



Agència  
per a la Qualitat  
del Sistema Universitari  
de **Catalunya**

General framework for

**INCORPORATING THE  
GENDER PERSPECTIVE IN  
HIGHER EDUCATION  
TEACHING**





Agència  
per a la Qualitat  
del Sistema Universitari  
de **Catalunya**

**General framework for**

**INCORPORATING THE  
GENDER PERSPECTIVE IN  
HIGHER EDUCATION  
TEACHING**

AQU CATALUNYA, 2018

© The Catalan University Quality  
Assurance Agency

C. dels Vergós, 36-42  
08017 Barcelona

Original title: *Marc general per a la  
incorporació de la perspectiva de gènere  
en la docència universitària*

The content of this document is covered by a  
Creative Commons 3.0 Attribution-  
NonCommercial-NoDerivs licence. It may be  
copied, distributed and displayed provided that  
the author is identified and it is not used for any  
commercial purpose.

You can consult the full license at:

<http://creativecommons.org/licenses/by-nc-nd/3.0/es/legalcode.es>



First edition: July 2019

## SUMMARY

<b>Introduction .....</b>	<b>7</b>
<b>1. Regulatory framework on gender mainstreaming.....</b>	<b>9</b>
1.1. International application .....	9
1.2. Europe .....	10
1.3. Spain .....	10
1.4. Catalonia .....	11
1.5. Links with the VSMA framework and the mission of AQU Catalunya .....	11
<b>2. The gender dimension in university studies .....</b>	<b>13</b>
2.1. What is teaching with a gender perspective? .....	13
2.2. What benefits does the gender dimension bring to education? .....	14
2.3. How can the gender dimension be mainstreamed in education? .....	15
<b>3. Assessing the gender perspective in degrees.....</b>	<b>19</b>
3.1. Diagnostic elements .....	19
3.2. Assessment indicators .....	22
<b>4. Appendices.....</b>	<b>25</b>
4.1. The gender dimension in different fields of knowledge .....	25
Arts & Humanities.....	26
Social and Legal Sciences.....	32
Education (Social Sciences and Law).....	36
Sciences .....	41
Health Sciences.....	45
Engineering and Architecture .....	50
<b>Bibliography and documentary resources .....</b>	<b>55</b>
<b>Working group .....</b>	<b>67</b>



## INTRODUCTION

Gender mainstreaming applies to all levels of public policy. It involves taking into consideration the differences between men and women when analysing, planning, designing and implementing policies, taking into account the way in which different measures, situations and needs affect men and women. The concept must also be applied to higher education, including quality processes, as established in Article 28 of Law 17/2015, of 21 July, on the effective equality of men and women.

In March 2017, the Global University Network for Innovation (GUNI), of which UNESCO, the Catalan Association of Public Universities (ACUP) and the Government of Catalonia are members, presented its report *Higher Education in the World: Towards a Socially Responsible University*. This report makes reference to the Sustainable Development Goals (SDG), a series of 17 priorities which constitute a roadmap for socially responsible universities. In particular, Goal 5 focuses on gender equality and states the following: *Achieving every Sustainable Development Goal depends on improving the lives of women, girls, men, and boys equally. But achieving gender equality demands urgent action to end harmful practices and violence against women and girls, and overcome the social, political, educational, and health barriers that deny them equal rights and opportunities.*<sup>1</sup>

AQU Catalunya, in conjunction with the Inter-university Council of Catalonia's Women and Science Committee, set up a working group to draw up a framework document setting out guidelines and recommendations for effectively mainstreaming a gender equality perspective in all areas of higher education teaching. AQU Catalunya thus believes that gender mainstreaming is a fundamental aspect of the quality of the education provided within the Catalan university system. The working group was coordinated by Glòria González Anadón (Universitat Autònoma de Barcelona) and Tània Verge Mestre (Universitat Pompeu Fabra) and integrated by Eulalia Pérez Sedeño (Spanish National Research Council, CSIC), M. Teresa Ruiz Cantero (University of Alicante), Inés Sánchez de Madariaga (Technical University of Madrid, UPM), Encarna Bas Peña (University of Murcia), M. Àngels Gensana (Catalan Women's Institute) and Eva Benito (AQU Catalunya). This document is the result of the group's work and it was subsequently approved by AQU Catalunya's Institutional and Programme Review Commission (CAIP).

It clarifies the most significant concepts and issues and provides a guide containing gender audit tools and gender-sensitive assessment indicators affecting both the design of courses and the way in which they are taught. It is addressed mainly to bodies and centres responsible for planning, managing and assessing the quality of higher education teaching, although it is of interest to the whole university

---

<sup>1</sup>See the description given by the United Nations University: <https://unu.edu/explore/sustainable-development-goal-5>

## General framework for incorporating the gender perspective in higher education teaching

community, including administrative and service staff, teaching and research staff and students. The text consists of four sections, which provide the following information:

- A review of the **regulatory framework** in Europe, Spain and Catalonia regarding gender equality in higher education and the mainstreaming of this gender in the ***Framework for the Validation (ex-ante assessment), Monitoring, Modification and Accreditation of Recognised Degrees (MVSMA)***.
- The basis of the **conceptual framework** for the gender perspective in higher education teaching, emphasising its **importance and its contribution to the quality of teaching** and pointing out the **practical implications** for improving programmes.
- **Gender audit tools and the main indicators for assessing** how the gender perspective is mainstreamed, in line with the assessment guidelines of the Validation-Monitoring-Modification-Accreditation (VSMA) cycle.
- Appendices for each of the five areas of knowledge to facilitate the practical implementation of gender mainstreaming, through examples of **gender biases**, which help identify when changes are needed, and an illustrative list of **learning outcomes** that demonstrate the overarching character of the gender dimension in different disciplines. The document also includes **some documentary resources (such as teaching resources, tools and other support material)**, a **glossary** and **bibliographical references**.

Martí Casadesús Fa

Chairperson of AQU Catalunya's Institutional and Programme Review Commission



# 1. REGULATORY FRAMEWORK ON GENDER MAINSTREAMING

Mainstreaming gender into teaching is one of the central features of gender equality policies at the university level. As the European Union emphasises, gender equality is not simply a question of social justice. It also affects **the quality of teaching and research**.<sup>2</sup> These considerations have led to the development of international, Spanish and Catalan regulatory frameworks, which the present document applies to the quality assurance processes of bachelor's degrees and postgraduate programmes.

## 1.1. International framework

The principle that men and women are effectively equal has been established internationally and is overseen by the Commission on the Status of Women (CSW), a commission of the United Nations Economic and Social Council (ECOSOC). The CSW is the main inter-governmental body concerned with promoting gender equality, based on the *Convention on the Elimination of All Forms of Discrimination against Women* (CEDAW, 1979) Article 10 of the CEDAW emphasises the importance of education in promoting the equality of men and women: "States Parties shall take all appropriate measures to eliminate discrimination against women in order to ensure to them equal rights with men in the field of education." The Convention is regularly supervised by a Committee which comments on the reports drawn up by States which are party to the Convention. Regarding the combined seventh and eighth reports by Spain (61st session, 2015, section 27b), the Committee insisted that Spain should comply with its international commitments regarding education and gender equality. Concerning the limitations detected, it mentioned that education in gender issues was relegated to a secondary status and recommended that an effort should be made to eliminate all gender stereotypes from textbooks, that women's rights should be included in the curriculum and in academic programmes and that gender equality should be promoted in the professional training of teachers.

---

<sup>2</sup> The Horizon 2020 Regulation, Work Programme 2018-2019, Science with and for Society, SwafS-13-2018, Gender Equality Academy and dissemination of gender knowledge across Europe: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/swafs-13-2018.html>

## 1.2. Europe

The Treaty on European Union (TEU, 2010) established the principle of equality between women and men as a common value within the EU (Art. 2). The Treaty on the Functioning of the European Union established gender equality and the fight against any kind of discrimination based on sex as objectives for the EU that must be present in all its actions and policies (Articles 8 and 10), thus assuming the all-encompassing nature of such equality. The equality of women and men is also a fundamental right that must be guaranteed in all spheres of activity, according to the EU Charter of Fundamental Rights (Art. 23, 2000). These agreements legitimise the introduction of positive measures affecting not only opportunities but also results, with a view to eradicating inequality between women and men (TEU Art. 141.4).

In European research programmes, since the 5th Framework Programme (1998-2002), the European Commission has been involved in encouraging the participation of women in the production of scientific knowledge, reviewing the biased view of knowledge, ensuring that research addresses the situation of both women and men and correcting the deficit of knowledge about women, gender and gender relations. The Horizon 2020 Programme has reinforced the gender dimension in research programmes. The promotion of gender equality is one of the six pillars of the European Research Council (ERC) and a fundamental principle of the European Research Area (ERA).

In the context of transition towards the European Higher Education Area, it should be noted that the reform included a mandate to include gender studies in higher education and research (Kortendiek, 2011). In particular, it established the need to train students in competences and skills that would enable them to deal with economic and social change and become aware of the values associated with equality between men and women. In line with this policy, the communiqué of the 2003 Ministerial Conference in Berlin urged Member States to reorganise bachelor's degree courses in order to reduce gender inequality (González and Wagenaar, 2003).

## 1.3. Spain

*Organic Law 1/2004, of 28 December, on comprehensive measures for protection against gender-based violence*, states that the education system plays a key role in eradicating violence against women. Article 4 establishes that universities should include and encourage training in equality and non-discrimination in all fields of academic life on a cross-cutting basis. Article 25 of *Organic Law 3/2007, of 22 March, on the effective equality of women and men*, establishes that in higher education support should be given to teaching and research regarding the meaning and scope of equality between women and men. To this end, public authorities will ensure that: i) the programmes of study include teaching about equality between women and men; (ii) postgraduate courses dealing with the subject are created; (iii) studies and research are carried out in the subject and gender aspects are included in the reports and statistics produced.

As well, *Organic Law 4/2007, of 12 April, amending Organic Law 6/2001, of 21 December, on universities*, emphasises that universities must respect equality between women and men and recommends the development of programmes dealing with gender equality. *Royal Decree 1393/2007, of 29 October, on the structure of official university studies*, recognises that one of the principles guiding the development of programmes of study is that "any professional activity must take into

account a respect for fundamental rights and equality between men and women" and stipulates that in these programmes "teaching related to these rights" should be included where it is relevant. The thirteenth additional provision of *Law 14/2011, on science, technology and innovation*, establishes that gender mainstreaming is a "cross-cutting category" in research and technology and Spanish research policy should promote gender and women's studies.

### 1.4. Catalonia

Article 4.h of *Law 1/2003, of 19 February, on Catalan universities*, states that one of the objectives of the Catalan university system is to bring about improvements in teaching and contribute to lifetime learning in order to improve social cohesion, equality of opportunity and quality of life. The eighth additional provision, on gender mainstreaming, points out that "universities should promote measures to achieve equality of opportunity between men and women in all areas of university activity". *The Catalan Statute of Autonomy* (2006) includes, as a guiding principle, that public authorities must ensure gender mainstreaming through the inclusion of a gender perspective in all public policies (Chapter V, Article 41).

Article 28.1 of *Law 17/2015, of 21 July, on effective equality of women and men*, calls on universities to "introduce the mainstreaming of the gender perspective and of studies on the contribution of women throughout history in all areas of knowledge, academic activity and research, which must be included in the curriculum of bachelor degrees and postgraduate programmes ". The same article indicates that "requests for the accreditation of bachelor degrees and postgraduate programmes must be accompanied by a report which details, when relevant, how the gender perspective has been mainstreamed in the curriculum or, if this has not been done, the improvements envisaged to make this possible". Article 28.2 emphasises that universities "must guarantee that their staff are trained in the gender and women's perspective in all academic disciplines", while Article 28.3 requires universities to "create specific modules or courses on the gender and women's perspective in the compulsory curriculum". *Law 11/2014, of 10 October, for guaranteeing the rights of lesbian, gay, bisexual, transgender and intersex people and eradicating homophobia, biphobia and transphobia* stipulates in Article 13, which is devoted to universities, that measures should be promoted to protect, support and carry out research into the visibility of LGBTI people and that measures should be developed to eliminate discrimination and raise awareness within the university. Article 12 states that respect for diversity in sexual orientation and gender identity should be taken into account in teaching material. These recommendations are also reflected in *Guia per a la incorporació de la diversitat sexual i de gènere a les universitats catalanes a partir de la Llei 11/2014* (Guide for incorporating sexual and gender diversity in Catalan Universities based on Law 11/2014) (Directorate-General for Equality, Government of Catalonia, 2018).

### 1.5. Links with the VSMA framework and the mission of AQU Catalunya

This document presents a framework applicable to **all degrees (including bachelor and master programmes) in the five areas of knowledge** (Arts and Humanities, Social Sciences and Law, Science, Health Sciences, and Engineering and Architecture). Gender mainstreaming helps address gender biases, which may affect all areas of knowledge, as illustrated in the Appendices.

## General framework for incorporating the gender perspective in higher education teaching

The particular features of each area of knowledge and discipline will determine the aspects to which the gender perspective can be applied most intensively and the way in which it can be mainstreamed in the curriculum. In this respect, Law 17/2015 gives specific recommendations for some degrees. Article 21 stipulates that the curriculum for degrees enabling to teach in the mandatory primary and secondary education and in the baccalaureate must include specific training in gender equality and coeducation. As well, article 49.5 states that "public administrations shall encourage the mainstreaming of women's health in all health science studies".

