are particularly important for international students (Hennebry & Fordyce, 2017), have also been investigated.

Other studies have analysed the relationship of satisfaction to personal factors, such as students' prior academic and work experience (Rizzolo et al., 2016); their objectives and reasons for choice (Doña & Luque, 2019; Gutiérrez et al., 2018); and their aspirations and ideas concerning the programme (Hardré et al., 2019). Pegalajar (2016) confirm the influence of course expectations on the construction of identity and academic satisfaction among students on the Master in Secondary Teaching. Hardré and Hackett (2015) found that differences between expected and actual experiences negatively predicted general satisfaction with the course.

Master's degrees, then, represent a new educational context and experience for students from varying backgrounds who must make the transition to the programme, adapt, persist and finally graduate. In this article we study in greater depth the characteristics of the master's degree, specifically its type, analysing relationships between students' access profile, motivations and course satisfaction; factors that will help us understand, with student guidance in view, their transitions to an expanding educational area. Answers to these questions can be extrapolated to apply to universities elsewhere.

Method

This study forms part of a wider study aiming to analyse in depth student transitions to official master's degrees. Here we present the results of a survey whose objectives were:

(1) to analyse student profiles and identify similarities and differences among them according to the type of master's degree; (2) to analyse correspondences between reasons for choice and the type of master's selected; (3) to analyse the link between academic satisfaction and the type of master's; (4) to identify relationships between reasons for choice and student satisfaction according to the type of master's.

Participants

The sample comprised 1,532 students from the 2016-17 and 2017-18 academic years on eight social and juridical science master's programmes at two state universities in north-east Spain (the Universidad de Barcelona and the Universidad Autónoma de Barcelona). The degrees were chosen intentionally according to student numbers, importance, and type of master's. programme directors selected modules and groups with the highest percentage of attendance and facilitated access to students. The final sample comprised 978 students, with a total response rate (RR) of 64% and 2.3% margin of error (calculation of sample error with a 95% confidence level for finite populations: –p and q = 0.5). There were 661 students (RR = 59%) from professional qualification degrees (Master in Secondary Teaching and Master in Law); 205 students (RR = 74%) from professional development degrees (Master in Educational Psychology and Master in Sports Company Management); and 112 students (RR = 86%) from research degrees (Master in Research and Educational Change, Master in Education Research and Master in Values and Citizenship).

Instrument

The questionnaire was developed by adapting previously validated scales and administered on paper in classrooms at the end of the first trimester in each year. The questionnaire dimensions included: (a) socio-demographic data; (b) academic and professional background; (c) type of master's programme; (d) reasons for choice; and (e) academic satisfaction.

To measure the reasons for choice of the degree (RC), a previously validated ten-item scale assessing factors influencing choice was used. It featured 5 graded response options (from 1 = *not important* to 5 = *very important*). The scale, with proven consistency, has been presented in prior publications (Figuera Gazo et al., 2018; Jurado et al., 2019).

Academic satisfaction (AS) was analysed using a scale adapted from those by Lent et al. (2009, p. 17) and Figuera Gazo & Torrado Fonseca (2015). Substantial changes were not made; hence content validation was not considered necessary. Academic satisfaction was measured by seven items on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*).

Analysis of Results

Univariate, bivariate and multivariate descriptive analyses were performed using SPSS v.25 software. Student profiles were analysed seeking significant differences
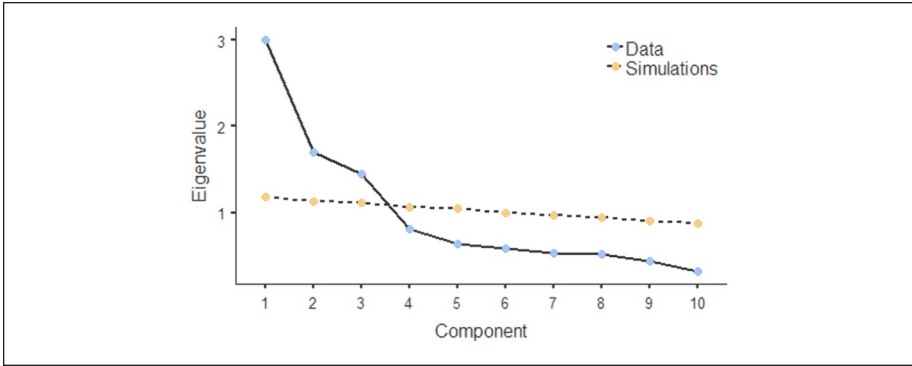
Figure 1. Results of FA, reasons for choice scale.

