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In the Future, Probably: Male Students at University (1985—2022)

Probablemente, en un futuro: los estudiantes varones en la Universidad (1985-2022)

Diego Becerril
University of Granada, Spain
becerril@ugr.es

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ABSTRACT

Spanish universities have transformed over the last four decades. The growing access of women has been a significant process within these social changes, although it has not led to greater equality in gender distribution, but rather to growing inequality, this time to the detriment of male university students.

This article describes the evolution of the presence of men in the university system, taking into account undergraduate and postgraduate enrolment, as well as data on graduates.

Secondary data provided by the Ministry of Education and Vocational Training are used from the 1985–1986 academic year to 2021–2022. The results indicate that males became progressively less prominent in undergraduate enrolments, a finding accentuated among graduates. According to the branch of knowledge, there is a majority of women in four of the five branches, Engineering and Architecture being the only area in which there is a majority of men.

KEYWORDS: university; undergraduate student; branch of study; student sociology; access to education.

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RESUMEN

La Universidad española se ha transformado en las últimas cuatro décadas. El acceso creciente de las mujeres ha sido un proceso significativo dentro de estos cambios sociales, si bien no ha determinado una mayor igualdad en la distribución por sexos sino una desigualdad creciente, esta vez en perjuicio del universitario masculino. El presente trabajo describe la evolución de la presencia de los varones en el sistema universitario, teniendo en cuenta la matriculación en Grado y Posgrado, así como los datos de egresados.

Se utilizan datos secundarios del Ministerio de Educación y Formación Profesional desde el curso 1985-1986 hasta 2021-2022. Los resultados indican una progresiva pérdida de peso de los varones en las matriculaciones en grados, acentuada entre los egresados. Según rama de conocimiento, existe mayoría de mujeres en cuatro de las cinco ramas, únicamente en Ingenierías y Arquitectura se registra una mayoría masculina.

PALABRAS CLAVE: universidad; estudiante universitario; rama de estudios; sociología del estudiante; acceso a la educación.

1. Introduction

The year 2010 marked the centenary of one of the greatest social achievements related to the university sphere: the free access of women to these studies. The Decree of 8 March 1910 amends a historical handicap that other countries had eliminated over the course of the 19th century. Women's access to university education was one of the great social transformations of the last century (Del Amo, 2009; Guil and Flecha, 2015).

Both in the media and in scientific works, the feminisation of the university is presented as an advancement of women, who have been acquiring majority positions since the latter decades of the 20th century. Achieving broad access of women to higher education makes it possible to keep moving towards other objectives, such as their greater inclusion among teaching staff or management positions. Nevertheless, the fact that a greater number of women has been consolidated should not mean the end to analyses of differences on grounds of gender in the university sphere; rather, they must remain an object of study, particularly in a space that represents the future of work for people and the foundations on which to build their life and social well-being (Armenteros and Pérez, 2017; Martínez, 2019).

In this regard, the theories linking education and economics are well known in the sociology of education, especially through two main paradigms, such as the theory of human capital and the theory of credentialism (Moreno, 1998). Both highlight the importance of higher education and its determination in individual adult trajectories.

The significance of education can be directly verified in the unemployment rate according to the level of education (table 1).

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Table 1
Unemployment rate by level of education (2022)

	Male rate	Female rate
Illiterate	26.3	46.7
Primary education	24.1	30.5
Secondary (stage 1)	14.7	22.5
Secondary (stage 2)	11.7	17.2
Higher education	6.2	8.8

Source: Spanish National Statistics Institute (INE). Economically Active Population Survey.

The differences between the levels below higher education are of particular relevance, with the rate decreasing constantly as the level of education increases. For males, obtaining a higher education means reducing their unemployment rate by more than 400% compared to the lower level.

Given this feminisation of the university, studies on female presence and the traditional gender perspective have been transferred to Vocational Training (VT), where women have a lower percentage. A few years ago, a monograph was published in the journal *Revista de Sociología de la Educación* (2020, vol. 13–3) guided by the concern about the inequalities that persist, since it is in vocational training where the greatest gender inequalities remain (Merino, 2020, p. 305). However, there are inequalities in specific branches of VT, as, if an equality understood between 40–60% is applied, VT cannot be said to be a markedly masculinised educational stage (Aguado, Cano and Sánchez, 2020, p. 315). Despite this last assertion, the situation of women in VT has previously been studied in various analyses (Merino, 2020; Mariño and Rial, 2019).

Furthermore, on institutionalising equality policies and units in universities, the main focus of these bodies, as of 2007, has been on the situation of women. Currently, the activity of these units is dedicated, in particular, to the lower presence of women in scientific careers (STEM). Inequality in technical degree programmes is evident, and it is an object of appropriate intervention; however, the paradox is that there is no action around other inequalities, nor are these inequalities made visible. Thus, for example, there are similar situations of imbalance for men in other areas, such as health sciences, where there appears to be no concern from a male perspective. Rather, these realities are mentioned exceptionally, arguing that it likely also requires specific future intervention, in this case in favour of the integration of more students (Gala, 2010, p. 39).

Studies with a gender perspective in the university sphere are fundamentally related to three interrelated blocks: the student body, the teaching staff and management positions.

1. In the field of students, it is common that the concern about women in university education does not reside in their access to these studies, but rather shifts to other issues (multiple authors, 2010). The concern is that there are still degrees or studies that women do not choose, and where they are enrolled in a much lower proportion than men, as is the case of engineering, in particular, or technical degrees, in general (Oliveira, Unbehaum and Gava, 2019; Olmedo et al., 2018).
2. Gender studies focused on the employment of women in the teaching profession, where women are under-represented (Guil and Flecha, 2015; Pérez, 2005). If women have a majority in the classrooms and obtain better results, there would be a process of discrimination in their access to the university teaching staff. Women are not the majority among university teaching staff and their proportion is extremely low in the body of professors. In this area, the parity policies of the Spanish National Agency for Quality Assessment and Accreditation (ANECA) have intervened with the recognition of care and maternity in the accreditation processes of research activities and higher teaching bodies.
3. Thirdly, the small number of female university graduates in positions of responsibility and management is evident, although the situation has been changing in recent years (Castellón Declaration, 2018; Pérez, 2005). Their presence is not yet significant among figures associated with heads of departments, deaneries or rectorates, being proportionally lower as responsibility increases.

The research conducted as part of this study is limited to the first block, related to the student body. The objective is to describe and analyse the distribution by gender in university students from 1985 to 2022 from a male perspective.