This document proposes indicators to assess the mainstreaming of gender in the methodological guides related to the **VSMA framework** that assesses the quality of undergraduate and postgraduate programmes . The *Framework for the Validation, Monitoring, Modification and Accreditation of Recognised University Degrees (MVSMA)* links together the quality assurance (QA) processes (ex-ante assessment, monitoring, modification and accreditation) that take place throughout the life-cycle of a degree course, with a view to establishing coherent links between all of them and promoting greater efficiency in process management. Consequently, the mainstreaming and subsequent assessment of the gender perspective will be applied to the stage reached by each degree. The gender perspective must be incorporated in the design of any proposed new degree when it is validated. Other programmes will have to mainstream gender gradually via the remaining assessment processes (monitoring, modification and accreditation).

## 2. THE GENDER DIMENSION IN UNIVERSITY TEACHING

### 2.1. What is mainstreaming gender into teaching?

As shown in Table 1, "gender" is not synonymous with "sex" or "women". Teaching with a gender perspective is not, therefore, teaching about women; rather, it considers sex and gender as key analytical and explanatory variables. It implies paying attention to the similarities and differences in the experiences, interests, expectations, attitudes and behaviour of women and men, and identifying the causes and consequences of gender inequality, in order to fight it.

Teaching with a gender perspective takes into account both people's biological characteristics (sex) and the social and cultural characteristics of women and men (gender). Gender is a social category and a constitutive element of social relationships and structures based on hierarchies imposed by discourses and ideologies that define social norms, stereotypes and roles associated with femininity and masculinity, which produce different structural forms of inequality and injustice, both in terms of recognition and status and in access to socio-economic resources (Scott, 1986; Beckwith, 2005). These discourses and ideologies also establish a strict correspondence between biological sex and sexual orientation, as well as the socially expected gender identity and expression of, classifying as "abnormal" individuals who are non-heterosexual, transgender, transsexual or gender-fluid.

Table 1. Sex and gender

Sex refers to biological qualities characteristic of women and men, boys and girls, in terms of reproductive organs and functions based on chromosomal complement and physiology.

Gender is a socio-cultural process. It refers to cultural values and social attitudes that together shape and sanction "feminine" and "masculine" behaviours, and also affect products, technologies, environments, and knowledge. It includes gender roles, attitudes and identities.

European Commission (2016) *Guidance on Gender Equality in Horizon 2020*, p. 7

Gender is experienced together with other socially constructed identities such as social class, ethnicity, race, sexuality and disability. For this reason, a gender-sensitive education needs to be based on an **intersectional** approach, which involves taking into account how the combination of different types of inequality (sexism, classism, racism, homophobia and ableism) produces specific forms of discrimination (Crenshaw, 1991), as shown in Table 2.

Table 2. Gender and intersectionality

"An intersectional analysis tells us that it is not enough to belong to a rich country – that alone does not protect you from vulnerability to HIV infection, nor does it guarantee treatment. Where you sit in relation to the State – as a woman, a poor woman, a black woman, an educated woman, as a lesbian, as a woman with a disability who is therefore assumed not to be having sex, as an immigrant who is not entitled to many of the social security benefits of citizens,... all of these factors determine your vulnerability to HIV/AIDS."

Sisonke Msimang, AWID Forum "Reinventing Globalization", quoted in: Association for Women's Rights in Development (2004), *Women's Rights and Economic Change* no. 9, p. 6.

### 2.2. What benefits does the gender dimension bring to education?

Mainstreaming gender **into teaching improves the quality of instruction and the social relevance of the resulting knowledge, technology and innovations**. The gender perspective facilitates an in-depth **understanding of the needs, behaviour and attitudes of the whole population**, avoiding both partial interpretations based on men as the universal subject and essentialist views of men and women. In this way, errors in theoretical conceptualisations and empirical analyses can be avoided. Teaching with a gender perspective also **stimulates students' critical thinking capacity**, providing them with new tools to identify social stereotypes, norms and roles related to gender. They thus learn to problematize dominant socialisation patterns and **develop skills that will enable them to avoid gender blindness in their future careers**.

According to the definition given by the European Union (EIGE, 2016), "**Gender blindness** is the failure to recognise that the roles and responsibilities of women/girls and men/boys are ascribed to, or imposed upon, them in specific social, cultural, economic and political contexts. Gender-blind projects, programmes, policies and attitudes do not take into account these different roles and diverse needs. They therefore maintain the status quo and will not help transform the unequal structure of gender relations". **University teaching is also affected by gender blindness**, as pointed out in a recent report from the Xarxa Vives d'Universitats (Verge and Cabruja, 2017).

Regarding **content**, gender blindness has many consequences in education: the **over-generalisation** of the phenomena studied on the basis of the experience of men, making the situation of women **invisible**; a **false representation** of the behaviour, attitudes and needs of women as a deviation from the ideal male model; a **blurring of the differences** between men and women, as if they were homogeneous groups; and explanations of the differences based on **gender stereotypes** (Lovenduski, 1998; Minnarch, 2010) (see examples for the various areas of knowledge in the Appendices).

At the same time, teaching with a gender perspective helps us to detect the potential gender imbalance in the authorship of the works studied and to determine the extent to which the **learning environment and teaching and assessment methods** are inclusive and take into account the diversity of students.

There are various elements that can communicate to students a series of implicit or non-explicit messages that reinforce inequality between women and men, generating what may be described as a "hidden curriculum" (Margolis, 2001). The "hidden curriculum" is expressed through the **gender gap in the works cited** in course syllabi, which do not reflect the volume of contributions by female

academics. When scientific authority is represented as intrinsically male, gender stereotypes are reinforced (Cassese and Bos, 2013).

Gender blindness can also conceal issues related to the **learning environment**, such as class interactions (for example, differences in the frequency of interventions, oral presentations or interruptions during discussions), teacher-student dynamics or the language used (see Ho and Kelman, 2014).

The gender perspective also allows paying attention to the differences between the academic results of male and female students caused by **teaching and assessment methods** that often go unnoticed (Eddy, Brownell and Wenderoth, 2014; Wehrwein, Lujan and DiCarlo, 2007). For example, gender differences have been detected in the results of final exams in class as opposed to take-home exams,<sup>3</sup> and in multiple-choice tests according to the time allowed and whether incorrect answers are penalised or not.

Finally, the gender perspective encourages reflection on the **professional ethos and organisational culture of the discipline itself**. The composition of the staff and the student body says as much about gender differences in access to courses as it does about the part played by social roles and stereotypes in the historical development of the discipline. It is, therefore, necessary to understand how these mechanisms determine the choice of studies and profession, so that action can be taken with a view to eliminating such gaps (Kortendiek, 2011: 220).

### 2.3. How can the gender dimension be mainstreamed in education?

Mainstreaming the gender perspective affects **the degrees' curriculum**. It can be done via **specialised courses** or **in a more overarching manner**, by identifying the courses where sex and gender are relevant (Alonso and Lombardo, 2016). What is proposed here is a **skill**, developed in a number of courses through different learning outcomes (see the Appendices):

#### Skill:

*To develop the ability to assess inequality on the grounds of sex and gender, to design solutions.*

We should depart from the premise that all courses can include a gender perspective, although its depth may vary from one area of knowledge to another and between a programme's courses (see the curricular content with a gender perspective compiled by the Women's and Gender Research Network, NRW). To determine the relevance of gender in the content of different disciplines, we can turn to the **theoretical and empirical contributions of gender studies**, consulting existing guides, handbooks, specialised journals and massive open online courses (MOOC) (see the section on resources).

Briefly, sex is relevant when studies involve human beings or animals or when their tissue or cells are analysed, while gender is relevant when they deal with human beings and the interaction between

---

<sup>3</sup>Camilla Turner, "Oxford University set to feminise curriculum by requesting inclusion of women on reading lists", *The Telegraph* (15 March 2018): [https://www.telegraph.co.uk/education/2018/03/14/oxford-university-set-feminise-curriculum-requesting-inclusion/amp/?WT.mc\\_id=tmg\\_share\\_tw&\\_twitter\\_impression=true](https://www.telegraph.co.uk/education/2018/03/14/oxford-university-set-feminise-curriculum-requesting-inclusion/amp/?WT.mc_id=tmg_share_tw&_twitter_impression=true)

## General framework for incorporating the gender perspective in higher education teaching

individuals or with their environment. Table 3 lists some aspects of its relevance in different areas of knowledge (for further details see the Appendices to this document).

Table 3. Relevance of the gender dimension by area of knowledge

- **Arts and Humanities:** The gender perspective in teaching involves including the legacy, experience and output of women in different fields of the arts, philosophy and philology. It also questions the representation of women based on stereotypes of their family and social role and the female body as a sex object. As well as noting that "Anon." could well have been a woman, as Virginia Woolf wrote, it also involves paying attention to disciplines that have been considered "less suitable for women" (such as epistemology or ethics) or where artistic expression is seen as minor and where the work of women has been very important (e.g. crafts, fabrics, pottery and illustrations).
- **Social Sciences and Law:** The gender perspective in teaching is relevant in all those courses in which the content or its results and applications affect people directly, as citizens, users of public services, consumers, audiences, peoples and cultures, or indirectly, through the way in which institutions and organisations regulate social interaction. It is also relevant in all those subjects in which empirical data are used to determine people's attitudes, values, behaviour and needs.
- **Education:** Introducing the gender perspective involves: encouraging critical, constructive and responsible thinking to identify gender stereotypes, inequality and discrimination against women and girls throughout history, and the factors that sustain and perpetuate them; presenting examples and practices that promote equality between men and women in all spheres; learning to recognise sexism, whether explicit or implicit, in the discourse and practices of schools and the university; using active and participatory methodologies for identifying the day-to-day events that contribute to gender-based violence; describing the contributions of women to education, explaining their absence from textbooks, research and decision-making processes; and designing measures to eliminate all forms of direct or indirect discrimination against women.
- **Sciences:** The gender perspective is indispensable when the subject matter or its applications affect men and women differently. This is especially relevant when scientific or mathematical principles are applied to other areas, such as medicine, engineering, the environment or social sciences, where there are clear differences in the way men and women are affected, in both the biological and social senses.
- **Health Sciences:** The gender perspective in teaching involves raising awareness of and correcting scientifically identified gender bias regarding the different response in men and women to exposure to the risk factors underlying the onset of the illness, differences according to sex and gender in the manifestation of the illness and the patient's experience of it, differences in the healthcare received and the results of treatment, care and operations, and in clinical management and the functioning of health services.
- **Engineering and Architecture:** The gender perspective is relevant whenever men and women, as a result of biological considerations or social and cultural factors, use technological products and services in a particular way or differently. It means that attention must be paid to inequalities (arising from differences in income or in social and cultural factors) in access to the product or service and to the adjustment of technology biological differences, such as body size and strength, and the needs and preferences of men and women. In general, and particularly in architecture, urban planning, it implies that caring for others and the perception of safety should be taken into account in the design of cities and buildings.



## General framework for incorporating the gender perspective in higher education teaching

It is fundamental that the gender perspective be included when students are introduced to the **hard core of the discipline** and its frontiers, including introductory first-year courses, as what is excluded from the course content reveals as much about the discipline as what is included (Cassese and Bos, 2013: 217).

The gender perspective is also necessary in **courses dealing with research methods and techniques**, including quantitative methodology, where numbers and statistical methods are conceived of as being gender neutral. Nevertheless, the choice of research questions, the construction of concepts and the design of hypotheses are not value-free and prejudices often inform methodological decisions, such as the gathering of data and the selection of variables (Harding, 1987; Hesse-Biber et al., 2007). As an example, Table 4 shows how the formulation of questions in a survey can influence the type of response obtained and enable one to detect phenomena that were not previously visible.

Table 4. Example of methodology with a gender perspective

"Asking 'have you ever been raped?' will produce different responses from asking 'have you ever been forced to have sex?' (...). Similarly, in a study investigating violence against female and male taxi drivers (...) a higher number of participants gave a response to the question 'have you ever experienced sexual harassment at work?' than would have if I had asked 'have you ever experienced sexual abuse at work?', despite my view that it is the same experience. Additionally, one male participant refused to answer any further questions when he came to this question, claiming 'this questionnaire is designed for women'. Interestingly the research showed that male taxi drivers are sexually harassed at work, albeit not to the same extent as women. The questions not asked can influence the research findings as much as the questions asked (...). If a phenomenon is assumed not to affect a population there will generally be no relevant question included, hence suppressing and nullifying the experiences of the population studied."

Nicole Westmarland (2001). The Quantitative/Qualitative Debate and Feminist Research: A Subjective View of Objectivity. *Forum: Qualitative Social Research* 2 (1): Art. 13 (electronic publication)

It is essential to train students to work on **research, projects and applications with a gender perspective**, both in course assignments and final bachelor's or master's degree project or dissertations. This is where students should demonstrate that they have learnt to use gender as an analytical and explanatory variable when identifying the research question, doing the literature review, defining the hypotheses, selecting the methodological approach, gathering the data and analysing them, reaching conclusions and highlighting policy implications. There are a number of guides and checklists with recommendations on how to mainstream gender into research (see the section on resources).