(α = .05) according to the type of master's chosen using a chi-square independence test and a Kruskal–Wallis H test for the variables in socio-demographic and academic/professional backgrounds.

Validation analyses of the scales for reasons for choice and academic satisfaction were performed, with results coinciding with the studies from which they were taken:

The *reasons for choice of programme scale* shows reasonable reliability (Cronbach's α .701). To identify the underlying dimensions and find homogeneous groups of variables enabling us to explain the maximum amount of information, a factor analysis (FA) was performed using principal component extraction and Varimax rotation with Kaiser normalization. The exploratory test assumptions were fulfilled (KMO= .731; Bartlett's test p= .00). The scale items were grouped into three factors explaining a variance of 61.46% (see Figure 1).

As Table 1 shows, factor 1 included the items reflecting intrinsic motivations for choice (RC9, RC4, RC10, RC8 and RC5); that is, students' wish to update and/or develop their education and skills. Factor 2 encompassed three items related to more extrinsic reasons (RC7, RC3 and RC6): the quest for long-term technical and professional benefits. Lastly, factor 3 referred to reorientations in students' professional projects, with two items (RC2 and RC1).

The *academic satisfaction* scale showed a Cronbach's α of 0.888 for reliability and high internal consistency. The FA grouped the seven items into a single factor explaining 60.5% of variance with the prior fulfilment of application assumptions (KMO = .898; Bartlett's test p = .00). (see Figure 2).

To confirm the differences found between reasons for choice and academic satisfaction according to the type of master's programme, non-parametric tests of means among the scale items were performed (Kruskall–Wallis H). A correlation analysis was also undertaken to determine the dependence between academic satisfaction and reasons for choice (intrinsic, extrinsic and professional change). To this end the factor variables from the FA of the two scales were generated using a regression method, with scores resulting negative and positive across an interval from −1 to 1. Size of real significance and statistical power were calculated (Frías et al., 2000) to complement

Table 1. Rotated Components Matrix of the Reasons for Choice Scale.

	Components		
	1	2	3
RC9 - To further my education	.819		
RC4 - To enjoy a new educational experience	.772		
RC10 – To stay active	.722		
RC8 – To further my professional competences	.707		
RC5 – To widen my network of contacts	.657		
RC7 – To improve economically		.823	
RC3 - To further my professional situation		.761	
RC6 – To stay in / gain access to the jobs market		.741	
RC2 – To redefine my professional project			.850
RC1 – To change my profession			.846
Variance explained	27.59%	18.91%	14.95%

Extraction method: Principle Components Analysis. Rotation Method Varimax with Kaiser normalization
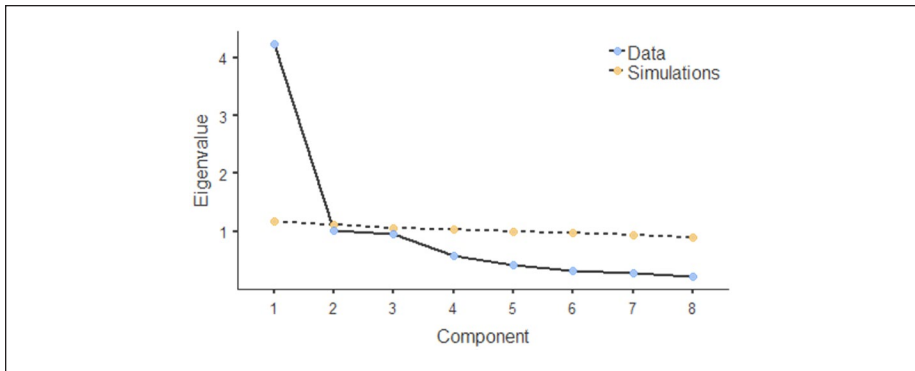The rotation converged in 4 interactions.