2. Background

2.1. Enrolment by gender at university

Since the 1986–1987 academic year, women have made up the majority at Spanish universities, a finding also seen in the general international context (Michavila, Martínez and Merhi, 2015). The entry of women was a process that, like many other transformations in Spain, had a pendulum motion, from not having been present for centuries to being in the majority in a short period of time. Women themselves have been struck by this incorporation, which they describe as an avalanche, with an unexpected and continuous growth of women at university (Almarcha, González and González, 1994), and the president of the Women and Science Committee and rector of the Ramon Llull University could not fail to recognise how far women have come in such a short space of time (Giménez-Salinas, 2010, p. 7).

At present, the presence of men is a minority in almost all university areas and their enrolments have not ceased to decline in the period analysed, creating a historical trend (Figure 1).

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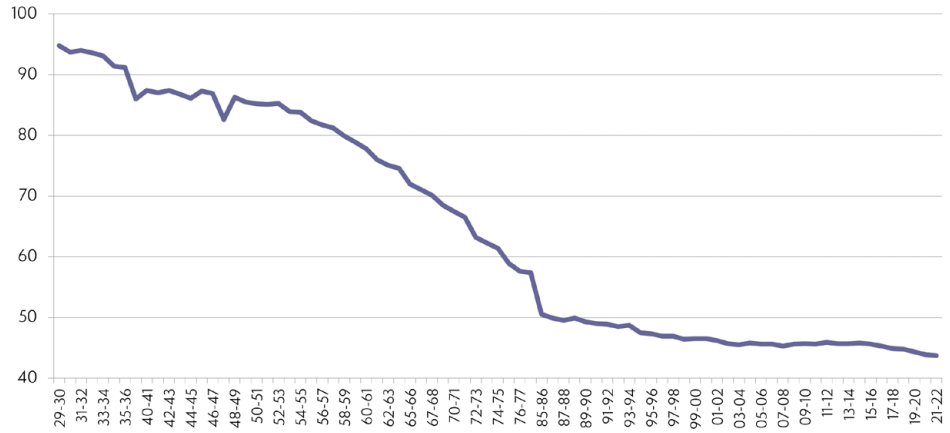
Figure 1

Proportion of males enrolled in undergraduate degree programmes



Source: Barrera and López, 1984: Up to 1977–1978. Ministry of Education and Vocational Training (1985–1986 onwards). Own elaboration using data from Barrera and López, 1984 (up to 1977–1978) and from the Ministry of Education and Vocational Training (from 1985–1986 onwards).

Since the 1929–1930 academic year, the percentage of males in university classrooms has been decreasing, with a less accelerated rate in recent decades. They accounted for 94.8% at the beginning of the data series, 75% in 1962, 50% in 1985 and 43.7% in 2021.

In a broad egalitarian framework, as men have not fallen below 40%, in a range of 60–40%, it would not be a real problem. That said, this same rule would have determined that if women reached 40% around the seventies in Spain—and in the sixties internationally—the debate about their presence at university would have ended decades ago. Quite the opposite is true, however, and this can be exemplified by a report from that time when female university students were a minority. The year 1970 is declared the International Education Year and UNESCO published a report on the education and promotion of women (Chabaud, 1970). This article proposes equal access to education for women, which "only" means 43% in the education system. This percentage leads to assertions such as "these figures are sufficient to show that girls do not have the same opportunities for access to education as their brothers" (ibid., p. 16). With similar percentages of men at Spanish universities at present, it is necessary to understand and question this historical investment in the proportion of genders.

Likewise, in the first decade of the 21st century, when women enrolled in university postgraduate studies fell from 59% to 51%, the Spanish Foundation for Science and Technology (FECYT) voiced its concern that this decrease suggested the system may be stimulating men to continue their studies and thus increase their professional and intellectual competence to a much greater extent than women (2005, p. 15). Undoubtedly, it is not the figure of 40% that has marked the limit of the issue.

2.2. The unequal choice of studies

With the majority presence of women at university being evident, a persistent theme is the unequal choice of studies according to gender (Arranz, 2004; Fernández et al., 2019; Guil and Flecha, 2015; Sainz and Müller, 2017; multiple authors, 2010). While women opt for certain degrees, and not for others, men do so in a different way. Thus, women are highly represented in degrees such as Teaching, Social Work and Social Sciences in general, or in programmes related to Health Sciences, as well as in other degrees such as Biology. There is a higher percentage of men in technical degrees and engineering.

It can be deduced from this differing situation that women are concentrated in the less socially valued studies and are destined to professions with less prestige and remuneration. On the contrary, men would study the most prestigious degrees with better paid career opportunities (Alberdi and Alberdi, 1984; Guil and Flecha, 2015). The explanation for these choices would be found in the female or male image of training and professions, in gender roles. The main determinants would be in the family, society in general and the media in particular.

These factors condition that, even if the choice of each gender appears free, in reality there would not be an authentic free choice. There is discrimination according to gender, based on a differential socialisation in which women's access did not imply a change in the educational model, being the priority and preferential model for men (Acereda, 2010; Alberdi and Alberdi, 1984; Arranz, 2004; Marqués and Roca, 2010).

Regarding society, social discrimination based on gender causes women to tend to value the public sphere, where they are more protected and have a greater possibility of work-life balance. They choose to study as an objective way to obtain degrees so as not to be discriminated against, opting for degrees with professional opportunities in the public sphere (Almarcha, González and González, 1994; Carabaña, 1984). In short, female degree programmes are formed, chosen mostly by women (Arranz, 2004; Marqués and Roca, 2010; Pérez, 1996).

However, it is not simply a matter of presence or not. The main problem, together with the completion of university studies, is quality and performance. It is well known that the university results of women are higher than those of men, that they have lower drop-out rates and that they finish their studies earlier (Hernández and Pérez, 2018). However, this has not resulted in interest being taken in what happens or there being concern about the problems of men at university. Very much to the contrary, it has been used as an objective display of the superior dedication of women and the fact that men have poorer performance and less presence at university has been normalised. It is a merit of women who invest in education compared to the conduct of men (Almarcha, González and González, 1994).

Durkheim and the concept of idol (a kind of ghost that disfigures reality, but appears to be reality) have been called upon to point out how the majority presence of

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women at university disfigures the real problem: their discrimination in the choice of degree programmes, as well as reaching positions as teaching staff and management (Arranz, 2004). There are even authors who question whether universities prioritise the gender of their teaching staff over educational excellence (Guil and Flecha, 2015).

The concern and discrimination of educational access has been disappearing to the extent that women predominate. When this problem appears, it is as a historical situation of women in the past (e.g., Montero, 2009; Palermo, 2006). For university students, there has only been the egalitarian unease that, of the five branches of knowledge, women are not sufficiently represented in one. This concern is dispelled if the disproportion is reversed, with male under-representation. Proof of this is that the main focus of equality is on degree programmes or branches where there is a lower percentage of women: engineering and STEM disciplines.