All courses can tend to **balance the share of works by male and female authors** in the texts studied in class or cited in reading lists. Some universities already call for gender balance in the bibliography listed in course syllabi and recommend giving the author's full name<sup>4</sup>, as, when only the initial of the

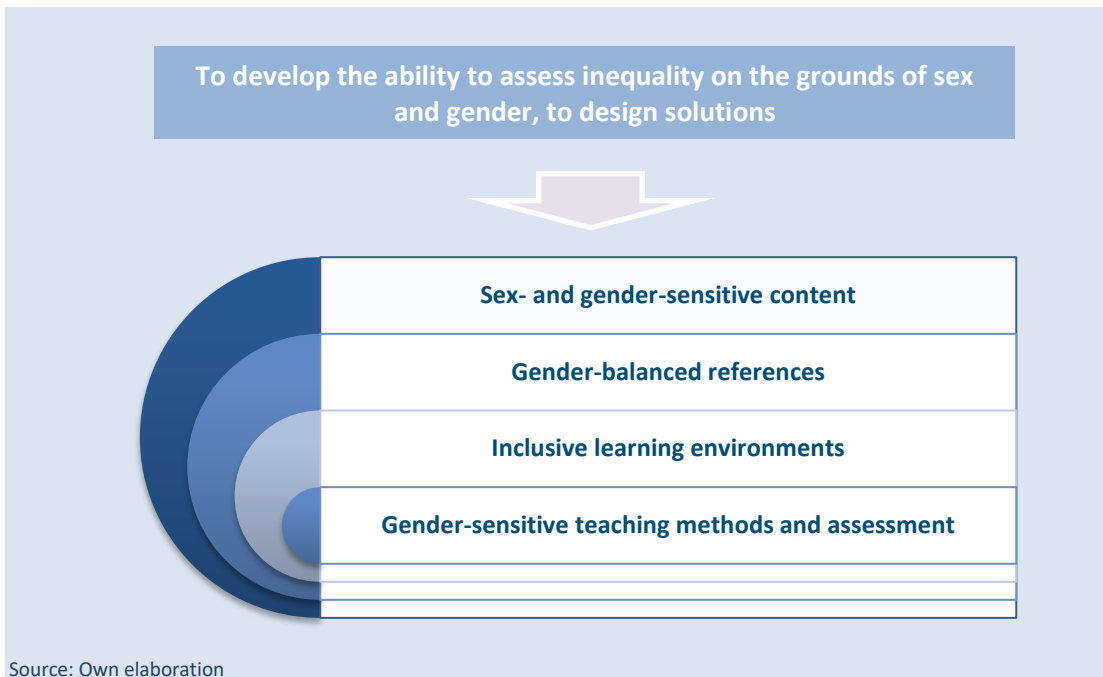
---

<sup>4</sup> Litera Turner, "Oxford University set to feminise curriculum by requesting inclusion of women on reading lists", *The Telegraph* (15 March 2018): [https://www.telegraph.co.uk/education/2018/03/14/oxford-university-set-feminise-curriculum-requesting-inclusion/amp/?WT.mc\\_id=tmg\\_share\\_tw&\\_twitter\\_impression=true](https://www.telegraph.co.uk/education/2018/03/14/oxford-university-set-feminise-curriculum-requesting-inclusion/amp/?WT.mc_id=tmg_share_tw&_twitter_impression=true)

## General framework for incorporating the gender perspective in higher education teaching

forename is listed, there is a tendency to assume, by default, that the writer is a man (Bosque, 2012: 3).

**In short**, when applied to teaching, the gender perspective implies a process of reflection which affects the design of the competences and skills in the programme's curriculum, the design of courses, including learning outcomes, the content taught, examples provided, the language used, the sources selected, the method of assessment and the way in which the learning environment is managed. To ensure the successful mainstreaming of the gender perspective, **teaching staff** need to acquire this skill through the **training** provided by universities' teaching innovation units and the specific courses organised by **gender equality units and observatories**.



## 3. ASSESSING THE GENDER PERSPECTIVE IN DEGREES

### 3.1. Gender audit aspects

This section describes the aspects that contribute to the effective mainstreaming of the gender perspective in higher education teaching. This analysis helps **diagnose the extent to which gender mainstreaming is supported and promoted by the institution, the centre and its programmes**, and to measure teaching staff's interest in implementing it and their ability to do so. Moreover, an analysis of the main gaps, deviations and difficulties detected allows to **identify the aspects that can be improved or reinforced**.

Diagnostic elements: institution, centre and staff

#### The institution

#### Planning and organisation

- **A commitment by the institution** to promote the mainstreaming of the gender perspective into teaching (measures included in the equality plan, integration in the university's strategic plan, in internal quality assurance systems, the existence of support guidelines, etc.).
- The use of **gender audits** to measure the extent to which the gender perspective has been incorporated in degrees.
- **Teaching innovation and exchange and promotion of experiences and good practices** regarding gender mainstreaming (calls for teaching innovation projects, the creation of networks, etc.).
- **Production of materials** with a gender perspective.
- **Availability of specialised training in gender issues** (bachelor degrees, minors, master degrees, postgraduate courses, activities qualifying for credits, etc.).
- The existence of gender mainstreaming **chairs** on teaching or research with a gender perspective.
- The existence of **measures** to make visible and recognise teaching and research related to gender studies or with a gender perspective (awards, publications, etc.).
- **The presence of women** giving academic year inaugural lectures and among those receiving awards, distinctions, honorary doctorates, etc.
- The existence of materials and resources dealing with gender mainstreaming and gender studies, available to staff and students via **libraries**.

## General framework for incorporating the gender perspective in higher education teaching

- Participation in **inter-university projects** to promote gender mainstreaming in higher education teaching.

### Human resources policy

- **A policy for hiring and promoting** staff designed to achieve parity and overcome the vertical segregation of teaching staff.
- **A training plan** for teaching staff which includes courses on gender perspective in course content and in teaching and assessment methods.
- **Incentives policy** that rewards efforts to mainstream the gender perspective into teaching.

The centre  
(faculty, school,  
department)

### Planning and strategy

- **Gender audit tools** are used to measure the extent to which gender has been mainstreamed into degrees.
- Gender equality and gender mainstreaming are incorporated in **internal quality assurance systems**.
- There are **teaching strategies** with a gender perspective, in both curricular and non-curricular activities (lectures, conferences, thematic workshops, career guidance, etc.).
- An effort is made to achieve **gender balance** when organising seminars, lectures, etc. and when choosing speakers for the inaugural lecture.
- **Activities are organised with a view to combating inequality and the gender stereotypes** associated with the discipline and its career opportunities.
- Measures are taken to correct the lack of gender balance among the **degree's students and staff**.
- The language used in the programme **presentation materials** (website, leaflets, etc.) is inclusive, women appear as often as men and gender stereotypes are avoided.
- When **curricular internships** are offered, the incorporation of students belonging to whichever gender is underrepresented in the field is encouraged.
- Hiring, career advancement and access to decision-making positions are promoted for the **underrepresented sex** among teaching and research staff.
- Academic and management activities are designed to facilitate a **balance between work or study and personal and family life**.
- Measures are taken to make visible **women's contributions** to the discipline and the profession.
- The degree has evidence of **student satisfaction** with the extent to which the gender perspective has been introduced in their studies.

### Curricular design and content

- There are **skills** that develop the gender perspective in the course content and the subjects taught.
- There are **learning outcomes** that deal with the gender competency and these are evaluated.
- There are **gender-specific courses**.

## General framework for incorporating the gender perspective in higher education teaching

- **Teaching and assessment methods** are inclusive: they contain no gender bias and take into account diversity among students.
- The **bibliography** listed in reading lists aims achieves gender balance.
- Students' ability to conduct **gender-sensitive research** is developed.
- The programme's curriculum allows students to choose gender-specific courses which are part of other degrees (minors, optional courses, etc.).

### Teaching staff

#### Professional development

- Staff have the **tools and knowledge** to incorporate a gender perspective effectively in their teaching.
- Staff participate in **ongoing training courses** to improve their knowledge of ways to incorporate a gender perspective in teaching and research.
- Staff develop **teaching innovation projects** related to gender mainstreaming.
- Staff produce **materials** about teaching with a gender perspective.

### 3.2. Assessment indicators

The recommended indicators related to gender mainstreaming into teaching which VSMA-cycle programmes should respond to in self-benchmarking reports are listed below. The table also includes the **standards** related to these indicators, which correspond to validation and accreditation processes. The list includes **general** indicators, which focus on the context of each degree in the **centre**; **specific** indicators for the courses included in the **programme’s curriculum**; and indicators of **student satisfaction**.

Assessment indicators	Validation standards	Accreditation standards
<b>General indicators: The existence of gender imbalance or gender stereotypes</b>		
Percentages of women and men among students enlisted in the <b>degree</b>	Access to the course and admission of students  Course plan  Teaching staff  Material resources and services  Internal quality assurance system	Quality of the training programme  Relevance of the public information  Efficacy of the programme’s internal quality assurance system  Suitability of teaching staff for the training programme  Effectiveness of learning support systems
Percentages of women and men teaching the <b>degree</b>		
Percentages of women and men holding permanent and non-permanent positions		
Breakdown by sex of management positions in the centre		
Action has been taken to increase the number of students of the underrepresented sex enlisted in the <b>degree</b> (Yes/No, evidence)		
Action has been taken to make visible women’s contribution to the discipline (bibliography, seminars, lectures, awards, extra-curricular activities, etc.) (Yes/No, evidence)		
Action has been taken to incorporate the gender perspective in activities not forming part of the course: career guidance, work by tutors, academic regulations, lectures/conferences/workshops, internship agreements, etc. (Yes/No, evidence)		
<b>Training of staff in gender mainstreaming</b>		
The institution offers teaching and research staff training in gender mainstreaming (Yes/No, evidence)	Quality of the teaching programme	

## General framework for incorporating the gender perspective in higher education teaching

Assessment indicators	Validation standards	Accreditation standards
The <b>degree's</b> teaching and research staff participate in gender mainstreaming training sessions provided at the university (Yes/No, evidence)	Appropriateness of public information	Suitability of teaching staff for the training programme
The <b>degree's</b> teaching and research staff participate in teaching innovation projects dealing with gender mainstreaming (Yes/No, evidence)	Internal quality assurance system Teaching staff Material resources and services	
<b>Materials production</b>		
The <b>degree</b> provides students with teaching material which has a gender perspective (Yes/No, evidence)	Course plan	Quality of the training programme Quality of programme (learning) outcomes
<b>Public information</b>		
In the materials used to present the degree (website, information leaflets, etc.) women appear as often as men and gender stereotypes are avoided.	Access to the course and student admissions Material resources and services	Relevance of the public information
<b>Specific indicators: programme's curriculum</b>		
An analysis has been made of the extent to which gender has been mainstreamed into the <b>degree</b> (Yes/No, main conclusions)	Knowledge, skills and competences Course plan	Quality of the training programme Effectiveness of learning support systems Quality of programme (learning) outcomes
Number and types of gender competencies included in the degree		
Number and types of learning outcomes related to a gender perspective		
Number of units/courses that incorporate a gender perspective or focus on gender		
State how many of these units/courses are basic, compulsory or optional and which academic <b>year</b> they are taught in		
The programme's curriculum allows students to choose gender-specific courses which are part of other programmes (optional, minors, electives, etc.)		
Training is provided on how to conduct research with a gender perspective when preparing a final bachelor's degree or master's project (Yes/No, evidence)		

## General framework for incorporating the gender perspective in higher education teaching

Assessment indicators	Validation standards	Accreditation standards
<b>Satisfaction indicators: Student satisfaction<sup>5</sup></b>		
The <b>degree</b> has evidence of students' perception on the extent to which gender has been mainstreamed into their studies (Yes/No, evidence)	Internal quality assurance system	Quality of the training programme Efficacy of the programme's internal quality assurance system Effectiveness of learning support systems

---

<sup>5</sup> A new question should be included in the questionnaire to determine the satisfaction of those completing their degree: *"Has the teaching received enabled you to develop the ability to assess inequality on the grounds of sex and gender?"*



## 4. APPENDICES

### 4.1. The gender dimension in different area of knowledge

Below examples are provided of specific learning outcomes that put gender competencies into practice in the five fields of knowledge (Humanities, Social Sciences and Law, Sciences, Health Sciences, and Engineering & Architecture) and in the 17 second-level sub-fields that comprise the degrees (see *AQU Catalunya's programme catalogue* published in July 2016). Because of the specific reference in the current normative framework made to programmes related to the world of education, a separate section is devoted to this field:

#### 1. Arts & Humanities

- 101: Philosophy and History (History; Philosophy and Humanities)
- 102: Languages and Literature (Linguistics, Classic and Comparative Linguistics; Catalan and Spanish Philology; Foreign Languages)
- 103: Art and Design (Fine Arts; Art and Design)

#### 2. Social Sciences and Law

- 201: Economics, Business and Tourism (Economics; Business Administration; Tourism)
- 202: Law, Labour Law and Politics (Law; Labour Law; Politics; Sociology and Geography)
- 203: Communication and Documentation

#### 3. Education (Social Sciences and Law)

- 204: Education (Pre-School Education; Pedagogy and Educational Psychology)
- 205: Social Intervention (Work and Social Education; Social Psychology)

#### 4. Sciences

- 301: Biological and Earth Sciences
- 302: Experimental Sciences and Mathematics (Chemistry; Physics and Mathematics)

#### 5. Health

- 401: Nursing and Healthcare (Sports, Nutrition and Physiotherapy; Nursing; Healthcare)
- 402: Psychology and Therapy (Psychology; Therapy and Rehabilitation)
- 403: Medicine and Biomedical Sciences (Medicine and Dentistry; other health sciences: Pharmacy, Veterinary Science and Biomedicine)

#### 6. Engineering & Architecture

- 501: Architecture, Construction and Civil Engineering (Architecture; Construction; Construction Engineering; Civil Engineering)
- 502: Industrial Technologies (Naval Engineering; Aeronautical Engineering; Electronic Engineering and Automation; Mechanical Engineering and Industrial Design; Chemical and Materials Engineering; Industrial Engineering and Organisation)
- 503: Information and Communication Technologies (ICT) (Telecommunications; Computer Science)
- 504: Agriculture, Forestry and Fishing (Agriculture and Food Production; Forestry)

## Arts & Humanities

### Introduction

Gender inequality affects Arts and the Humanities (Philosophy, History, Philology, Literature, Art and Design) in various ways. Firstly, men have been the main objects of study in many disciplines, and conclusions have been generalised to humanity as a whole. Even in periods when major cultural revolutions were taking place, such as the Renaissance or the Enlightenment, or during important social and political revolutions, such as the French Revolution, women's role in these events is generally absent from the curricula. Secondly, women's contributions have "disappeared" from the official accounts of these disciplines and fields in which their participation has been quantitatively and qualitatively very important, such as craft, textiles, ceramics and illustration, have been treated as "minor" arts. As a result, the literary, philosophical and artistic canons are biased in favour of men. Taking these matters into account does not imply producing a new history or literature solely about women. When the whole population is included, a new type of history or literature is produced, which redefines and extends their meaning.