Figure. 2. Results of FA, academic satisfaction scale.

the information yielded by the classical statistics and to evaluate the strength of the correlation between reasons and academic satisfaction, using G*Power 3.1.9.7 software (Faul et al., 2009). Finally, to identify student profiles according to the variables analysed, a segmentation or decision tree analysis was performed (Pérez, 2011).

Results

Student Profiles According to Type of Master's

As Table 2 shows, the profile of the students on the different types of master's degrees showed significant differences among the defining variables. The tests revealed a

Table 2. Values and Tests of Student Socio-Demographic Variables According to Type of Master's.

	Required by profession (*n* = 661)	Professional development (*n* = 205)	Research oriented (*n* = 112)	Contrast test (*)
Women (%)	58.9	83.9	73.1	.00
Age (Mean & Sd.)	26.4 (6.5)	25.9 (6,3)	29.3 (6.8)	.00
International students (%)	3.1	10.9	57.1	.00
Living with parents (%)	49.3	55.1	19.8	.00
Master's degree as first choice (%)	89.6	93.7	86.4	.22
Paying for own master's (%)	25.3	33.9	35.0	.16
Recently graduated (%)	59.7	51.2	36.4	.00
Related work experience (%)	16.6	22.9	44.6	.00

(*)Chi² test for qualitative variables, Kruskal–Wallis test for quantitative.

relationship of dependence between the type of master's and students' personal characteristics. Below we specify the features of each.

We found the youngest students on professional development and qualification degrees. In Spain age relates to students' social and educational context; thus the youngest have just finished their first degree, move straight to a master's without working, and live with parents financing their education. Gender differences found among these degrees are attributable to the diversity of student backgrounds on the Master in Secondary Teaching.

A different profile emerged among research-oriented master's programmes, whose tendency to serve as preparation for PhD studies may explain the high percentage of international students moving from their home countries to undertake research training in Spain. Thus on these degrees we found older students with professional experience, sometimes related to the study area, living independently from parents (with a partner, alone or in shared accommodation).

Reasons for Choice According to Type of Master's

As Table 3 shows, students on research-oriented degrees valued self-realisation and personal growth (RC9, RC8, RC4, RC10 and RC5) over instrumental motivations like long-term economic and professional benefits; their main motivation was to further their education. Responses of students on professional qualification degrees were significantly different: they saw acquiring a broader education as secondary to developing their professional competences in order to obtain quality employment (RC3, RC6 and RC7).

Figure 3 shows the differences in mean scores for reasons for choice in relation to the type of master's. Students on professional development and research-focused degrees had greater intrinsic motivation (wishing to update and/or develop their

Table 3. Values and Tests of Means between Items in the Reasons for Choice Scale and Types of Degrees.

	Required by profession (n = 661)	Professional development (n = 205)	Research-oriented (n = 112)	Contrast test (*)
	Mean (Sd.)	Mean (Sd.)	Mean (Sd.)	Sig.
RC1 – Change of profession	2.57 (1.33)	3.16 (1.29)	2.72 (1.42)	.00
RC2 – Redefinition of professional project	2.46 (1.40)	2.38 (1.34)	2.59 (1.39)	.47
RC3 – To further professional situation	4.07 (1.08)	4.33 (0.91)	3.98 (1.10)	.00
RC4 – To enjoy a new educational experience	3.14 (1.27)	4.01 (1.04)	4.35 (0.88)	.00
RC5 – To widen network of contacts	2.48 (1.24)	3.51 (1.11)	3.32 (1.09)	.00
RC6 – To stay in / gain access to jobs market	4.00 (1.21)	4.02 (1.14)	3.23 (1.30)	.00
RC7 – To improve economically	3.82 (1.20)	3.70 (1.13)	3.07 (1.31)	.00
RC8 – To develop professional skills	4.16 (0.98)	4.62 (0.61)	4.63 (0.72)	.00
RC9 – To further education	3.89 (1.11)	4.52 (0.82)	4.67 (0.65)	.00
RC10 – To stay active	3.19 (1.39)	3.90 (1.08)	4.15 (1.06)	.00

(*) Kruskal–Wallis test for quantitative data.

education and competences), compared to students on profession qualification degrees, more focused on the extrinsic motivations of long-term economic and professional benefits.