2.3. STEM disciplines, an example of concern for women

Specifically, the movement to make science and technology equal began in the United States in the 1970s; the Association for Women in Science was founded in 1971. Europe joins in the following decade, culminating in the formation of the "Helsinki Group" as a means of analysing the situation of women in science. In 1997, the magazine *Technology & Culture* dedicated a monographic issue to gender in technology[1], the first work on this topic in 1976 (Cowan, 1976).

In 1998, there was a joint conference of the Parliament and the European Commission in Brussels on "Women and Science", declaring the need to intensify efforts to increase the presence of women in research. This means, for the first time, a line of work in the European Commission's Fifth Framework Programme for Research, a Communication and an Action Plan in 1999.

The United Nations began celebrating the International Day of Women and Girls in Science on 11 February 2015 because "a significant gender gap has persisted throughout the years at all levels of science, technology, engineering and mathematics (STEM) disciplines all over the world".[2]

To this we must add events such as "European Women in Technology" and "Women in Technology". The idea of women as equally capable as—and not inferior to—men in all branches of science is encouraged. Another example, the Fondation L'Oréal sponsors events such as "For Women in Science", and Vodafone, "Code Like a Girl".

The trend seen in Spain is consistent with that of its international environment. Since the 1990s, the Polytechnic University of Catalonia has been developing the programme "***Programa Dona***", and the Autonomous University of Barcelona has recorded the first analyses of sexism (Pastor, 2010). In 2001, the Association of Women in Research and Technology (AMIT) was founded, born out of the need to defend the rights and opportunities of female researchers and technologists. Since 2001, the National Research Council (CSIC) has been preparing reports on its staff, through its

Women and Science Committee. Furthermore, the Spanish Foundation for Science and Technology (FECYT) has a line of work and reflection on the role of women and published a study on "Women and Science" (2005).

At the university level, the creation of the Equality Units was a very decisive boost. Programmes and activities were initiated to address the gender gap that disadvantaged women. This line remains strong at universities and is an essential part of the "Women Rectors Summit" that was extended to the international context with the European Women Rectors Association (EWORA).

Universities hold events such as "Girls' Day"[3], for secondary school students, with the aim of making women choose more technical degree programmes and engineering. Another project is "***Quiero ser ingeniera***" (I want to be an engineer)[4], which sees the involvement of several Spanish universities and the Institute for Women and Equal Opportunities. The Santander WomenNOW Summit was celebrated in March 2019, an international event that turns Madrid into the European capital of women. It has extremely broad objectives and develops specific forums dedicated to women in science. In general, university events on women and science continue to multiply year after year.

The political sphere is also not exempt from this gender trend. In November 2002, the Congress of Deputies debated a non-legislative proposal in relation to improvements in the situation of women in science and technology. Countless actions are taken in relation to the female issue within the university sphere and raising awareness of the problem, with it becoming part of the 370 proposals that the political party PSOE offered to Unidas Podemos in September 2019 as an investiture pact. Specifically, measure 58 promises to boost STEM vocations, giving free enrolment in the first year to women if their presence is less than 30%, and with additional points in grants. This interest is still evident in research funded by the Ministry of Education and Vocational Training, such as that carried out by Grañeras et al. (2022) on the gender gap in STEM education.

From the observation of the lack of analysis on the male university student, this article proposes this view and shares Vila's assertion that reliable data are essential for beginning an analysis; without data to support a claim, anyone can say that the situation does not exist, or that it is not so serious or that it will simply change over time(2010, p. 161).

In light of this context and background, the main objective is to analyse the male proportion of students at university enrolled in programmes in different branches of knowledge, obtaining an extensive longitudinal perspective. The information provided is from the male perspective, that is, shedding light on percentage of male presence. As a specific objective, the distribution of students at all levels of the university system will be explored, from their enrolment in degrees to data in master's and doctoral studies.

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3. Methodology

A quantitative methodology is used. A secondary analysis of the data extracted from the Ministry of Education and Vocational Training is conducted[5], with a large amount of data available on the student body, included in university statistics and reports.

The sources are statistics of university students, statistics of doctoral theses, and data and figures of the Spanish university system. Using these as a basis, the variables used are obtained: number of enrolments and graduates at each university level, as well as the doctoral theses defended. In all the variables, the division by gender is considered to achieve the objective of describing and analysing male presence at the different university levels.

The level of analysis of these sources is descriptive, using, at all times, cross-sectional variables that enable the construction of contingency tables, with the gender of university students as the main variable.

All data presented refer to the university system as a whole. This means that the data analysed include both campus-based universities and those offering distance learning, the actual centres and affiliated centres, and those of a public and private nature.

The selected academic courses cover a period of almost forty years, from 1985–1986 to 2021–2022. The choice of the initial academic year of the analysis is justified for several reasons. Firstly, because this is the year from which the Ministry offers information on its website, making it possible to create series directly and contemplate several decades of evolution. Secondly, it is since the mid-eighties that women have reached a majority percentage in the Spanish university system and men, a lower percentage, and therefore the aim is to discover how the situation has evolved until now. Last but not least, choosing that start date allows the debate to continue, which, as stated above, had certain relevance in the mid-eighties, before being subsequently diluted.

4. Results

The results are structured according to the different contexts where university students are present. A first approach focuses on male students enrolled in undergraduate degree programmes, where the majority of students are concentrated. Secondly, the situation at the levels of master's and doctoral studies is addressed.

4.1. Undergraduate degree programmes

This section analyses two key issues related to university students. On the one hand, enrolments in general and, on the other, differentiation according to branches of knowledge.

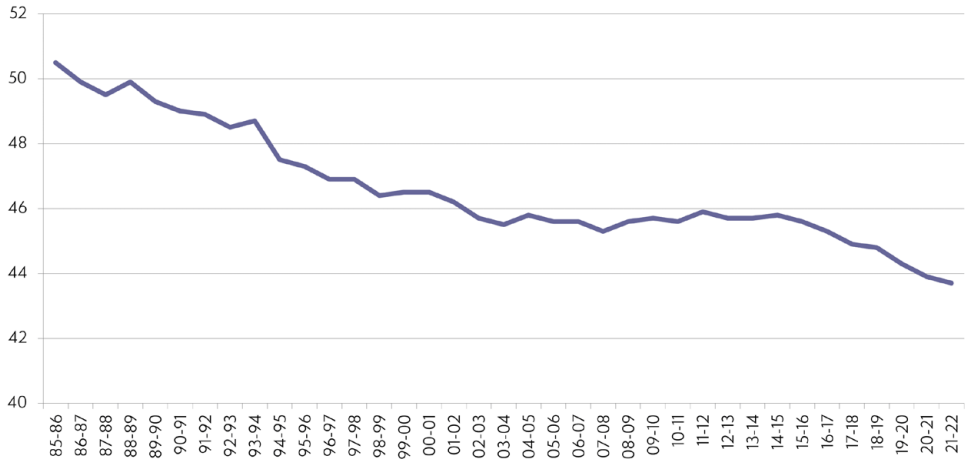
4.1.1. Enrolments

Undergraduate degree programmes constitute the central core of university studies and are essential stages for continuing formative development. The changes in the university sphere, related to the process of European convergence and the Bologna Process, have led to the current degree structure being entirely imposed, although statistics from years ago were fundamentally of cycles. For comparative purposes, they are added in a single category that encompasses the bulk of university students, who are in the process of obtaining a bachelor's degree.