Integrating the gender perspective in teaching implies identifying the experiences of men and women and their contributions to history, philosophy, literature and art, but also examining the way in which gender, as a social and cultural construct, cuts across all the phenomena under study. For example, asking where women were in the Renaissance, the Enlightenment and the French Revolution implies considering their contributions to philosophy, literature and art and analysing the effects that periods of effervescence and transformations in hegemonic cosmovisions have had on women and men, in terms of access to education, political power, and political, civil, social and economic rights. It also involves paying attention to both public and private life, in order to understand the functioning of society, the norms on which it has been sustained over time, including those regarding gender, and how these have been justified philosophically and have been transmitted through cultural and artistic expression (Scott, 2008), as shown in Table 1.

Table 1. The importance of gender in history

"But it seems to me that we should be interested in the history of both women and men (...) Our goal is to understand the significance of the sexes, of gender groups in the historical past. Our goal is to discover the range in sex roles and in sexual symbolism in different societies and periods, to find out what meaning they had and how they functioned to maintain the social order or to promote its change."

Natalie Z. Davis (1976), "'Women's History' in Transition: The European Case", *Feminist Studies* 3 (3-4): 83-103 (p. 90).

Education with a gender perspective thus allows us to identify and problematize how the construction of images, symbols, discourse, regulatory systems, hierarchies and forms of subjectivity expressed in different disciplines have contributed to producing and reproducing certain models of femininity and masculinity that reflect gender relations in society in each period and location. Gender thus cuts across artistic and literary creation, the construction of history, the production of philosophical thought and linguistic and cultural models.

### *Common forms of gender bias in the Arts and Humanities*

The supposedly universal type of knowledge produced through research and passed on through the teaching of arts and humanities is imbued with **androcentrism**—the adoption of a masculine point of view as neutral and universal—and numerous **gender biases**. Some examples are listed below:

- **History:** The interest of historians has tended to focus on activities and events involving men, as outstanding individuals or as members of groups or organisations consisting fundamentally of men, such as armies or the working-class movement. This approach has largely limited historical analysis to situations linked to spheres of power, such as politics or war, thus concealing the realities of everyday life, traditionally associated with private life and thus with women (Amelang and Nash, 1990). This conventional view of the past is, therefore, incomplete and presents women as passive, relegating them to the background, as subjects of study.
- **Art:** The absence of works by women in museums and the lack of a discourse to explain their absence makes half of the population invisible and makes it impossible for women to have role models in art, while consecrating a representation of reality from an exclusively male perspective. Among the most representative works in the collections of the 30 museums on the website of the Catalan art museum network (<http://xarxa.museunacional.cat/>), only three can be clearly attributed to women. Of the 1,160 works on display in the Museo del Prado (in March 2018), only six are by women, the work of three painters: Sofonisba Anguissola, Clara Peeters and Artemisia Gentileschi.<sup>6</sup> Moreover, although the presence of women in the management of our historical and artistic heritage is very important, they are underrepresented in managerial positions.
- **Literature:** There is a significant gap between those who consume most literature, mainly women, and those who are praised and rewarded for their literary work, predominantly men. This gender bias reinforces the historical association between literary "genius" and masculinity. Recent studies show how, while two thirds of books are published by women, two thirds of the books appearing in critical reviews refer to male writers (see Harvey and Lamond, 2016, for the case of Australia). Moreover, literature written by women is often classified as "women's literature" or "feminine literature", as if these works did not form part of universal literature, while the literary canon, works written by men, is never classified as "masculine literature" (Zancan, 1998).
- **Philosophy:** Abstraction based on individual circumstances and differences, whether biological or social, can disguise or consolidate existing inequalities. If gender is only added a posteriori, theories may legitimise, even unintentionally, ways of understanding concepts that have already inscribed gender in pernicious ways. The individual representing humanity, supposedly with no gender, who is guided fundamentally by self-interest will be a man, what is understood by the fact of being a man, i.e. the values, life experiences and behaviour associated with masculinity. Theories establishing standards regarding justice, freedom or equality that are detached from significant categories like gender or race run the risk of ignoring or silencing the history of sexism or racism. Table 2 illustrates this bias in the criticism by Susan M. Okin of *Theories of Justice* (1971) by John Rawls.

---

6 Marina Velasco, "El Museo del Prado sólo expone seis obras de mujeres", *El Huffington Post*, 6 March 2018, available at: [https://www.huffingtonpost.es/2018/03/06/el-museo-del-prado-solo-expone-seis-obras-de-mujeres-son-estas\\_a\\_23375343](https://www.huffingtonpost.es/2018/03/06/el-museo-del-prado-solo-expone-seis-obras-de-mujeres-son-estas_a_23375343)

Table 2. The gender of philosophy

"Liberal political theory is, with very few exceptions, deceptively individualist. It claims to have as its subject human individuals who can exist independently of each other. They are never helpless infants; they do not suffer from major or less than passing disabilities, mental or physical, they do not seem to pass into any kind of dependency on others (...). All of this fictional portrayal of persons as autonomous, self-sustaining, and even self-created beings serves to disguise a giant ambiguity: while liberal theorists claim to be writing about individuals, scratch the surface of any of their theories and you will find out that they are almost all actually talking about male heads of households.

Susan M. Okin (2005), "'Forty acres and a mule' for women: Rawls and feminism", *Politics, Philosophy and Economy* 4 (2): 233-248.

- **Languages:** Human groups give meaning to the world through narrative and discourse. For example, the way in which the media present news, select and characterise those involved, and organise their discourse has a strong cognitive impact. Decisions affecting the constructions of (cultural, scientific, political, sports or advertisement) discourse may contain various types of gender bias, as a result of the different prominence given to women and men in the news, the issues to which they are most often related to, their presentation in active or passive roles, and the type of evaluation of their actions. An analysis of the discourse with a gender perspective allows us to determine to what extent it reproduces cultural patterns that sustain gender inequality and how women are very often depicted by the media as "subaltern alterity" (Spivak, 1994).

The arts and humanities are an area of knowledge that lends itself to identifying the representation of **gender-based violence** throughout history and different views of it. For example, a comparison of the picture *Susanna and the Elders* painted by different artists shows how different the perspectives of male and female painters can be. The painting depicts a passage in the Greek version of the Bible in which two elderly men, struck by Susanna's beauty, accosted her when she was bathing. When she refused to have sex with them, they took revenge by accusing her of adultery. In the picture by Paolo Veronese (1580), Susanna appears to adopt a sensual, suggestive posture before the kindly gaze of the two old men, while Artemisia Gentileschi (1610) portrays her as a frightened woman trying to get away from two men who are harassing her.<sup>7</sup>

### **Learning outcomes for the gender dimension competency**

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas:

---

<sup>7</sup> For further information see the project *Herstóricas*: <http://herstoricas.com/arte-y-violencias-machistas/>

## General framework for incorporating the gender perspective in higher education teaching

### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist.

### 101 – Philosophy and History

(History; Art History; Musicology; East Asian Studies; Archaeology; Philosophy; Humanities)

- Students use sex and gender as variables to understand social, political and economic structures.
- They can problematize the separation of public and private life and the assignment of gender roles in historiographical analyses.
- They recognise the importance of restoring women as active social, economic and political agents in the past.
- They are familiar with the historical development of the principle of equality and its philosophical and moral justifications.
- They can contextualise the work of women diachronically.
- They can analyse the history of philosophy, art or music in context, considering the particular historical and social circumstances that have conditioned men's and women's opportunities to produce thought, art and music.
- They can identify false gender neutrality or bias that may be latent in philosophical theories or conceptual constructs.
- They recognise how normative theories have helped to shape and legitimise inequality and gender power hierarchies and can identify how some theories have sought to treat social or cultural differences (for example, in roles and capacity) as biological.
- They value the role of philosophy as an intellectual commitment to human rights, equality, diversity and social justice and recognise the importance of feminist philosophy in this commitment.
- They can use the sex/gender category epistemologically when analysing the 'situated subject' that produces knowledge/thought.
- They understand and analyse the functions of composition and reception of music with regard to the construction and performativity of gender.

## General framework for incorporating the gender perspective in higher education teaching

### 102 – Languages and Literature

(Linguistics; Literary Studies; Classical Philology; Romance Philology; Catalan Language and Literature; Spanish Language and Literature; English Studies; Translation and Interpreting; Translation and Interpreting. German; Translation and Interpreting. English; Translation and Interpreting. French; Arab and Hebrew Studies)

- Students can carry out a critical analysis of literature, discourse and language as a means through which femininity and masculinity have been constructed and the gender roles and stereotypes associated with these identities in different periods.
- They recognise language as a socio-cultural product which evolves and as a vehicle for creating and transmitting culture, which produces and reproduces gender relations at the symbolic level.
- They can analyse the role of gender in the organisation of public and private life through literary sources.
- They can analyse the history of literature in context, considering the particular historical and social circumstances that have conditioned men's and women's opportunities to express themselves through literature.
- They can analyse the subjective representation of gender and sexuality in literary texts.
- They develop an ability to question the relationship between language and power.
- They can identify the gender patterns governing communication, recognise the existence of different styles of communication and develop approaches to interpretation which are not androcentric.
- They can detect sexist and androcentric use of language.
- They develop the ability to produce non-sexist texts.
- They are aware and understand how literature written by women has modified the literary canon by incorporating their own vision, voice and writing style.
- They can identify and correct the gender biases underpinning translations or interpretations of texts and errors when transferring Euro-centric and Anglo-American gender categories to texts from other cultures.

### 103 – Art and Design

(Fine Arts; Design; Conservation-Restoration of Cultural Heritage)

- Students can identify and assess the contributions of women in different roles linked to artistic creation throughout history.
- They can analyse the iconography of works produced in different historical periods and in different geographical locations with attention to the ways in which cultural conventions regarding gender and sexuality have been expressed and how they have been subverted.
- They recognise the work that challenges the power relationships and gender norms produced by feminist and LGBTI and *queer* artists.
- They acquire a capacity for critical analysis of the representation of women throughout the history of art, with a view to identifying the stereotypes and norms regarding gender and sexuality that are conveyed.
- They can problematize the idealised representation of male and female bodies and the frequent representation of women as passive objects of sexual desire.
- They can analyse the history of art in context, considering the particular historical and social circumstances that have conditioned men's and women's opportunities to express themselves through art.
- They can analyse the choice or treatment of the subject in artists' works with reference to their lives as women, men or transsexuals and in the light of their sexual orientation.
- They recognise gender differences and inequality in the use and management of historical and artistic heritage.
- They develop a critical mindset regarding the way in which the sexes are represented in contemporary visual culture, with special attention to publicity, video games, television, the cinema and the Internet.
- They can undertake artistic projects using audiovisual technology that are free from sexist stereotypes.

## General framework for incorporating the gender perspective in higher education teaching

- They understand and can assess the relationship between theatre and society in the way it (re)presents and (re)produces gender and gender relationships.
- They can include the gender dimension in their analysis of the history of design and its institutions and standards, paying attention to the sexualised construction of objects/subjects shown as woman/man, feminine/masculine/androgynous/transsexual or intersexual.

## Social Sciences and Law

### Introduction

The rigorous incorporation of gender in the teaching of social sciences and law implies that we cannot ignore gender as a **social category** that constructs identities, roles, preferences, behaviour and practices seen as "masculine" or "feminine". Women and men have unequal access to resources and occupy different positions of power. They also face different expectations of their behaviour in the family, the world of work or public life that reflect the social construction of gender. We can also understand gender as a **process** through which apparently gender-neutral structures and policies impact women and men differently, as different cultural codes regarding masculinity and femininity are inscribed into them.

To assess how individuals and groups act in a certain way we need to understand the social, political and economic structure in which we live. This includes not only the social standards and behaviour derived from gender, but also the role played by key institutions such as the family, the education system, the economic system, the political system, the media and the judicial system in the definition and imposition of such behaviour and the unequal distribution of resources. **Avoiding a false gender neutrality** involves recognising that people's experiences and social position are determined by all these elements, as shown in Table 1.

Table 1. The importance of gender in the Social and Legal Sciences

"We know that the material conditions of women's lives worldwide are worse than those of men. Worldwide, women are poorly represented in ranks of power, policy and decision-making. Women work more and their labour is of less value and care work and emotion work are gendered with women more likely to bear multiple burdens both at home and at work. Despite supposed sexual liberation, heterosexual relationships and the patriarchal family are supported by all social institutions and lesbians are marginalised and disadvantaged in legislation and family life. Divorced and never-married women with children and older women dependent on state pensions and social security benefits are often the poorest in society. Further, the double standard of sexual morality means that the sexual reputation of a woman is much more precarious than that of a man. Violence against women is often supported, even promoted, by the media and not given serious attention by the criminal justice system and, further, to humiliate is to 'feminise'".