Academic Satisfaction According to Type of Master's

We found significant differences in academic satisfaction according to the type of degree, with research master's students noticeably more satisfied than those taking a degree qualifying them for a profession (see Figure 4).

Table 4 shows the results for each of the scale items in academic satisfaction in relation to the type of degree. Two tendencies in students' opinions can be seen, with differences of more than one scale point. Research degree students had higher levels of academic satisfaction in all items compared to the more critical or less satisfied students taking professional qualifications. Peer group satisfaction was the exception (AS6): regardless of the type of master's, students were satisfied with their colleagues.

There were significant differences in academic satisfaction where students had a professional background related to their studies ($Z = -2.986$, sig .003). Students who had finished their bachelor's degrees more than a year previously
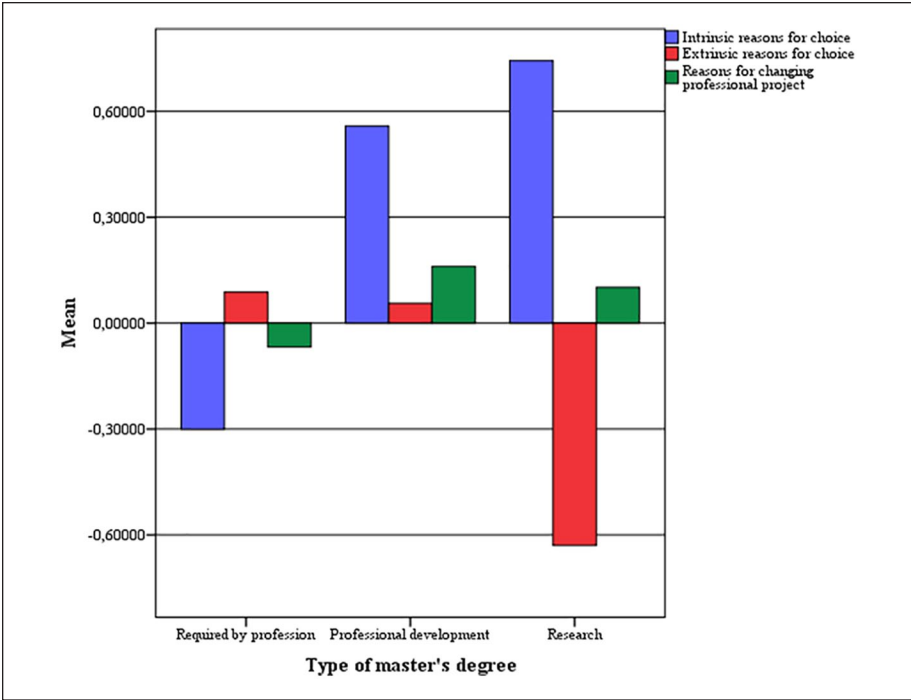
Figure 3. Means of factor variables of reasons for choice according to type of master's.

and had programme-related work experience were more satisfied than those whose work experience bore no relation to their master's topic (means of 3.69 as opposed to 3.42). This tendency was confirmed across the three types of programme.

Relationships between Reasons for Choice and Student Satisfaction

To determine relationships between academic satisfaction and reasons for choice, we calculated the Spearman correlation and its statistical significance, effect size (p) and statistical power (1-β), enabling us to assess the strength of the link between the constructs analysed and the type of master's. The results appear in Table 5.