The gender distribution of these students (since the mid-eighties) is represented in Figure 2.

Figure 2

Proportion of males enrolled in undergraduate degree programmes



Source: Ministry of Education and Vocational Training. Own elaboration using data from the Ministry of Education and Vocational Training.

The most recent record of data by gender (2021–2022) indicates that the distribution is as follows: 43.7% for males and 56.3% for females. There is a difference of about 13 percentage points, and therefore it is common to agree on the feminisation of the university.

It is the evolution of this process, however, that is more interesting. Longitudinally, a progressive decrease in the proportion of men at university is evident. Thus, while in the 1985–1986 academic year they accounted for 50.5% of the students enrolled—the last year that they exceed 50%—, their percentage fell to 46.5% in the 2000–2001 academic year. The representativeness of males continues to fall in

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a gentle yet steady fashion; a decade later, in 2010–2011, they accounted for 45.6%, and in 2021–2022, 43.7%.

This evolution has had three phases of development. There is a first phase in which the decline was more pronounced, mainly in the last fifteen years of the 20th century. From 1985 to 2000, the percentage fell by 4 points. Secondly, there is an intermediate phase of certain stabilisation; in the period 2000–2016 the decline is one percentage point per year. Lastly, the decrease is seen to accelerate somewhat more from 2017 onwards, registering a drop of 2 percentage points.

It is true that there are exceptional academic years where there is a certain increase (for example, 2008–2009), however this is only a few tenths, and they are specific peaks that do not distort the descending reality. This increase can be associated with the period of economic crisis experienced in Spain since 2007. The impact of unemployment was especially felt in the most masculine sectors, such as construction, which influenced university enrolment as a means of improving job qualifications (Graves and Kuehn, 2020).

Therefore, male students, who started the historical series at parity with females, have gradually become less prominent, and there is now a significant gap in enrolment.

Given that this is the reality, and if the aim is equality or parity, it can be said that this is not being achieved by the university system in undergraduate degree programmes. On the contrary, inequality is being accentuated with respect to men, who are less and less represented as students.

In any case, where the analyses of the differentiation by gender end, a very relevant factor that must be included to understand in real terms the situation according to gender at university is overlooked. It is important to note that the ideal equality or parity can be imagined at 50-50, where both males and females would have a typically perfect presence. However, this would not be egalitarian if the actual composition of both groups is not 50-50. In other words, if generationally there were more women than men, or vice versa, would it be acceptable for the percentages to be limited to 50%?

That said, with a greater degree of flexibility, the margin that could be considered egalitarian would range between 60–40%, which would be reasonable (Aguado, Cano and Sánchez, 2020). From another perspective, it could be assumed that the fair and egalitarian thing would be to preserve the generational population proportion and give opportunities to all people; if there are more women demographically, it is logical that there are more female university students. In order to judge equality, the gender ratio at university ages must be known.

According to data from the Spanish National Statistics Institute (INE) for the age group that conforms the majority of university students in undergraduate degree programmes (18 to 24 years old), there is a slight difference. The proportion of men in 1985 was 50.9% compared to 49.1% of women, a proportion that has barely fluctuated over the course of these three decades. Table 2 represents the male proportion in the ages indicated by five-year periods, whereby the stability of the data can be verified around just over 51%.

Table 2

18–24-year-old male demographic

	1985	1990	1995	2000	2005	2010	2015	2020
Percentage of males	50.9	51.6	51.1	51.2	51.3	51.0	51.1	51.4
Total population*	4,492	4,555	4,740	4,461	3,923	3,541	3,156	3,328

*Total population aged 18–24 in thousands. Source: own research using INE data.

Based on these percentage figures and comparing them with the proportions of students enrolled according to gender, the differences are even more disadvantageous for men. The gap between the actual generational proportion of males and their access to university is continuously increasing.

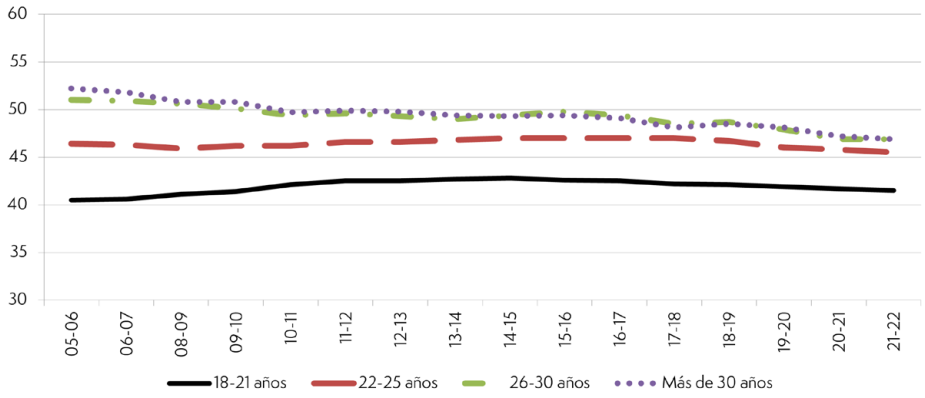
In the 1985–1986 academic year this gap was only 0.4%; however, during the period analysed this difference has increased, rising from 2.6% in the 1990–1991 academic year to 3.8% in 1995–1996, 4.7% in 2000–2001, 5.7% in 2005-2006, 5.4% in 2010–2011, before finally reaching 7.5% in the 2020–2021 academic year. In other words, the distance between living males and those enrolling in university degrees has been increasing, which means that over the years a greater proportion of males have been left out of the university context.

In short, there is a significant gender gap in university students. The value ranges between 6.3% deficit (if it is deemed that the presence must be 50% parity) and 7.5% (if it is deemed that they must be represented according to their own demographic reality).

The loss in prominence of male students is also detected if the male students are represented according to age (Figure 3).

Figure 3

Proportion of males enrolled in undergraduate degree programmes by age group



Source: Ministry of Education and Vocational Training. Own elaboration using data from the Ministry of Education and Vocational Training.