Gayle Letherby (2003) *Feminist Research in Theory and Practice* (Buckingham: Open University, p. 55)

### Common forms of gender bias in the Social Sciences and Law

The supposedly universal type of knowledge produced through research and passed on through the teaching of social sciences and law is imbued with **androcentrism**—the adoption of a masculine point of view as neutral and universal—and numerous **gender biases**. Some examples are listed below:

- **Economics:** Most studies of economics maintain that men show less risk aversion than women but they do not take into account the way in which gender roles lead men and women to give different meaning to the same risks. They also omit the fact that individuals are usually less



averse to risks related to areas with which they are more familiar, as might be the case for men with financial investments (Cutter, Tiefenbacher and Solecki, 1992).

- **Anthropology:** Gender blindness prevents people from seeing how the supposedly "natural" qualities of men and women become social roles. For example, it has been considered natural for men to perform tasks requiring physical strength, as they are supposed to be stronger, but in Africa carrying water or wood is a task assigned to women and even to children. We thus see a combination of androcentrism and ethnocentrism (Elson and Pearson, 1981).
- **Criminology:** Criminological theories have focused mainly on men who have committed crimes, neglecting female offenders and the significant role that gender can have in criminality. Because they deviate from the roles prescribed for women, female offenders have been considered as abnormal or worse than male offenders (Belknap, 2015). Social and economic inequalities between genders has also been minimised as a fundamental variable explaining violence against women.
- **Political Science and Sociology:** It is remarkable that there has been hardly any discussion in most political science and sociology literature of the importance of gender in explaining differences in political behaviour or social capital (O'Neill and Gidengil, 2006). Much of the difference derives from the asymmetry of resources brought about in the private sphere by the prevailing sexual division of labour, which affords men more spare time and more opportunities for social interaction. Descriptions of political participation and elites also refer systematically to men, creating a symbolic imaginary in which the "homo politicus" is male.
- **Law and Economics** Social security systems, welfare policies and taxation are formally gender neutral but, in practice, their structure is based on gendered norms and assumptions: the calculation of pensions and unemployment benefits is biased in favour of full-time employment, which is more common among men; there are tax allowances for the husband if the wife is unwaged; paternity leaves are shorter than maternity leaves, etc. (Walby, 2009).
- **Geography:** Urban planning and the prevailing growth model have tended to prioritise economic production. The distances between the home, the workplace and day-to-day activities imply a considerable consumption of time and money that make care work difficult, a task that continues to be done mostly by women (Hayden, 1980).
- **Law:** An analysis of court rulings shows how the application of criminal law continues to be male. This can be seen in decisions regarding child custody in cases of separation or divorce, where certain stereotypes of femininity continue to play a central role. It can also be seen in how little credibility is given to the word of the victim in the treatment of crimes against women's sexual freedom (Aguilera, 2012).
- **Communication:** The sources consulted and presented as experts in the media perpetuate a symbolic imaginary in which men are the authority *par excellence*. Journalist Adrienne LaFrance drew attention to this issue when she discovered that only 22% of the sources she had quoted in 2015 in her articles for *The Atlantic* were women: "These numbers are distressing (...) By failing to quote or mention very many women, I'm one of the forces actively contributing to a world in which women's skills and accomplishments are undermined or ignored."<sup>8</sup>

---

<sup>8</sup> Adrienne LaFrance, "I Analyzed a Year of My Reporting for Gender Bias (Again)" *The Atlantic*, 17 February 2016: <https://www.theatlantic.com/technology/archive/2016/02/gender-diversity-journalism/463023/>

## General framework for incorporating the gender perspective in higher education teaching

**Gender-based violence** calls for special attention, a significant area for all fields in the social sciences, as its origins lie in the gender power relationships and socio-economic inequality and differences in status that prevail in patriarchal societies. For example, while political economics seek to explain the links between the economic, social and political spheres, it has rarely paid attention to the way in which gender impregnates all these spheres and the role played by material inequality in sustaining violence against women (True, 2012).

### *Learning outcomes for the gender dimension competency*

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas:

#### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist.

#### 201 – Economics, Business and Tourism

(Economics; Accounting and Finance; Business Administration and Management; Marketing and Market Research; Business Sciences; International Business Economics; Tourism)

- Students can analyse macroeconomic policies to include domestic and care work.
- They can make a gender-sensitive analysis of taxation.
- They can apply gender mainstreaming tools to the analysis of organisations and human resources policy (equality plans, work-life balance measures, protocols to combat gender-based violence, occupational health and safety programmes).
- They can incorporate the circumstances and needs of women and men and a focus on human rights in policies for cooperation and development.
- They recognise and understand the role of macro-economic and social policy in producing and reproducing gender inequality.
- They can identify the different impact of budgets on men and women.
- They can identify the different needs and experiences of women and men as users of public services, consumers, etc.

#### 202 – Law, Labour Studies and Politics

## General framework for incorporating the gender perspective in higher education teaching

(Law; Criminology; Labour Relations; Labour Studies; Occupational Health and Safety; Public Administration and Management; Political and Administration Sciences; Sociology; Social and Cultural Anthropology; Geography)

- Students can identify gender biases in the labour market (occupational segregation, pay gap, types of contract and associated social benefits, etc.) and can design solutions to eradicate such biases.
- They are familiar with legislation on the effective equality of men and women and on violence against women.
- They can identify and act in response to direct, indirect or multiple discrimination on the grounds of sex, gender and sexual orientation.
- They can identify the role of gender in crime and programmes for the treatment, rehabilitation and social and occupational reinstatement of inmates.
- They are familiar with programmes for the treatment and rehabilitation of groups of women in penitentiary institutions.
- They are familiar with programmes for intervention and the specialised treatment of those serving sentences for having committed crimes related to gender-based violence and of the women who have been victims of such violence.
- They are familiar with public policies on gender equality and know how to apply gender mainstreaming tools (equality plans, gender impact assessments, etc.).
- They understand the role of macro-economic and social policy in producing and reproducing gender inequality.
- They can analyse gender roles in the traditional family structure and in new family models .
- They can recognise the gendered logics in the functioning of institutions and organisations, regarding both formal and informal aspects.
- They are familiar with the history of how women's rights were achieved.
- They can identify the contributions of women to society in different historical periods.
- They know how women's rights can be incorporated in peace-building policies, applying a human-rights approach.

### 203 – Communication and Documentation

(Audiovisual Communication; Journalism; Advertising and Public Relations; Library Science and Documentation; Information and Documentation)

- Students recognise the role of the media, audiovisual productions and advertisements in constructing gender relations and sexual and gender identity.
- They can identify the role of information and communication technologies in the transmission of gender stereotypes and apply measures to prevent them being reproduced.
- They can produce audiovisual and advertisement outputs with a non-sexist and non-androcentric vision.
- They can present information on gender-based violence- appropriately, excluding aspects that might give it an unhealthy character and avoiding its trivialisation.
- They have learnt to draw attention to the contributions made by women in all spheres of society and consider their experience as a relevant documentary source.
- They can compile, systematise, conserve and disseminate information about women, works written by women, documents referring to policies and laws on women and those produced as a result of research into gender studies, problematising the gender biases found in extant search tools and descriptors.

## Education (Social Sciences and Law)

### Introduction

In today's society, education does not only take place in schools, but also in the family, in the workplace (companies, government bodies, NGOs, etc.), in leisure centres, etc. In all of them we find complex problems arising from gender inequality, underlining the urgency of educational measures and social interventions that incorporate the gender perspective. Accordingly, there is a need to train professionals in education and social intervention who can play an active role, not only in education centres, but also in the family, the workplace and the community to advance the equality of women and men in society as a whole.

University education provides an ideal setting for the introduction of aspects that can and should be dealt with in the curriculum, with participatory methodologies that contribute to reflection on and the analysis of preconceived ideas about gender equality, identifying the underlying causes of different types of discrimination against girls and women. The training of professionals with a gender perspective is relevant to all stages and levels of education, including the education of children between 0 and 3 years old, primary education, secondary education and ongoing and lifelong learning, and to all the areas of social intervention, as pointed out in Table 1.

Table 1. The importance of gender in social intervention

The training of professionals must be in line with scientific, social and technical advances but it must also respond to the needs of society:

"With the term 'social professions' we refer to a multi-professional field organised around social action, with service to people as a common factor...; the social element refers to the fact that all of them produce, socialise, create and generate social bonds, promote communication between people, activate cooperation between citizens in asymmetrical situations, generate relationships and interaction and keep the social fabric alive."

Joaquín García Roca (2000) "Trabajo social", in Adela Cortina and Jesús Conill, dirs, *Diez palabras clave en ética de las profesiones* (Estella: Verbo Divino, p. 313, author's note: own translation)

The acquisition of the gender dimension skill would eliminate the current contradiction between not receiving this training at university and subsequently being required in one's professional role to act against inequality, discrimination, harassment and gender-based violence. It is, therefore, indispensable to conduct a critical review of the curricula and teaching guides for degrees related to education and social intervention, including the master's degree in Training in Secondary and Upper Secondary School Education, Vocational Training and Language Education.

### ***The most common forms of gender bias in Education and Social Intervention***

The compulsory admission of girls to formal education in Spain dates from 1857 and women were first admitted to university at the end of the nineteenth century. The elimination of formal barriers and the presence of women as students and teachers has not, however, led to the eradication of inequality, as shown by the criticism of Spain by the committee overseeing the implementation of the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) in sections 26 and 27 of the

## General framework for incorporating the gender perspective in higher education teaching

report corresponding to the 61st session in 2015. The criticism included the following points: the higher school drop-out rate among girls from groups at risk of social exclusion; segregation by gender in the choice of programmes, with some highly feminised fields (in particular those related to education, social intervention and care) and others which are predominantly masculine (such as engineering and architecture, and vocational education and training); the existence of gender stereotypes in textbooks and a failure to promote gender equality in the curriculum.

Indeed, numerous studies indicate that a "**hidden curriculum**" still prevails at different levels of education, reproducing gender inequality (Margolis, 2001; Subirats, 2013). As the Xarxa Telemàtica Educativa de Catalunya (XTEC) points out, the combination of ideas, beliefs and dichotomies that treat as "normal" the maintenance of sexist stereotypes in the classroom, the use of language that does not include both sexes, different attitudes to boys and girls that imply discrimination and differences in the interaction of teachers and pupils according to their sex, forms part of a hidden curriculum that helps to maintain stereotyped behaviour in both girls and boys.<sup>9</sup>

The elimination of gender biases requires the effective implementation of **coeducation**, understood as "educational measures that promote real equality of opportunity and value the experience, aptitudes, and the social and cultural contribution of women and men indistinctly without sexist, homophobic, biphobic, transphobic or androcentric stereotypes or discriminatory attitudes on the grounds of sex, sexual orientation, gender identity or gender expression" (Law 17/2015, Article 2.d).

Coeducation is also fundamental to **preventing gender-based violence**. Teachers need training in the use of methodological tools for responding to situations of gender-based violence and for developing activities to raise awareness. It also has an important role to play in countering myths that can lead to abusive relationships, as is the case of romantic love.

Coeducation is referred to in five Catalan laws: Law 5/2008, of 24 April, on the right of women to eradicate gender-based violence; Law 12/2009, of 10 July, on education; Law 14/2010, of 27 May, on the rights and opportunities of children and adolescents; Law 11/2014, of 10 October, to guarantee the rights of lesbian, gay, bisexual, transgender and intersexual individuals and eradicate homophobia, biphobia and transphobia; and Law 17/2015, of 21 July, on the effective equality of women and men. The main aims of coeducation are listed in the table below.

Table 2. Aims of coeducation (Law 17/2015, Article 21)

- To raise awareness of the historical contributions of women in all areas of knowledge and their social and historical contribution to human development.
- To teach young people about the history of the consecution of women's rights.
- To promote and disseminate criteria of equality between men and women, both in teaching and in establishing cooperative and participatory work.
- To teach boys and girls to share household responsibilities, care for those who are dependent and their families without the burdens imposed by traditional gender roles.
- To train pupils and provide support for individual expectations so that they can make academic and professional choices free of gender norms.
- To train pupils in the non-sexist, non-androcentric use of language.
- To promote research projects related to coeducation and gender mainstreaming.

---

<sup>9</sup>See the section on "Coeducation and Gender Equality", especially regarding training: <http://xtec.gencat.cat/ca/curriculum/coeducacio/formacio/>

## General framework for incorporating the gender perspective in higher education teaching

- To provide sexual and affective education that favours the development of a positive, healthy sexuality that respects diversity and avoids all types of prejudice on the grounds of sexual orientation.
- To promote content related to sexuality geared to the prevention of unwanted pregnancies and sexually transmitted diseases.
- To combat gender-based violence, according to the parameters set out in Law 5/2008.
- To incorporate ways to tackle, prevent and positively manage conflict situations linked to sexist attitudes and behaviours.

## Learning outcomes for the gender dimension competency

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas. In general, learning outcomes are listed for studies that involve the **training of trainers**:

### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist.