Students choosing a master's for intrinsic reasons were more academically satisfied, with no noticeable differences in the type of degree. The strongest correlation was found among students taking the master's as professional development and qualification. However, the relationship between satisfaction and a change in the professional project was only significant among students taking research degrees. In this case the international student profile, characteristic of this type of programme, may explain the result.
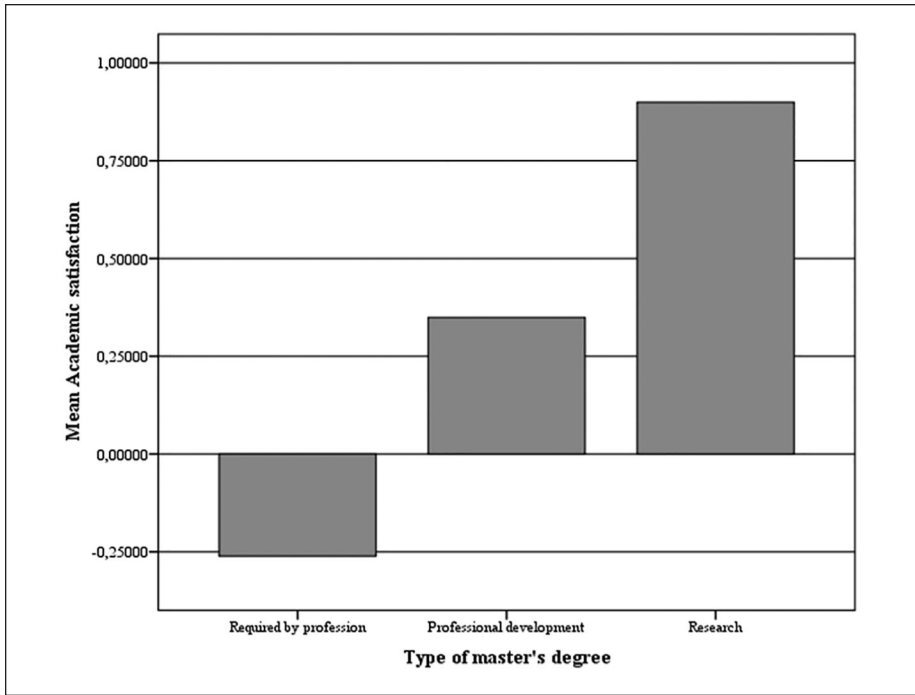
Figure 4. Means of the factor variable of academic satisfaction according to type of master's.

Analysis of the Classification Power of Independent Variables According to Type of Master's

In the segmentation test the type of master's was taken as a dependent variable and all the questionnaire variables as independent. The CHAID growth model was only applied to the classification model of two variables: type of student (Spanish or international) and intrinsic/extrinsic reason for choice. The values of the variables in reasons for choice were adjusted to the 5-point scale to facilitate interpretation of results.

A total of 11 nodes were obtained with a depth of three levels and a risk estimate of 0.279. The resulting model correctly classifies and predicts 72.1% of cases (Table 6), with higher accuracy for students qualifying professionally than those on professional development degrees.

The tree diagram classified the 978 participants into 11 nodes (Figure 5). The first level shows that the single characteristic best defining students according to the type of master's was their not being an international student (Chi^2 = 290,248 gl = 2 sig .000), and that the highest percentage of the latter type of student was on research degrees. The following significant classification was solely for the 872 Spanish students. Intrinsic reasons for choice constituted the next level of classification, where

Table 4. Values and Contrasts of Means for the Items in the Academic Satisfaction Scale in Relation to the Type of Degree.

	Required by profession (n = 661)	Professional development (n = 205)	Research-oriented (n = 112)	Contrast test (*)
	Mean (Sd.)	Mean (Sd.)	Mean (Sd.)	Sig.
AS1 - I'm comfortable with the educational atmosphere of the master's	3.51 (1.13)	4.12 (0.73)	4.48 (0.63)	.00
AS2 - In general I'm enjoying the programme	3.11 (1.24)	3.84 (0.91)	4.38 (0.66)	.00
AS3 - In general I'm satisfied with my student life	3.35 (1.17)	3.80 (0.84)	4.11 (0.76)	.00
AS4 - I like the level of academic stimulation	2.85 (1.17)	3.43 (0.96)	4.05 (0.87)	.00
AS5 - I like what I'm learning	3.33 (1.14)	3.78 (0.97)	4.42 (0.68)	.00
AS6 - I feel good with my colleagues	4.40 (0.74)	4.39 (0.78)	4.50 (0.71)	.28
AS7 - I like the way we're learning	2.91 (1.11)	3.58 (0.92)	4.15 (0.83)	.00

(*) Kruskal–Wallis test for quantitative data.