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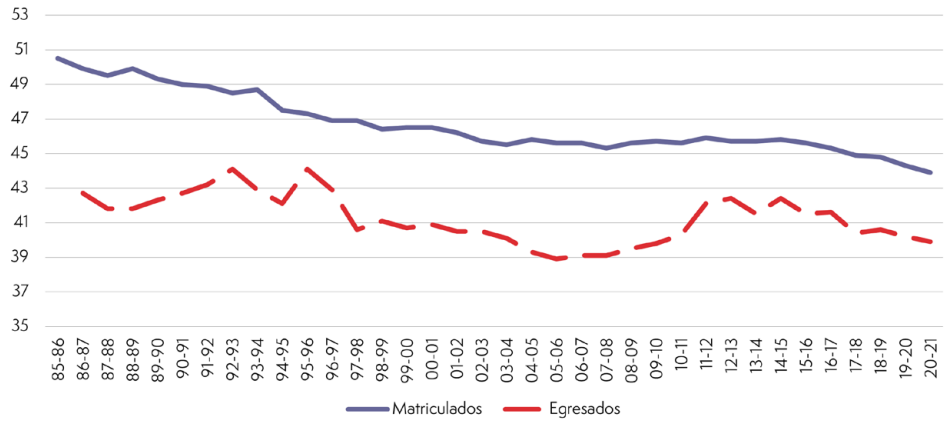
The lowest proportion of males appears in the younger groups, where their enrolment has decreased; however, their presence is somewhat greater in the older groups (without being the majority in any of the age groups). For the most recent academic year, 2021–2022, males represent 41.5% of those aged 18 to 21 and among those over the age of 30 years, 46.9%. However, these data must take into account two factors that increase the percentage difference among men. First, males generally have a higher tendency to delay the completion of their studies, meaning they are more present at older ages; and second, the economic crisis caused males with an atypical age to enrol at university (Armenteros and Pérez, 2017; Feito, 2019; Graves and Kuehn, 2019).

From a strict perspective of the first entry of men to university, the 41.5% reflected would be approaching the lower limit of the conventional equality margin 40–60%.

Since male enrolment in the Spanish university system is in decline and a minority, the situation is even more differential in relation to graduates. Figure 4 shows the evolution of enrolled and graduated students from the 1985–1986 academic year to 2020–2021. In contrast to enrolments, the trend of graduates is not so linear, with increases and decreases, especially in the second half of the 1990s and the first half of the 21st century.

Figure 4

Proportion of males enrolled in and who are graduates of undergraduate degree programmes



Source: Ministry of Education and Vocational Training. Own elaboration using data from the Ministry of Education and Vocational Training.

Overlooking the oscillations, there are results that can be derived from the data. Firstly, the percentage of male graduates is lower than that of enrolments. This means that at the end of the degree, the gap between the genders has increased even

more, with a higher percentage of female graduates compared to enrolments. Males are affected by longer periods of study or, in the worst-case scenario, have dropped out (Fernández-Mellizo, 2022; Rubio, 2009).

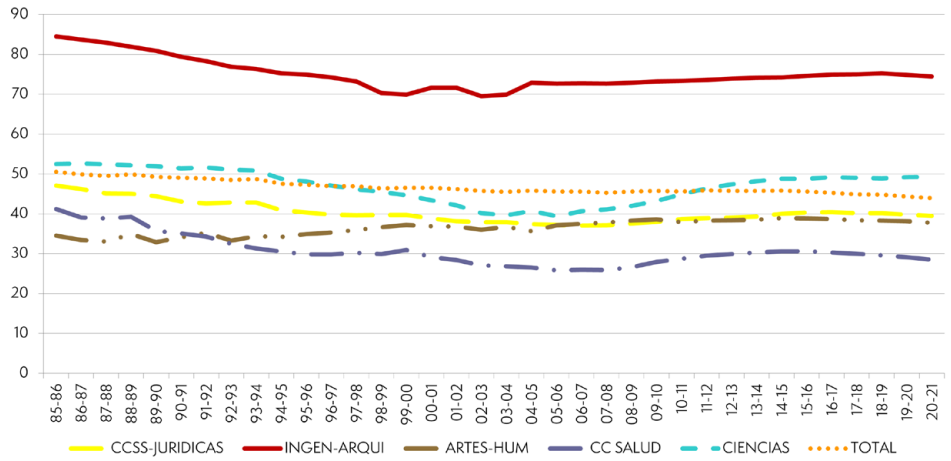
A positive aspect is that the differential between the male percentage of enrolled students and graduates has decreased. In the second half of the eighties it oscillated between 7% and even 8.2% (1988–1989), and then dropped to 5–6% in the nineties. In the 21st century, it varies by around 5% in the first decade, before decreasing in recent years. In the 2020–2021 academic year, this percentage is 3.6%. The reason for this decrease in the gap may be due to the fact that, since the percentage of male university students is lower, perhaps the strong selection makes them more motivated to complete their studies. On the other hand, the implementation of the four-year degree facilitates a higher completion rate than the previous five-year degrees.

4.1.2. Differentiation according to areas of learning

The presence of men and women can be analysed in a more detailed way by dividing them according to the area of learning (Figure 5).

Figure 5

Proportion of males enrolled in undergraduate degree programmes according to the area of learning



Source: Ministry of Education and Vocational Training. Own elaboration using data from the Ministry of Education and Vocational Training.

From this perspective, some substantial differences between areas are evident. A first general analysis shows a low participation of males in almost all areas, with the

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exception of one. A downward trend in male presence in the period is common in the five areas, with certain stabilisation in the last third of the academic years analysed, but without marking the initial values of the analysed period.

Analysing this in detail, in most areas they are below 50% of the total number of university students. Thus, both in Arts and Humanities and in Social and Legal Sciences, men are always below the average. Male representation in Arts and Humanities has oscillated between 32% and 38%, with the final result being the only one to be higher than the initial percentage of the period.

In Social and Legal Sciences, as in the rest of the areas, the percentage of male students has only decreased. In the eighties the proportion of men was 47%, at the end of the 20th century this proportion did not reach 40%, and the lowest level was recorded at the beginning of the 21st century with 37%. Subsequently, the percentage of male students went on to recover slightly in recent academic years (39%).

The branch of Science was one of the few that began the period with slightly more men than women (52.5%); however, in the second half of the 1990s, specifically in the 1994–1995 academic year, the proportion of men fell from 50% to 39.6% in the 2003–2004 academic year. From this date, a certain increase is once again seen, ending the period at around half, with 49.2% in 2021–2022.

At the bottom, Health Sciences stands out, the branch with the lowest proportion of men in the entire university system. The highest figure recorded in the period was 41.2% (1985–1986); however, this marked the start of a decline to its lowest figure, 22.3% men in the 2006–2007 academic year. In 2021–2022, the figure recovered to 28.2%, yet only three out of ten enrolled students are male.