### Implementing coeducation (applicable to all subjects)

- Students can identify and describe the gender biases in the courses they study and the androcentrism and sexism in the teaching material used at different levels.
- They are aware of the origins of different education for women and men and its consequences.
- They can identify, understand and know how to deal with educational (attitude to study, resistance to the school culture, academic results, educational preferences, choice of programmes, pathways, participation in games and sports) and social dynamics in the school context (relations between teachers and pupils, between pupils, between school and family, and within the family) from a gender perspective. (They thus understand the relationship between such phenomena in the context of an unequal, hierarchical gender system, taking the intersection with other types of inequality into account.)
- They are able to analyse an educational institution, including its symbols, practices, explicit and hidden standards and the use of time and premises (playgrounds, classes, laboratories, etc.) from a gender perspective, yielding gender inequality and unequal access to educational resources through the action of pupils and male and female teachers.
- They can formulate proposals for overcoming gender inequality in schools, through the design of playgrounds, the time devoted to officially accredited studies and other teaching, and the design of curricular and extra-curricular activities.

## General framework for incorporating the gender perspective in higher education teaching

- They promote activities aimed at raising awareness and training in connection with gender equality and preventing gender-based violence in different working environments (schools, social services, leisure centres, centres for the elderly, centres for dealing with drug abuse, support services for women, minors and people with special needs, prisons, hospitals, companies, NGOs, etc.).
- They know how to use a wide range of resources (film, documentaries, advertisement, texts drawn from different fields of knowledge such as literature, history, natural science, philosophy, mathematics, medicine, etc.) to analyse gender inequality and discrimination on the grounds of sex, gender, sexual orientation, gender identity and their consequences for the development of women's and girls' potential.
- They can identify situations of harassment, gender-based violence and LGBTI-phobia in the educational community, the family, groups of friends or the workplace and make proposals for action to respond to them.
- They design curricula and teaching materials that encourage students to reflect and develop a critical attitude to gender inequality, discrimination against girls and women and the factors that sustain different forms of gender-based violence.
- They can identify the inconsistencies in educational, social and professional practices between the theoretical discourse on gender equality and day-to-day practices.
- They use innovative group dynamics to tackle different forms of sexism and encourage reasoned, critical decision-making by pupils in response to them.

### 204 – Education

(Pre-school Education; Primary Education; Pedagogy; Educational Psychology)

- Students can identify gender stereotypes in culture and education and the factors that perpetuate them.
- They can identify objectives, content, activities, materials and assessment that are sexist, proposing new approaches that promote coeducation and equality of rights and opportunities for women and men.
- They can detect and list the types of direct and indirect discrimination in the explicit (formal) and hidden (informal) curricula.
- They can produce teaching units which take into account the need to overcome gender inequality, based on the social and cultural characteristics of the people and contexts concerned.
- They propose activities that help to raise awareness of the consequences of sexually differentiated socialisation.
- They review their own teaching practice and the day-to-day practices of the teaching institution from the perspective of gender and gender inequality.
- They use non-sexist resources and alternatives to stimulate thought and to organise classrooms and other spaces where pupils study or spend time together.
- They know how to provide support for intersexual and transsexual students and those who are beginning the process of changing their gender identity.

### 205 – Social Intervention

(Social Work; Social Education; Social and Organisational Psychology)

- Students formulate proposals for activities to increase awareness of the factors that sustain and perpetuate inequality and gender stereotypes: in all societies, peoples and cultural contexts.
- They can define activities that help others to become aware of the consequences for individuals and for society of sexually differentiated socialisation.
- They propose measures to raise awareness of, make visible and combat gender-based violence and LGBTI-phobia.
- They formulate proposals to promote gender equality and combat gender-based violence and LGBTI-phobia in different settings (school, family, workplace, community) and among different groups.
- They make proposals to promote gender equality and non-discrimination in the organisational structures of government bodies, companies and NGOs.
- They can distinguish social policies with a gender perspective from those that disregard it, and assess their consequences.

## General framework for incorporating the gender perspective in higher education teaching

### Master Degree in Teacher Training in Secondary and Upper Secondary School Education, Vocational Training and Language Education

- They can identify objectives, content, activities, materials and assessment methods that are sexist from those that promote equality of rights and opportunities for women and men.
- They can detect direct and indirect discrimination in the explicit and hidden curricula.
- They can develop teaching units with a coeducational approach, taking the characteristics of individuals and their backgrounds into account.
- They record good teaching practice based on coeducation and disseminate it.
- They use group dynamics to tackle different forms of sexism and encourage reasoned, critical decision-making by pupils in response to them.
- They use non-sexist resources and alternatives to stimulate critical thought and to organise classrooms and other spaces where pupils study or spend time together.
- They formulate proposals to promote gender equality and combat gender-based violence and LGBTI-phobia in different settings (school, family, workplace, community).
- They make proposals to promote gender equality and non-discrimination in the organisational structures of teaching institutions, government bodies, companies and NGOs.
- As tutors they take the needs of both boys and girls into account.
- They know how to provide support for intersexual and transsexual students and those who are beginning the process of changing their gender identity.
- They design educational and career guidance programmes with a view to fighting gender stereotypes.



## Sciences

### Introduction

In the field of experimental sciences, the gender perspective should be included in so far as the area studied involves products, policies or actions with different repercussions for women and men. The different effects should be examined from both a purely biological perspective and a social or cultural perspective. Based on this approach, mainstreaming gender can be more or less intense according to the aims and content of each course and how it involves human beings and their relationships. There is, however, a general consideration that affects most courses: in general terms, few women study science (especially experimental sciences and mathematics). It should be borne in mind that the existence of gender stereotypes and the implicit bias associated with some professions discourages scientific vocations among women, as explained in Table 1.

Table 1. The gender of science

"Physics textbooks are notorious for giving the impression that the history of physics has been a linear development of great discoveries made by solitary gentlemen scientists (...). Unsurprisingly, people regard themselves as less able to contribute to an enterprise when the history of that enterprise does not include members of their group (...). All of these different factors lead to the expectation that successful physicists must be solitary, male geniuses, who construct new theories and knowledge by the sheer force of their own personal intellects.

Many different types of individuals, most importantly (though not exclusively), women, are simply not expected sources of physics knowledge. The internalisation of those cognitive expectations leads to increased (implicit) discrimination, reduced participation, and less chance for success (...). The internalisation of these cognitive expectations not only excludes people from the domain of physics, but also can potentially eliminate various ways of knowing and knowledge construction. If knowledge is expected to be the product of a solitary genius, (...) [these expectations] also belie the reality that modern-day physics is actually practised and constructed by communities of scientists working in close collaboration with each other (...)

Maralee Harrell (2016), "On the Possibility of Feminist Philosophy of Physics". In: Maria Cristina Amoretti and Nicla Vassallo (eds) *Meta-Philosophical Reflection on Feminist Philosophies of Science. Boston Studies in the Philosophy and History of Science*, vol. 317. Springer, Cham (pp. 24-25).

It is, accordingly, good practice to raise awareness of the contributions made by women to the discipline. A bias against the recognition of women scientists has been detected, with their work often being undervalued or sometimes attributed to male colleagues. This bias was called the "Matilda effect" by science historian Margaret W. Rossiter in 1993. Every effort should be made to avoid and combat the reproduction of gender stereotypes and bias in university education and to raise students' awareness of non-discrimination in their future careers. These aspects form part of the agenda of the main professional scientific associations. Table 2 shows the actions established by the American Physical Society, but many other professional scientific associations have a similar agenda.

Table 2. Agenda for gender equality in the sciences

- Increase the fraction of women in physics by increasing the number who enrol in and complete undergraduate physics degrees
- Understand and implement solutions for gender specific issues such as stereotype threat, unconscious bias, and impostor syndrome that affect careers of all physicists
- Enhance professional development opportunities for women in physics such as mentoring, mentor training, and negotiation skills workshops
- Remedy issues that impact gender inequality in physics by encouraging research into fundamental causes, assessing policies, and advocating good practices

Committee on the Status of Women in Physics (CSWP), 27 March 2015, American Physical Society (APS), Committee priorities, available at: <https://www.aps.org/about/governance/committees/cswp/index.cfm>

### *Common forms of gender bias in Sciences*

Traditionally, in the more abstract and theoretical fields of science, the introduction of gender perspective has been ignored, on the assumption that the concepts and techniques involved are gender neutral. However, the language, metaphors, analogies and iconography used as a support may offer a partial view of reality and reinforce gender stereotypes. It should be emphasised, moreover, that in the applied use of science in fields like medicine (biology or chemistry), engineering (geology, mathematics, physics) and social sciences (environment, statistics), where the subject matter, the results or the derived applications affect human beings directly, gender biases are common. Some examples of such biases are listed below:

- **Chemistry:** Work on safety procedures for chemical products and their consequences for gender relations (Buchholz, 2006) have shown that regulations on the safety of chemicals and new developments in policies on chemical products have not studied the difference between the exposure of men and women to harmful substances and the consequences in each case. These studies highlight the problem of having tended to make suppositions based on an "average person", who is implicitly thought of as male, healthy, young, working and not pregnant. This means that the situation of other groups (e.g. children, women or men who are not healthy) are not taken into account adequately. It also implies that exposure unrelated to the workplace is only included as a marginal consideration when assessing the risks attached to chemical substances. Recent studies have confirmed that gender differences in connection with exposure to chemical products, sensitivity to them and their effects on health have not been researched sufficiently (Hemmati and Bach, 2017).
- **Mathematics:** Although various situational factors (such as previous experience and acquired knowledge) are highly relevant to explaining the anxiety felt by many students about mathematics and statistics, gender is a significant factor on an individual level. Women are vulnerable to a "stereotype threat", as, socially, the capacity for abstract thought in general and mathematical ability in particular have tended to be associated with masculinity. This threat begins to develop in primary and secondary education (Galdi, Cadinu and Tomasetto, 2014). However, it should be noted that the teaching environment and teaching methods go further in explaining gender differences in the performance of pupils than factors related to the characteristics of female students and their cognitive styles (Boaler, 1998).

## General framework for incorporating the gender perspective in higher education teaching

- **Physics:** Physics often uses narrative and images to express concepts and facilitate communication. These images may contain gender stereotypes, as we can see in the description of electron and positron as belonging to "opposite sexes" (Bug, 2003: 892). Similarly, there is often implicit gender bias in the language and metaphors used to describe science. As against traditional metaphors suggesting that science should "master" nature, Barbara McClintock (Nobel Prize, 1983) said that she would "listen to what corn had to say", establishing an intimate relationship with the plants she studied and blurring the frontiers between the scientist and the object studied. For her, the goal of science is not to predict, control and manipulate the natural world but to understand it and connect with it.
- **Environment:** In research into the relationship between gender and environmental impact, analysing gender involves comparing the attitudes and behaviour of women and men regarding climate change. We should therefore ask: Which women? Which men? We need to compare groups of women and men according to social factors that also affect their footprint, such as income, level of education and location. Considering women as a homogeneous group, opposing it to men as a homogeneous group (simply disaggregating data by sex), prevents us from identifying important factors that influence gender attitudes, roles and behaviour. Studies that analyse gender taking other social factors into account avoid stereotypes and false correlations. In studies on chemical pollutants and their effect on people, the analysis of the potential effects of chemical substances in the environment should also consider the diversity of the population (see "Gendered Innovations", Stanford University, in the section on resources).
- **Biology:** The use of animals for research has been a very frequent practice in Western science and medicine since their earliest days. However, until the 1960s, it was not common to report the sex of the animals used, unless the experiments were related to reproduction. Even today, the sex of the animals in question is omitted in 22-42% of articles in publications on neuroscience, psychology and multidisciplinary biology (Beery et al., 2011). An analysis of studies with animals in which their sex is reported shows that females are underrepresented in most fields, except reproductive biology. This research also shows how we can design better studies with animals to determine how sex (biological characteristics) interacts with gender (sociocultural and environmental factors and processes) (see "Gendered Innovations", Stanford University, in the section on resources).
- **Statistics:** Statistics can be applied in fields such as economics and finance, marketing, life and health sciences, sociology, public administration and the media. In studies concerning people, the relevance of the sex/gender variable is unquestionable. Failure to include the gender perspective in the design of the project or the analysis of data means that the final results may be flawed, often being presented as universal generalisations while the diversity of the population as a whole has not been taken into account (Hesse-Biber et al., 2007).

### *Learning outcomes for the gender dimension competency*

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas:

## General framework for incorporating the gender perspective in higher education teaching

### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist.

### 301 – Biological and Earth Sciences

(Biology; Biochemistry; Biotechnology; Microbiology; Environmental Sciences; Geology)

- Students recognise the implications of gender for those areas of their discipline that affect men and women differently, not only in biological but also in social and cultural aspects.
- In their work they recognise and assess how gender roles and stereotypes have an impact on scientific products, processes and policies.
- They can use empirical data and statistical indicators that include sex and gender variables to analyse a problem.
- They can distinguish the effects of the variables sex and gender in the analysis of problems and projects.
- They can incorporate the category of gender (and other social distinctions such as social class and ethnicity) in environmental analysis and assessment, and in concepts, strategies and programmes related to environmental policies and sustainability.
- They recognise and categorise the importance of gender for geosciences applied to social, political and economic processes and consider its ethical implications.

### 302 – Experimental Sciences and Mathematics

(Chemistry; Oenology; Physics; Mathematics; Statistics)

- Students identify the significance of gender relations in the development of chemistry and in the use of chemical products by women and men.
- They take the diversity of the population into account in analyses of the potential effects of chemical substances on the environment.
- Students recognise the implications of gender for those areas of their discipline that affect men and women differently, not only in biological but also in social and cultural aspects.
- In their work they recognise and assess how gender roles and stereotypes have an impact on scientific products, processes and policies.
- They can use empirical data and statistical indicators that include sex and gender variables to analyse a problem.