Table 5. Correlation Coefficients between Academic Satisfaction and Reasons for Choice According to the Type of Master's.

Type of master's (n = cases valid for the test)	Academic Satisfaction	Intrinsic reasons for choice	Extrinsic reasons for choice	Change in professional project
Required by profession (n = 589)	Coef. Rs	.381**	−.50	.091*
	Sig.	.000	.222	.021
	p	.617	.223	.30
	1−β	1	.999	.992
Professional development (n = 189)	Coef. Rs	.408**	−.116	−.53
	Sig.	.000	.113	.466
	p	.639	.34	.230
	1−β	1	.996	.993
Research-oriented (n = 99)	Coef. Rs	.322**	.135	.218*
	Sig.	.001	.182	.030
	p	.567	.367	.467
	1−β	.999	.993	.997

*Sig. < .05, **Sig. <0.01 p = .10 low; p = .30 medium; p = .50 high.

students on professional development and research degrees had high scores. The third and final level shows that extrinsic factors acted differently according to whether

Table 6. Student Classification Prediction According to CHAID Growth Model.

Classification

	Predicted			
Observed	Required by profession	Professional development	Research-oriented	Correct percentage
Required by profession	641	0	20	97,0%
Professional development	183	0	22	0,0%
Research-oriented	48	0	64	57,1%
Overall percentage	89,2%	0,0%	10,8%	72,1%

Growth method: CHAID.
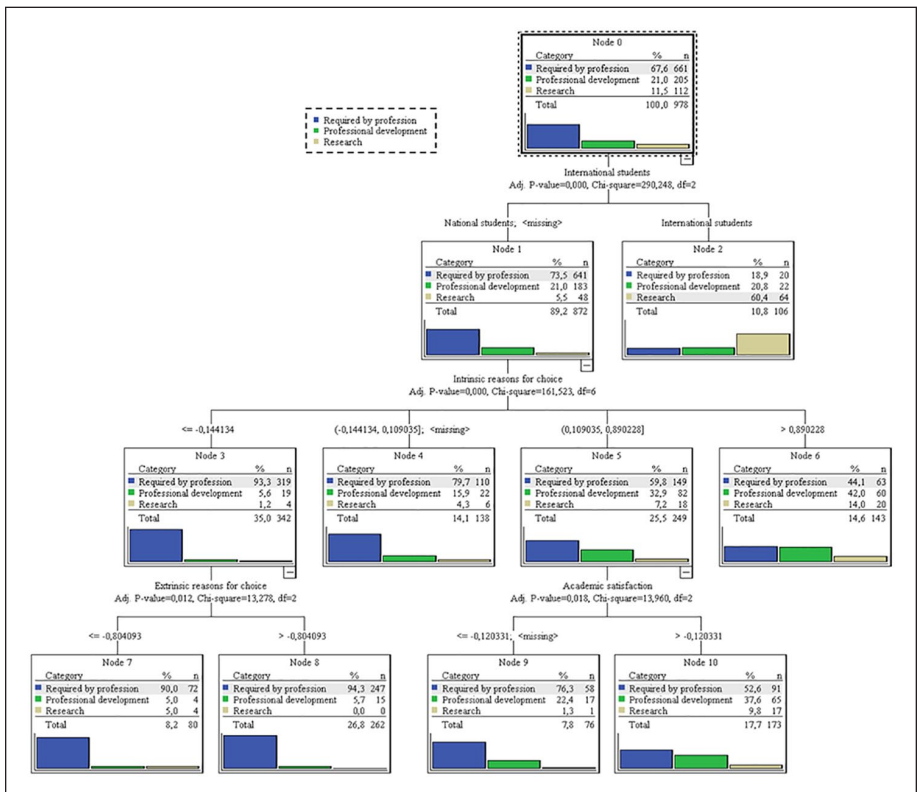Dependant variable: Type of master's.