Undoubtedly, the line that extends in the top part of Figure 5 is striking. This line maps the branch of Engineering and Architecture. In this area there is a strong male presence, to the detriment of females. The period begins with 84.5% males, but the trend shows a progressive decline that, within a decade, stands at 74.2% (1996–1997), before continuing to decline with peaks and troughs to reach 69.5% for the 2002–2003 academic year. However, following this minimum, the increase and recovery of male representation is slow but constant, reaching 75.2% in the 2018–2019 academic year, with a certain subsequent decline to 73.5% in 2021–2022. This proportion is similar to that recorded twenty-five years earlier (1997–1998 with 73.2%). Although it seems that progress has not been made in equality, it should be noted that the latter percentage is more than ten points lower than the initial figure of the series.

In any case, of the five areas of learning into which the university system is divided, male representation is below average in four, and in some cases well below, as in Health Sciences. Only the branch of Engineering and Architecture stands out above, being the exception in the university context.

4.2. Master's and doctoral programmes

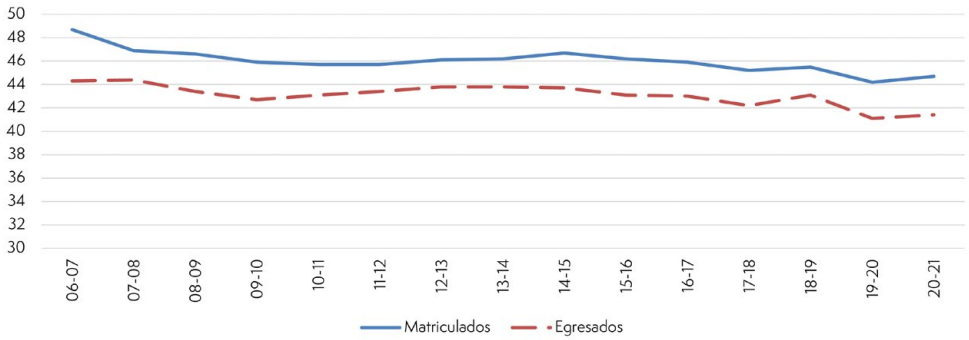
University students can continue their education by completing a master's or doctoral programme. The master's degree is a relatively new qualification, but a series has been created from the 2006–2007 academic year to 2021–2022 (Figure 6).

The data show, once again, that the male presence in master's degrees is lower than that of women and, in addition, has been weakening. Their enrolment at the start of the data series was 48.7%, while in 2021–2022, a value of 45.2% was recorded.

However, it is noteworthy that the enrolment of men at this university level of master's degree is higher compared to undergraduate degrees in all the years analysed.

Figure 6

Proportion of males enrolled in and who are graduates of university master's degrees



Source: Ministry of Education and Vocational Training. Own elaboration using data from the Ministry of Education and Vocational Training.

As for the percentage of graduates, the general trend is in line with enrolment, drawing almost parallel lines. The characteristic, which it shares with the degree, is that the percentage of males who finish is always lower than those enrolled.

It is true that any university enrolment data is higher than that of graduates, as there are always people who do not finish or drop out, however this dynamic affects men in particular. For example, in the 2020–2021 academic year, 56.1% of those enrolled were women, while 60.1% of those who graduated were women. Undoubtedly, in absolute numbers there will have been drop-outs, but the percentage is clear in terms of their proportional gain in prominence.

Finally, the highest level of university degree is the doctorate, in which the corresponding thesis must be defended. Regarding enrolment in doctoral programmes, it should be noted that this level of education is where the greatest equality in the entire university system is found, with 50% usually recorded for each gender.

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However, if unequal access and the unbalanced presence by gender at the undergraduate and master's levels do not usually generate analysis, this subsequent equalisation in doctoral studies is very much taken into account by the gender perspective, which considers it a loss of female human capital (Pérez, 2005, p. 55).

The general data should not hide significant differences according to the branch of knowledge, which remain very stable over time. According to enrolment data for the 2021–2022 academic year, males represent more balanced percentages in the doctoral programmes in Social and Legal Sciences (49.3%) and Arts and Humanities (46.1%). In contrast, in the doctoral programmes in Science (53.2%) and, above all, in Engineering and Architecture (69.3%), men are in the majority. At the opposite extreme, male presence is a minority in Health Sciences (37.7%).

Lastly, with reference to the defence of doctoral theses, the overall data according to gender indicate a similar equality to enrolments in doctorates. In the last available year, 2021, of the 11,344 theses defended, 50.9% were by men and 49.1% by women.

5. Discussion

The data reflect a clear reality: the decrease in male presence at Spanish universities, which does not seem to arouse interest or research in the academic community or in society or politics. The analysis is almost always presented with a gender perspective that focuses on women and, if only secondarily, on men. This study offers a pioneering approach to the male perspective on presence according to gender at university. This provides a complementary vision to that offered from the female perspective.

The description over a broad period of time, and considering all university levels, is precise to understand the different features that appear throughout the university system. However, this descriptive nature limits the possibilities for analysis and in-depth theoretical and qualitative research that determine these data, which remains as a future line of study. It was necessary to understand and present the situation in order to subsequently interpret it. Even so, it is possible to understand that the processes and factors that lead to a low enrolment of men in university cannot simply be identified with those that once caused a low presence of female university students. The figures may be similar to other periods, but the casuistry is yet to be determined.

Inequalities in enrolment are often attributed to "gender biases", as the CRUE (Conference of Rectors of Spanish Universities) Equality Policy Delegate recently put it[6], adding that eliminating them "is not a matter of equality, but of social justice". The socio-cultural environment is blamed for the fact that women do not have STEM vocations, and the egalitarian conditions and dissemination actions that make role models of each gender visible in the professions must be promoted early on. Conversely, the same mechanisms could be conditioning men, with the difference that there are no systematic and specific programmes for them, unlike women.

The hegemonic explanation, within the socio-cultural or economic field, banishes any mention of possible differences in cognitive development and non-cognitive skills according to gender, which may be an explanation of the educational problems of men (Buchmann, DiPetre and McDaniel, 2008; Calvo, 2011). It may be logical that sociology is not primarily dedicated to these issues, but they must be considered in an overview of inequalities together with, of course, others such as educational structure and practices.

In any case, the concern does not reside in the inequality of university access, which disadvantages men, but rather remains in the parity distribution according to gender in the different studies.

It should be added that, although this study is framed in the context of the university system, inequalities by gender are preceding and subsequent, with the university sphere being only a specific context. If the educational intervention is comprehensive, the entire system, which has different situations, should be considered. From starting nursery to defending a doctoral thesis, the inequalities vary, although this overview indicates that they are almost always included in a range of between 40 and 60. Within this range there are very different causes that give rise to a greater or lesser presence, and therefore there must be different measures and policies for each context. While in nursery or primary school the disproportion is demographic, in upper secondary education it responds to different motivations, which permeate the university sphere.