## Health Sciences

### *Introduction*

In professional healthcare practice, and in the editorial policy of many scientific journals, changes regarding gender mainstreaming are taking place and these should be reflected in health sciences curricula. A key question that many international universities have posed when reviewing their curricula is the following: What is a gender-competent professional? Briefly, it implies that he/she reads literature related to the degree with a gender perspective, treats men and women competently, based on appropriate scientific evidence, and works to eliminate situations of vulnerability.

Some key considerations for the mainstreaming of the gender perspective in undergraduate degrees and postgraduate studies in health sciences are listed below:

- At the 2015, Sex and Gender Medical Education Summit, attended by 111 universities from all over the world, a road map was drawn up to incorporate knowledge of sex differences in sickness-health processes: describing illnesses by sex, explaining differential diagnostics and sex-gender interactions, and determining their impact on gender inequality in healthcare.
- The journal *Biology of Sex Differences* pointed out that, although sex is a fundamental variable in human physiology, it is rarely taken into account in the design of basic physiology studies. It thus criticises an apparent scientific contradiction in that the experimental significance of sex is frequently ignored in an age of genomics and personalised healthcare.
- The behaviour of women and men, determined by stereotypes assumed during socialisation, has an impact on the body (cells, hormones and organs) and the body, in turn, conditions their behaviour. This sex-gender interaction causes differences in the way states of sickness/health are manifested.
- Epidemiological studies have identified differences between the sexes in the frequency of illnesses. Physiopathological differences are basic for classifying illnesses in three categories: i) more prevalent in one sex; (ii) differences in age of onset, symptomatology (e.g. coronary), response to treatment or prognosis in one sex compared to the other; (iii) exclusive to one sex (associated with reproduction). The importance of the inclusion of sex-gender interaction lies in the fact that sex differences may be producing gender inequality in health through various types of gender bias in healthcare.
- Individuals who suffer from chronic conditions in particular are submerged in a more complex life situation than those who are healthy. Their physical and/or psychological fragility obliges them to reorganise work and family care differently according to their sex. When healthcare focusing on welfare is provided, in addition to medical treatment we need to consider that patients (men and women) are forced to reconstruct their lives, changing the ways in which they fulfil their productive and reproductive roles, identifying their limitations and renegotiating new roles at work and in the family.
- The lack of gender perspective in the curriculum influences diagnoses, treatment and systems of care, creating professionals whose experience, knowledge and way of working are seriously filtered by the gender structure. Incorporating the gender perspective in courses requires a review of content, learning outcomes and teaching and assessment strategies in all subjects (basic, methodology, clinical and medical-surgical treatment, psycho-social care, and public and community health). This calls for what is known in educational innovation as "gender mainstreaming".

### *Common forms of gender bias in Health Sciences*

Through the training they receive in identifying and solving health problems and caring for patients, healthcare professionals can perpetuate gender inequality by not considering evidence for the differences between the way an illness is manifested in men and women or by interpreting the same signs/symptoms differently according to the sex of the patient.

Gender bias is defined in this case as the difference in the medical treatment of women and men, the impact of which can be positive, negative or neutral for their health. Gender biases and gender blindness in research and care in the health sciences stem from a biomedical model based on the following erroneous assumptions: Firstly, the equality of the two sexes in the "natural" course of the illness in all its stages (onset, process and prognosis) and in their response to treatment. Secondly, differences between men and women have been assumed where these do not exist, such as labelling women as suffering more frequently from psychosomatic problems. Some types of gender biases in different Health Sciences subjects are listed below:

### **Medicine and Biomedical Sciences**

- There are many cases of gender bias in different clinical specialities related to a lack of sensitivity in **diagnostic tests** for sick women, and greater diagnostic and therapeutic attention to men than to women. "Gendered Innovations", Stanford University (see the section on resources) presents a case study of gender bias in innovations related to cardiac conditions. The different manifestation of coronary illnesses in women makes their diagnosis difficult because their occurrence in men has tended to be used as a standard, or because samples of men have been used in clinical tests and the results taken as applicable to women. Gender blindness also often leads to diagnostic confusion in cases such as respiratory illness, rheumatic diseases (such as the late diagnosis of spondyloarthritis and confusion with other conditions such as fibromyalgia in women and spinal disc herniation in men) and neurological problems (as has been shown with multiple sclerosis, among other conditions).
- The limited presence of women in **clinical trials** is a recognised case of selection bias in clinical research caused by failure to apply the gender perspective. Women are underrepresented in clinical trials. The argument used by pharmaceutical companies to ignore the gender perspective is that it is biologically plausible to infer that the results obtained in men can be applicable to women. The gender perspective does not question the efficacy of the medication so much as its effectiveness for women, as the benefit-risk ratio for certain types of medication can vary according to sex, considering the hormonal variations of women during the menstrual cycle and the interaction of the medication with certain levels of hormones. In recent years, because of pressure from the Food and Drug Administration (FDA), the National Institute of Health (NIH) and other groups, the representation of women in clinical trials has improved. Nevertheless, the stratification of samples by sex is still infrequent and constitutes an example of measurement bias that raises questions about the validity of the results.
- Gender studies in **zoonoses** show that their transmission in rural areas is associated with the division of labour and associated cleaning tasks by sex. There is also evidence that men and women use beasts of burden differently, resulting in gender inequality regarding the associated risk. In professional practice, gender bias has been identified in the attitudes of animal owners, as men are more likely concerned about the effect of castration or sterilisation on the sexuality or masculinity of the animal. The usefulness of incorporating gender perspective in research with animals is discussed in Gendered Innovations, Stanford.

### Psychology and Therapy

- From the gender perspective, **syndromes** are a challenge for medical taxonomy, as physical or atypical symptoms are more readily attributed to psychological problems in women than in men. For example, the syndrome of fibromyalgia (pain in the muscle fibres) and the consequences of this diagnostic label have been well analysed. It has also been observed that the more extensive prescription (and consumption) of psychotropic medication in women than in men has different clinical implications.
- Gender bias in research leads to gender inequality in the **prescription of psychotropic drugs**. For example, a clinical trial conducted by the Universities of Ottawa, Carleton and Columbia and the New York State Institute of Psychiatry found that maternal depression has more impact on children than paternal depression. It reached this conclusion despite a serious limitation which was recognised in the report: it included a much smaller number of fathers and their children than mothers and their children (11 fathers as against 82 mothers).
- Nevertheless, while there is a lack of information about the differences between men and women in prognoses, the anatomical and physiological differences are recognised. Failing to consider these differences in the field of **rehabilitation and physiotherapy** can lead to gender bias.

### Nursing and Healthcare

- There is debate about gender bias in **nursing diagnoses** because of the use of the North American Nursing Diagnosis Association's labels, which standardise diagnostics, and a view that subordinates and stereotypes women's health issues, with repercussions on treatment plans. In home care, for example, women tend to be expected to take on the role of carers.

### Gender-based violence

- This blight on society is significant for all subjects related to health as, given the scale of the problem, preventive measures, healthcare and social assistance are fundamental. The causes of gender-based violence need to be borne in mind in professional healthcare practice. However, some of the causal relationships established need to be questioned. For example, in studies regarding the childhood experiences of violence in male offenders as a risk factor on an individual level, there are significant limitations arising from the inherent weakness of their design when adults provide retrospective information about their own childhood. As well as not allowing one to infer causes, they may involve bias with regard to recollection and social acceptability. The types of alleged adult offenders include those who in childhood: (1) experienced violence by dominant fathers (patriarchy), (2) witnessed and learnt violence inflicted by the father on the mother (or vice versa) and/or a sister (sexism), and (3) did not experience or witness violence. In the light of these types we find substantial differences in the model relating violence witnessed or experienced in childhood (risk factor) with violent behaviour in adults (result). The conflict tactics scale evaluates violence experienced in childhood and that observed between the parents in the same period. It is the methodological tool most widely used to measure violent experiences in the childhood of men as a risk factor for their becoming offenders as adults. The use of this scale presents a methodological problem, as the measurement of both types of violence together does not allow us to determine whether it is due to violence suffered in childhood (patriarchal violence) or that observed between father and mother (gender-based violence). This information bias can influence preventive strategies.
- Another type of bias detected is related to asking men about their violent behaviour: they may underestimate the frequency and seriousness of violence, if their statements are

## General framework for incorporating the gender perspective in higher education teaching

compared to those of their partners. It should also be borne in mind that the conflictive nature of a current relationship can influence perception of previous situations. Moreover, conclusions drawn from studies involving small samples and a restricted range of violent behaviour limit extrapolation to larger populations. In other studies we find bias in selection: the most violent families with broken marriages are usually excluded because of the abusive behaviour of one of the partners. Finally, in surveys of the prevalence of gender-based violence, the way in which information is obtained is critical. The low rate of participation by abused women in home surveys can produce biased information, as these women tend to refuse to participate when their partner is at home in another room or when the partner is also interviewed. Fear of the consequences of revealing their situation or the possibility of being accompanied by their partner influences their decision not to take part in the survey (Ellsberg and Heise, 2005).

### *Learning outcomes for the gender dimension competency*

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas:

#### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist.

#### Specific learning outcomes

- Students identify gender biases in existing knowledge regarding health-sickness-mortality processes.
- They are familiar with gender concepts related to health sciences and aware of the importance for health of gender identity, roles and sociocultural beliefs in men and women.
- They are familiar with the facts and with the mechanisms causing gender inequality in access to economic and social resources with consequences for men's and women's health (better or worse diet; access to employment and type of employment; access to education and, consequently, to prevention programmes; access to ICT and, as a result, to information on health; access to sport, etc.).
- They understand how gender inequality relates to other types of inequality (age, social class, origin, ethnicity and culture, sexual orientation, ableness) and how they affect people's health.
- Professionally and non-professionally they recognise the impact of the caring role on the health of informal carers.



## General framework for incorporating the gender perspective in higher education teaching

- They can analyse sex differences and gender inequality in aetiology, anatomy, physiology and pathologies, differential diagnoses, therapeutic options, response to pharmaceutical products, prognoses, patient treatment and other types of diagnosis and intervention.
- They can draw up clinical records, conduct physical or psychological examinations, diagnose outpatients and, in the case of other healthcare professions, make diagnoses specifically for men and women.
- They apply their knowledge of the sex/gender system to the analysis of men's and women's behaviour and when assessing or counselling male and female patients, groups and healthy populations.
- They communicate effectively with patients, showing awareness of the professional-patient power difference, including the use of language that minimises the power imbalance, gives validity to the experiences of the person who is suffering and eliminates gender stereotypes.
- They can evaluate information critically (differences between the sexes in morbidity and mortality and gender biases and gender gaps) and adopt practices that incorporate awareness of differences according to sex and gender inequality.
- They can analyse the individual and collective gendered impact of the healthcare system.
- They are familiar with public policies that affect equality in health and the tools of gender mainstreaming so that they can be applied in plans and reports related to health.
- They incorporate tools to assess gender equity in action related to health.
- They can identify cases of gender-based violence and know the protocols to apply when abuse (physical, psychological or sexual) is evident or suspected.

## Engineering and Architecture

### *Introduction*

The inclusion of the gender perspective in the teaching of architecture and engineering is important whenever the content, the results or the applications of a subject may affect human beings directly or indirectly. It is very common for men and women to be affected differently by technological developments, for example, through more or less easy access to the product or service, the types of application they need most, etc.

It is necessary to avoid gender biases in the content of university education in the technological fields. The reason is that engineering and architecture that do not consciously identify gender differences or possible omissions with regard to gender, in biological (analysis of sex) or social and cultural (analysis of gender) aspects, may produce outputs based on gender stereotypes or masculine patterns and interests that tend to be generalised as if they were applicable to the whole population.

The inclusion of gender in the teaching of these fields is intended to ensure that the services and products developed by engineers and the buildings and cities planned and built by architects and urban planners are based on scientific evidence involving the whole population, thereby reinforcing their validity, relevance and quality.

### *Common forms of gender bias in Engineering and Architecture*

Some of the most common types of bias in this area of knowledge are listed below, as described in "Gendered Innovations", Stanford University (see the section on resources):

- **Public transport:** The categories used in surveys on transport and, consequently, the way in which statistics are compiled and analysed often fail to take care work into account adequately (unwaged work by adults, usually women, who look after children or other dependent persons or take care of the home). The mobility associated with care work, including the care of children and the elderly, is not generally considered in the design of transport. The innovative concept of "the mobility of care" offers a new point of view from which care work can be recognised and revalued (Sánchez de Madariaga, 2009). The inclusion of this type of work in surveys helps us to determine the number of journeys men and women make for this purpose.
- **Design of homes, neighbourhoods and cities:** Incorporating a gender analysis in the processes of architectural design and urban planning is fundamental in ensuring that buildings and cities better serve the needs of all residents: men and women of different ages, with different types of family, patterns of occupation, social and economic level and care work responsibilities (Sánchez de Madariaga, 2013). Analysing gender in architectural design and town planning contributes to the construction of homes and neighbourhoods that meet people's day-to-day needs, by including all the activities that people carry out in their daily lives to care for others and look after the home. Including gender experiences in the design and evaluation of homes improves the living conditions of the occupants. Homes and neighbourhoods that are sensitive to gender improve the mobility of pedestrians and the use of space by women and men of different ages with different care responsibilities and physical abilities.