Figure 5. Classification of students according to type of master's: CHAID decision tree.

students had higher or lower intrinsic motivation. Those with high intrinsic motivation showed moderate to low values in extrinsic motivation, in similar proportions among

students taking both research and professional development programmes. In contrast, students with low intrinsic motivation had higher levels of extrinsic motivation (mainly those taking degrees qualifying them for a profession).

Thus the variable with highest predictive power was the type of student, followed by intrinsic reasons for choice. The best predicted and classified students were found in node 7, with 232 participants. This node had the highest percentage of gain (33.4%), with the set defined as: Spanish-nationality students taking professional qualification degrees show lower values in intrinsic reasons for choice and high values in extrinsic reasons. Node 9 represents the motivation pattern of almost half the students on professional development degrees, with high values in intrinsic reasons and medium-high in extrinsic. Lastly, node 8, with high intrinsic and low extrinsic reasons, represents 38.7% of national students on research degrees. A percentage of students showed a low motivational pattern in both factors (15%).

Discussion and Conclusions

At the outset we asked to what extent master's degree student profiles and motivations related to the types of Spanish master's programmes, and how these variables influenced students' academic satisfaction.

The results enabled us to identify similarities and differences among student profiles. Women were the majority in the sample, conforming to the increasing predominance of women on postgraduate programmes (except technology degrees; Figuera Gazo & Torrado Fonseca, 2019b). However, only the professional development courses had a rate close to the average for the social sciences. On the professional qualification degrees students came from varying fields (humanities, sciences, technology, etc.), which may explain the predominance of men on these programmes. On the research master students came from female-predominant fields such as education, and the greater presence of men may relate to other factors, for instance the higher proportion of international students preparing to take PhDs (current data show a slightly higher number of men taking PhDs in Spain: Merhi et al., 2018).

The other variables studied show two patterns, relating to degree orientation: professional specialisation or research. Among the first, the profile is of a young, recently graduated Spanish-national student without work experience in their sector. In the second, the profile is of a foreign student over 30 with e related professional background. While differences are significant in these variables, the characteristic most clearly defining students of this type is whether or not they are international students. This finding coincides with studies showing an increase in Latin-American students (OECD, 2019) seeking advanced degrees in Spanish universities (Mendoza & Ortiz, 2016).

The study of students' reasons for choice enabled us to classify student characteristics across the three different types of programme. Students' motivations for choosing a master's were both intrinsic and extrinsic, as concluded by other studies (Doña & Luque, 2019; Ulas & Yildirim, 2018). Moreover, the hierarchical segmentation analysis showed that the combination of reasons for choice was the characteristic best defining Spanish students' choice of degree. We found different motivational patterns, with

a clearly inverse tendency between students on research programmes and those seeking professional qualification. The latter had low or medium-low scores in intrinsic reasons and high scores in extrinsic. Students taking professional development courses (non-requisite for their professions) showed a different motivational pattern, with high intrinsic values and medium-high extrinsic; while the pattern of high intrinsic and low extrinsic reasons was that which best represented research degree students.

We discerned relationships between type of degree, age, professional background and motivation (Figuera Gazo et al., 2018; Jung & Lee, 2019; Jurado et al., 2019). Among extrinsic reasons for choice we can include the master's as access to or means of staying in the labour market in both professional types of degree (Cassuto, 2015; Silva et al., 2019). Many students come from a wide range of bachelor's degrees and seek a qualification opening the door to increasingly competitive job markets (Figuera Gazo & Torrado Fonseca, 2019a). Jung and Lee (2019) found evidence that students proceeded directly from bachelor's to master's degrees when there were no perceived job opportunities. The differences were found in intrinsic reasons, which had less weight for those taking programmes qualifying them for future professions. The high scores for extrinsic reasons on these programmes may be associated with students' expectations of an obligation imposed in order to work (Figuera Gazo et al., 2018). This supports Jung and Lee's (2019) argument that analysis of reasons for taking a master's degree should be interpreted according to each country's specific context.