In any case, obtaining higher education training is essential to achieve quality employment, as it guarantees a better employment rate, better working conditions and higher salaries (Armenteros and Pérez, 2018; Martínez, 2019). Therefore, in this final phase, special attention must be paid to the decrease in male students, which will affect the whole of society not only in the aforementioned aspects, but also in others such as the marriage market, family formation and birth rates.

6. Conclusions

This article seeks to open a line of research that takes into account the situation of male university students. They are the other side of the coin of university students and their data, as communicating vessels, are affected by the same processes, advances or setbacks present in women and/or society.

In this sense, the extensive data series presented shows the loss of male prominence at university, which has slowed in recent years, but which continues to decline. The most recent data indicate 43.7% of males in degrees, which would generate a gender gap whose size will depend on whether a parity of 40–60% or a representation adjusted to the actual proportion that young men represent with respect to women of the same age is considered desirable. This would be another extensive and remarkably interesting debate on what objective equality policies should be set in the university sphere or in society in general.

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The truth is that, as men are more demographically in the age range of university access, the real proportion of university students with respect to the generation total of men has only decreased. In the 2020–2021 academic year, the gap stood at 7.5%, while for the 1985–1986 academic year it was only 0.4%. This means that fewer and fewer men are accessing university in proportion to their demographic reality in Spanish society. I consider this demographic nuance to be of great significance; however, as it is not present in the considerations on equality, it must be an issue to be introduced.

From a perspective focused exclusively on enrolment data, the gap between men and women is 12.6% in favour of women, since for the 2020–2021 academic year they represent 56.3% of university students, while men represent 43.7%.

In any case, the differences according to gender are very significant according to areas of learning. Women are in the majority in almost all of them, with there being only one case where men have a very prominent presence: Engineering and Architecture. On the other hand, following completion of the undergraduate level, similar proportions are seen in master's degrees, while doctoral programmes are principally characterised by equal enrolment and thesis defence.

Within this analysed context, an extensive amount of time has been spent promoting women in spaces where their enrolment is not the majority or where they are under-represented; this same impulse, however, has not been detected with respect to men. In the review carried out, no actions, measures or conferences have been found that are specifically dedicated to the support of male university students in any area. While it may be that there has been an isolated action that has not been disseminated, the real explanation is its non-existence, based on the fact that male problems remain in the dark. The challenges of dropping out, under-representation or student failure, where men have a prominent role, are developed in a context of analysis and intervention where they are configured as general problems (Rubio, 2009).

If the objective of the state and universities is real equality, all educational spaces where inequality can manifest itself, regardless of gender, must be analysed and corrective measures applied where necessary. The units of equality must be the ideal platforms and they must start from a basis founded on equal attention to the inequalities between the genders.

Lastly, this study must acknowledge its limitations, the first being its descriptive nature. It is true that the approach could be more analytical and theoretical in terms of the processes that give rise to these inequalities. However, the total lack of the male perspective requires, from the outset, a description and data that give us an accurate understanding of the situation. A future line of research should be to delve into the causes, associated factors and explanations of this male inequality, with the performance, for example, of qualitative analyses.

Finally, university is a stage in the life course of individuals, which implies the limitation of not having a broad picture of the professional opportunities and future constraints that university choices can have for each person.

7. Bibliographic References

Acereda, A. (2010). Mujeres, toma de decisiones y liderazgo en las organizaciones. En VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 139-150). Barcelona: Generalitat de Catalunya.

Aguado Hernández, J. A., Cano Montero, F. J. & Sánchez Pérez, M. J. (2020). Segregación por género y Formación Profesional: aportaciones al debate sobre la situación actual. *Revista de Sociología de la Educación*, *13* (3), 308-327. https://doi.org/10.7203/RASE.13.3.16583

Alberdi, I. & Alberdi, I. (1984). Mujer y Educación: Un largo camino hacia la igualdad de oportunidades. *Revista de Educación*, *275*, 5-18. https://www.educacionyfp.gob.es/dam/jcr:6d872204-3c1b-4484-a393-6218a17f3a2e/re2750100501-pdf.pdf

Alcalá Cortijo, P. (Coord.) (2005). *Mujer y ciencia*. Madrid: Fundación Española para la Ciencia y la Tecnología.

Almarcha Barbado, A., González Rodríguez, B. & González Jorge, C. (1994). Cambio y desigualdad en el profesorado universitario. *Revista Española de Investigaciones Sociológicas, 66*, 117-139. https://doi.org/10.2307/40183720

Armenteros, J. H. & Pérez García, J. A. (2017). *La Universidad Española en cifras (2015-2016)*. Madrid: CRUE Universidades Españolas.

Arranz Lozano, F. (2004). Las mujeres y la universidad española: estructuras de dominación y disposiciones feminizadas en el profesorado universitario. *Política y sociedad*, *41* (2), 223-242.

Barrera Peña, M. L. & López Peña, A. (1984). *Sociología de la mujer en la Universidad: Análisis histórico-comparativo Galicia-España, 1900-1981*. Santiago: Universidad de Santiago de Compostela.

Calvo Charro, María (2011). *La masculinidad robada. Varones en crisis o el necesario reencuentro con la masculinidad*. Córdoba: Almuzara.

Carabaña, J. (1984). Modesto intento de interpretación de las tasas femeninas de escolaridad. *Revista de Educación, 275*, 19-43.

Chabaud, J. (1970). *Educación y promoción de la mujer*. Paris: UNESCO.

Cowan, R. S. (1976). The «industrial revolution» in the home: Household technology and social change in the 20th century. *Technology & Culture*, *17* (1), 1-23. https://doi.org/10.1353/tech.1993.0065

Declaración de Castellón (2018). *Políticas universitarias en materia de género a debate*. Castellón: Cumbre de Rectores de las Universidades Públicas Españolas.

Del Amo, M. C. (2009). La educación de las mujeres en España: de la «amiga» a la Universidad. *Participación educativa, 11*, 8-22.

FECYT (2005). *Mujer y ciencia. La situación de las mujeres investigadoras en el sistema español de ciencia y tecnología*. Madrid: FECYT.

Feito, R. (2019). La evolución de las tasas de idoneidad. In M. A. Ruiz Rosillo, M. A. Sancho Gargallo & M. De Esteban Villar, *Indicadores comentados sobre el estado del sistema educativo español* (pp. 47-50). Madrid: Fundación Ramón Areces-Fundación Europea Sociedad y Educación.

Fernández García, M. C., Torío López, S., García Pérez, O. & Inda Caro, M. (2019). Parental Support, Self-Efficacy Beliefs, Outcome Expectations and Interests in Science, Technology, Engineering and Mathematics (STEM). *Universitas Psychologica, 18*(2), 1-15. https://doi.org/10.11144/Javeriana.upsy18-2.psse

Fernández-Mellizo, M. (2022). *Análisis del abandono de los estudiantes de grado en las universidades presenciales en España*. Madrid: Ministerio de Universidades.