On research master's programmes the motivation profile may be due to their not being seen as a means to an end; Cassuto (2015) for example notes that it is a type of course seeking continuation in a PhD. However, the specific type of student was also relevant: older, with a clear track record, and selecting the degree for intrinsic reasons such as personal development and furthering their education (Doña & Luque, 2019; Hardré et al., 2019).

In academic satisfaction we found significant differences according to the type of master's. Students on research degrees and those with professional experience related to their degree showed higher levels of academic satisfaction than the more critical and less satisfied students taking degrees qualifying them to exercise their profession. Higher satisfaction levels have been linked to factors such as professional experience relevant to the programme (Jung & Lee, 2019). This may be because experience can generate feelings of belonging that, in turn, feed into commitment and satisfaction (Almeida et al., 2020; Cassuto, 2015; Hardré et al., 2019; Wilkins et al., 2016).

Other factors that may explain higher levels of satisfaction among research degree students may have to do with their actual academic experience and, specifically, with the link between intrinsic objectives and positive perception of the programme (in terms similar to those formulated by Hardré et al., 2019). Other institutional factors, more frequent on master's programmes, may also help explain the different levels of satisfaction, such as smaller class groups, closer ties with teachers and the fact that classes are given in the departments themselves, thereby facilitating teacher-student interaction and experiences that create a feeling of belonging (Gutiérrez et al., 2018;

MacFarlane, 2018; Pegalajar, 2016; Silva et al., 2019). These results concur with previous studies finding higher degrees of satisfaction and persistence among educational contexts that promote teacher-student interaction (Figuera Gazo, Torrado Fonseca, et al., 2019) and thus create opportunities for involvement in research, conferences and other professional or academic experiences, and foment networks and relationships among peers (Almeida et al., 2020; Gordon, 2016).

A final significant finding is the high correlation between intrinsic motivations and satisfaction. Students choosing a master's for intrinsic reasons were clearly more academically satisfied, with no appreciable differences across the different types of degrees (Doña & Luque, 2019; Griffioen et al., 2018; McPherson et al., 2017; Ulas & Yildirim, 2018). Thus the more that master's degree students see their academic programmes as a means towards personal objectives, helping them to acquire the skills they need to become competent professionals and achieve their goals, the greater value they will see in their studies (Silva et al., 2019; Wang et al., 2016). Therefore universities should commit themselves to guiding students in their transition to the master's degree, clearly communicating the content and purpose of each type of master's programme and helping them develop appropriate expectations towards their programmes, since this will directly influence their satisfaction (Hardré & Hackett, 2015; James & Casidy, 2018; Lent & Brown, 2020; Tinto, 2017).

This study confirms the existence of specific situations associated with the nature and purpose of master's degrees and the profiles of students taking them. These differences should be taken into account in the design of training and guidance actions in order to respond appropriately to student needs.

We cannot conclude without discussing the limitations of our study. On the methodological level, the non-probabilistic nature of the sample limits generalisation of results, although sample error is low and rate of participation very high. Another important point would be to improve the analysis of the *professional change* motivation factor by using wider samples enabling better assessment of its influence. Lastly, this study was performed in a specific academic context, that of Spanish social science master's degrees; thus the research horizon should be broadened to other academic and geographical areas that would allow us to enhance our understanding of transitions to the master's degree. The research collected here illustrates interest in this topic beyond Europe, particularly in the United States.

Declaration of Conflicting Interests

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Notes

1. The bachelor's degree is the first cycle in university education; in Spain it lasts four years (240 credits). The master's degree is a second level with greater specialisation, lasting from one to two years depending on the competencies taught (60, 90 or 120 credits). The third level is the PhD.
2. The Master in Teaching is required for students to become secondary teachers in Spain. Students from different subject areas take this degree to specialise as teachers. The degree is taught in virtually all universities and is the master's with the highest student numbers. The Master in Law is required to become a lawyer or attorney.

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