Gala Durán, C. (2010). Políticas de igualdad en el ámbito universitario: nuevas perspectivas. In VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 33-44). Barcelona: Generalitat de Catalunya.

Giménez-Salinas Colomer, E. (2010). Introducción. In VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 7-8). Barcelona: Generalitat de Catalunya.

Grañeras Pastrana, M. et al. (2022). *Radiografía de la brecha de género en la formación STEAM*. Madrid: Ministerio de Educación y Formación Profesional.

Graves, J. & Kuehn, Z. (2020). *Impacto de los ciclos económicos sobre las decisiones de los estudiantes de educación superior*. Madrid: Fundación Ramón Areces-Fundación Europea Sociedad y Educación.

Guil Bozal, A. & Flecha García, C. (2015). Universitarias en España: De los inicios a la actualidad. *Revista Historia de la Educación Latinoamérica, 17* (24), 125-148. https://doi.org/10.19053/01227238.3303

Hernández Armenteros, J. & Pérez Garcia, J. A. (Dir.) (2018). *La Universidad española en cifras 2016-2017*. Madrid: CRUE.

Marqués Calvo, M. & Roca Rossell, A. (2010). Mujeres y carreras técnicas. In VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 45-56). Barcelona: Generalitat de Catalunya.

Martínez Pastor, J. I. (2019). La relación entre el nivel de estudios y los salarios. In *Indicadores comentados sobre el estado del sistema educativo español 2019* (pp. 165-170). Madrid: Fundación Ramón Areces-Fundación Europea Sociedad y Educación.

Mariño, R. & Rial, A. (2019). Balance de las necesidades formativas demandadas por mujeres que cursan o que han cursado ciclos de FP en familias profesionales masculinizadas: el caso de Galicia. *EDUCAR*, *55* (1), 251-272. https://doi.org/10.5565/rev/educar.890

Merino Pareja, R. (2020). Formación Profesional y género: Desigualdades que persisten, algunos cambios y debates pendientes. *Revista de Sociología de la Educación*, *13*(3), 305-307. https://doi.org/10.7203/RASE.13.3.17444

Michavila, F., Martínez, J. M. & Merhi, R. (2015). *Comparación internacional del sistema universitario español.* Madrid: CRUE Universidades Españolas.

Montero, M. (2009). El acceso de la mujer española a la universidad y su proyección en la vida pública (1910-1936). *Anuario de Historia de la Iglesia, 18*, 311-324. https://doi.org/10.15581/007.18.9821

Moreno Becerra, J. L. (1998). *Economía de la educación*. Madrid: Pirámide.

Oliveira, E. R., Unbehaum, S. & Gava, T. (2019). STEM Education and Gender: A Contribution to Discussion in Brazil. *Cadernos de Pesquisa, 49*(171), 130-159. https://doi.org/10.1590/198053145644

Olmedo Torre, N., Sánchez Carracedo, F., Salán Ballesteros, N., López, D., Pérez Poch, A. & López Beltrán, M. (2018). Do Female Motives for Enrolling Vary According to STEM Profile? *IEEE Transactions on Education, 61*(4), 289-297. https://doi.org/10.1109/TE.2018.2820643

Palermo, A. I. (2006). El acceso de las mujeres a la educación universitaria. *Revista Argentina de Sociología*, *4*(7), 11-46. RAS 7__Ger__edu imprenta__Ger.indd (scielo.org.ar)

Pastor, I. (2010). Las mujeres en la Universidad. ¿De la igualdad de oportunidades a la igualdad efectiva? In VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 101-114). Barcelona: Generalitat de Catalunya.

Pérez Sedeño, E. (1996). De la biología imaginaria a la sociología real: obstáculos para el acceso de las mujeres a la ciencia. In M. A. García de León, M. García de Cortázar, & F. Ortega. *Sociología de las mujeres españolas* (pp. 219-241). Madrid: Editorial Complutense.

Pérez Sedeño, E. (Dir.) (2005). *La situación de las mujeres en el sistema educativo de ciencia y tecnología en España y su contexto internacional. Programa de análisis y estudios de acciones destinadas a la mejora de la calidad de la enseñanza superior y de actividades del profesorado universitario* (REF: S2/EA2003-0031). https://www.ohchr.org/Documents/Issues/CulturalRights/ConsultationEnjoyBenefits/UNESCOLASITUACIaNDELASMUJERESENELSISTEMA.pdf

Rubio Castro, A. (2009). El abandono y la falta de éxito de los chicos en la escuela, un problema de género. *Participación educativa, 11*, 23-39. https://redined.mecd.gob.es/xmlui/bitstream/handle/11162/91767/00820113014271.pdf?sequence=1&isAllowed=y

Sainz Ibáñez, M. & Müller, J. (2017). Gender and family influences on Spanish students' aspirations and values in stem fields. *International Journal of Science Education, 40* (2), 188-203. https://doi.org/10.1080/09500693.2017.1405464

Vila, A. (2010). Las mujeres en la investigación científica: apuntes sobre la historia y el futuro. In VV. AA. *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad* (pp. 159-166). Barcelona: Generalitat de Catalunya.

VV. AA. (2010). *Doctas, doctoras y catedráticas: Cien años de acceso libre de la mujer a la Universidad*. Barcelona: Generalitat de Catalunya.

Notes

1 Special Issue *Technology & Culture* (1997). Gender Analysis and the History of Technology, vol. 38 (1).

2 The United Nations has a website on the event where the reasons and objectives of the activities can be elaborated on. Retrieved from: https://www.un.org/es/events/women-and-girls-in-science-day/ [23-5-2023].

3 Further information can be found on the website. Retrieved from: https://www.uv.es/uvweb/universidad/es/listado-noticias/-girls-day-captar-estudiantes-ingenieria-ciencias-1285846070123/Noticia.html?id=1285920638113 [23-5-2023].

4 The development of the activity can be found on its website. Retrieved from: https://quieroseringeniera.ugr.es/ [23-5-2023].

5 The data are public and accessible on the Ministry's website. Retrieved from: https://www.universidades.gob.es/estadistica-de-estudiantes/ [23-5-2023].

6 Statements retrieved from: https://www.crue.org/2023/03/delegada-de-igualdad-sesgos-de-genero-ambito-academico/ [23-5-2023].

The Author

Diego Becerril is a lecturer in the Faculty of Political Science and Sociology at the University of Granada. He is the director of the SEJ131 research group "Social Life Analysis". His main lines of research include Family, Youth and Social Structure. He is a researcher in multiple R&D+i projects and a visiting professor at international universities (Lisbon, Harvard, Sorbonne, Sapienza, Havana, among others). His latest publications include those related to custody assignment (2021); legal reforms and marital breakdowns (2020); minors as victims of family violence (2019); and the participation of families in the educational system (2019).