- **Technologies providing support for the elderly:** By the mid-twenty first century the world's population will have aged drastically. The growing need for care and medical attention in the home puts growing pressure on carers, insurance companies and social security systems. New technologies are needed to provide support for the independent life of the elderly. An analysis of the data related to the care of elderly persons, considering sex and gender, reveals new opportunities for modern technologies and automated healthcare systems. Research teams have studied the different needs of women and men as they age. This research, with the cooperation of elderly people, their careers and other interested groups, provides key information for engineers regarding the design and development of support products which are useful for a wide user base. Gender analysis contributes to the following innovations: (i) assessment of the needs of support technologies for women and men; (ii) development of healthcare technologies that take the needs of women and men into account; and (iii) the use of participative design to create a new generation of support and healthcare technologies.
- **Car accidents involving pregnant women:** Conventional seat belts do not adapt satisfactorily to pregnant women and car accidents are the main cause of foetal death related to injury to the mother (Weiss et al., 2001). Even a relatively minor collision at 56 km/hour can cause injuries. With over 13 million pregnant women in the European Union each year, the use of seat belts during pregnancy is an important safety issue (Eurostat, 2011). The male body is often taken as the standard and is used as the main subject of study. The dummies used in crash tests were initially developed imitating a 50th-percentile American male. Other sectors of the population whose height and weight are different were not taken into account in the design stage. Taking both women and men as reference models can increase creativity in science and technology. From the start, devices should be designed for the safety of the whole population. The analysis of sex has led to the development of dummies and computer simulations representing pregnant women.
- **Sanitary infrastructures:** Nearly a thousand million people in the world do not have access to safe drinking water (Hunter et al., 2010). In sub-Saharan Africa, the supply of water is mainly the responsibility of women. In areas where there is not an adequate water infrastructure, women and girls spend 40 thousand million hours a year fetching water (Hutton et al., 2007). As supplying water is a task performed by women, many of them have a detailed knowledge of soils and the water they yield. This knowledge is vital for civil engineering and development projects, for example to determine where wells or dams should be positioned. Thanks to the knowledge of local women, the efficiency of water projects and services administered by the community has been improved (Postma et al., 2003). The participation of women is also closely linked to the sustainability of projects (Gross et al., 2001). Easy access to good quality supplies of water improves school attendance by children, thus helping to break the poverty cycle.
- **Information for plane passengers:** People travelling by air may find that their information needs are not met when they fly to unknown airports. This problem arises from the lack of standardised timetables, discrepancies when they are informed about destinations, the pictograms and tickets used, etc. (Bonsall et al., 2011). The European project "Enhancing interconnectivity through infoconnectivity (IC-IC)" is intended to produce an info-connectivity system (ICS) to optimise air passengers' access to information. The ICS will be introduced as a pilot scheme at four international airports: Amsterdam (Schiphol), Frankfurt, Paris (Charles de Gaulle), and Vienna. The aim of the IC-IC project is to make travel faster and more efficient, especially by facilitating transfers between public transport (road, rail, etc.) and air transport.

## General framework for incorporating the gender perspective in higher education teaching

IC-IC also seeks to improve accessibility for the elderly and for passengers who speak different languages. Through the application of gender innovation methods, the gender analysis carried out as part of this project, which is now at an advanced stage of implementation, revealed the added value for future research of the following, among other points: (i) investigating the needs of people travelling with dependent individuals in the airport infrastructures available; (ii) providing information to help those travelling with dependent individuals and for the dependent travellers themselves.

- **Machine translation:** Machine translation is becoming ever more important. Despite its frequent errors, it is gradually becoming more accurate. Some of the errors of machine translation stem from fundamental technological challenges that call for non-incremental solutions. One such challenge is related to gender. Google Translate, for example, overuses masculine pronouns ("he", "him", "his") massively, even when the text clearly refers to a woman. The result is a text that is unacceptably lacking in fidelity to the original and perpetuates gender biases. The origin of the problem is related to systems that do not determine the sex of the person referred to in the text. The translation is generated through a search for possible matches for a given phrase in large bilingual repositories and then on a choice based on factors such as their frequency in the huge text corpora with which modern systems work. As masculine pronouns are overrepresented, they come to be overused.

Lastly, **gender-based violence** is also a significant topic for courses in this field. The safety of women can be incorporated in the design of cities and their parks, in healthcare facilities and the design of buildings (Andrews, 1995). Safety while travelling and during the journey to the means of transport in question must also take into account the threat of physical or sexual violence that women suffer (Ceccato, 2017). Computational social science provides numerous options for detecting, measuring and preventing gender-based violence and for developing apps that can help to increase women's safety.

### ***Learning outcomes for the gender dimension competency***

The gender dimension skill **extends to all areas** and needs to be oriented toward developing critical thinking and a social commitment to plurality and diversity in today's society, from respect for fundamental rights to the equality of women and men and non-discrimination. As an illustration, we list some learning outcomes common to all areas of knowledge and some specific outcomes for sub-areas:

## General framework for incorporating the gender perspective in higher education teaching

### General learning outcomes

- Students can carry out research with a gender perspective:
  - They can distinguish the effects of the variables sex and gender in theoretical and empirical analyses.
  - They can identify the contributions of gender studies to the subject of their research.
  - They produce, compile and interpret empirical data in a gender-sensitive way.
  - They can create and use qualitative and quantitative indicators, including statistics, to gain a better understanding of gender inequality and the different needs, circumstances, values and aspirations of women and men.
- They can identify the intersection of gender inequality with other dimensions of inequality (age, class, race, sexuality and gender identity/expression, ableness, etc.).
- They can identify and are able to analyse the structural causes and effects of violence against women and other types of gender-based violence.
- They are familiar with and use the contributions of women and gender studies in their discipline.
- They identify and problematize gender roles, stereotypes and biases in their discipline or the exercise of their profession.
- Their use of language is inclusive and non-sexist. Their use of language is inclusive and non-sexist.

### 501 – Architecture, Construction and Civil Engineering

(Architecture; Construction; Construction Engineering; Civil Engineering)

- Students recognise the influence of social and cultural gender constructs on the planning, implementation and perception of buildings, cities, landscapes and spaces.
- They can analyse the construction and renovation of a city from a gender perspective, including women's safety.
- They can incorporate technical and gender considerations in transport planning, with analytical approaches that enable them to understand differences in transport needs and the way it is used.
- They consider the use of time by women and men and the roles assigned to them socially in plans for public transport and urban planning.

### 502 – Industrial Technologies

(Naval Engineering; Aeronautical Engineering; Electronic Engineering and Automation; Mechanical Engineering and Industrial Design; Chemical and Materials Engineering; Industrial Engineering and Organisation)

- Students understand the impact that cultural gender constructs may have had on the development of building materials and products and on the new technologies (development of computers, CAD, new media, laser technology, etc.).
- They recognise the importance of gender for design theory and user interfaces and can include it in their planning.
- They consider the target customer segment (men/women) in the development stage of the product or process, taking their characteristics and needs into account and also paying attention to other categories such as age, race or ableness.
- They are aware of and can respond to the different needs of men and women who live and work on a ship.
- They are familiar with the different effects of exposure to chemical products in different sub-groups of men and women.
- They take gender differences and inequalities into account in the design of safety measures for products and the implications products may have for personal safety.

### 503 – Information and Communication Technologies (ICT)

(Telecommunications; Computer Science)

- Students consider the target customer segment (men/women) in the development stage of the product or process, taking their characteristics and needs into account and also paying attention to other categories such as age, race or ableness.

## General framework for incorporating the gender perspective in higher education teaching

- They are aware of differences between users (men and women) in access to and the use of hardware and software.
- They learn to develop strategies to narrow the gender digital divide.
- They recognise the importance of gender for design theory and user interfaces and can include it in their planning.

### 504 – Agriculture, Forestry and Fishing

(Agriculture and Food Production; Forestry)

- Students understand the role of women in service companies, as service providers and as customers.
- They recognise the links between products and the traditional division of unpaid work, with domestic work still being socially assigned to women.
- They can analyse and take into account the role of women when developing markets for food products and selling them and the ways in which consumption patterns are determined by factors related to gender.
- They consider inequalities in the design of agricultural, forestry and fishery projects including those for development cooperation.

## BIBLIOGRAPHY AND DOCUMENTARY RESOURCES

### References used throughout the document

- Aguilera, Ariadna (2012). L'actualitat de l'anàlisi feminista del dret arran de pronunciaments judicials recents. *Annals de la Càtedra Francisco Suárez* 46: 183–209.
- Alonso, Alba and Emanuela Lombardo (2016) Ending ghettoization? Mainstreaming gender in Spanish political science education. *European Political Science* 15 (3): 292–302.
- Amelang, James S. and Mary Nash (1990). *Historia y Género: las mujeres en la Europa moderna y contemporánea*, Valencia: Alfons el Magnànim.
- Andrew, Caroline (1995). Getting women's issues on the municipal agenda: violence against women. *Urban Affairs Annual Review* 42: 99–118.
- Arbuckle, Julianne and Benne D. Williams (2003) Students' Perceptions of Expressiveness: Age and Gender Effects on Teacher Evaluations. *Sex Roles* 49 (9/10): 507–516.
- AWID (2014) Intersectionality: A Tool for Gender and Economic Justice. *Women's Rights and Economic Change* 9 (digital publication), [DOA: 14/09/2018]. Retrieved from:
  - [https://lgbtq.unc.edu/sites/lgbtq.unc.edu/files/documents/intersectionality\\_en.pdf](https://lgbtq.unc.edu/sites/lgbtq.unc.edu/files/documents/intersectionality_en.pdf)
- Beckwith, Karen (2005). A Common Language of Gender. *Politics and Gender* 1 (1): 128–137.
- Beery, Annaliese K. and Irving Zucker (2011). Sex Bias in Neuroscience and Biomedical Research. *Neuroscience and Biobehavioral Reviews* 35 (3): 565-572.
- Belknap, Joanne (2015). *The Invisible Woman: Gender, Crime, and Justice*. Stamford: Cengage Learning.
- Boaler, Jo (1998). Mathematical Equity – Underachieving Boys or Sacrificial Girls?. *International Journal of Inclusive Education* 2 (2): 119–134.
- Bonsall, Peter, et al. (2011). Deliverable 3.1: An Analysis of Potential Solutions for Improving Interconnectivity of Passenger Networks, WP3, INTERCONNECT, Co-funded by FP7. TRI, Edinburgh Napier University, Edinburgh, March 2011, [DOA: 14/09/2018]. Retrieved from: [http://www.eltis.org/sites/default/files/trainingmaterials/interconnect\\_toolkit.pdf](http://www.eltis.org/sites/default/files/trainingmaterials/interconnect_toolkit.pdf)
- Bosque, Ignacio (2012) Sexisme lingüístic i visibilitat de la dona. *Butlletí d'Informació Lingüística de la Reial Acadèmia Espanyola* (1): 1–18, [DOA: 28/06/2018]. Retrieved from: <http://revistas.rae.es/bilrae/article/viewFile/120/232>
- Buchholz, Kathrin (2006): Genderrelevanz und Genderaspekte von Chemikalien. In: Ebeling, Kirsten Smilla, Sigrid Schmitz (Hrsg.): *Geschlechterforschung und Naturwissenschaften*. VS Verlag für Sozialwissenschaften: Wiesbaden.
- Bug, Amy (2003). Has Feminism Changed Physics?, *Signs: Journal of Women in Culture and Society* 28 (3): 881-899.
- Cassese, Erin C. and Angela L. Bos (2013) A Hidden Curriculum? Examining the Gender Content in Introductory-Level Political Science Textbooks. *Politics & Gender* 9 (2): 214–223.

## General framework for incorporating the gender perspective in higher education teaching

- Ceccato, Vania (2017). Women's transit safety: making connections and defining future directions in research and practice. *Crime Prevention and Community Safety* 19 (3–4): 276–287.
- European Commission (2016) Guidance on Gender Equality in Horizon 2020. European Commission – Directorate-General for Research & Innovation.
- Crenshaw, Kimberlé W. (1991) Mapping the margins: intersectionality, identity politics, and violence against women of color. *Stanford Law Review* 43 (6): 1241–1299.
- Cutter, Susan L., John Tiefenbacher, and William D. Solecki (1992). En-gendered Fears: Femininity and Technological Risk Perception. *Industrial Crisis Quarterly* 6 (1): 5–22.
- Davis, Natalie Z. (1976). Women's History' in Transition: The European Case. *Feminist Studies* 3 (3–4): 83-103.
- Eddy, Sarah L., Sara E. Brownell and Mary Pat Wenderoth (2014). Gender Gaps in Achievement and Participation in Multiple Introductory Biology Classrooms. *CBE-Life Sciences Education* 13: 478–492.
- EIGE (2016). *Gender Equality Glossary and Thesaurus*. Vinius: European Institute for Gender Equality. Online resource [DOA: 14/09/2018]. Retrieved from: <http://eige.europa.eu/rdc/thesaurus/terms/1157>
- Ellsberg, Mary, and Lori Heise (2005). *Researching Violence against Women: A Practical Guide for Researchers and Activists*. Washington DC: World Health Organization, PATH.
- Elson, Diane and Ruth Pearson (1981). The Subordination of Women and the Internationalisation of Factory Production. In Kate Young et al. (eds.), *Of Marriage and the Market: Women's Subordination in an International Perspective*. London: CSE Books, pp. 144–166.
- Eurostat. (2011). Fertility, Figure 1: Number of Live Births, EU-27, Legally Induced Abortions by Year, Country, and Mother, Age, EU-27, [DOA: 14/09/2018]. Retrieved from: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_fabort&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_fabort&lang=en)
- Galdi, Silva, Mara Cadinu and Carlo Tomasetto (2014). The Roots of Stereotype Threat: When Automatic Associations Disrupt Girls' Math Performance. *Child Development* 85 (1): 250–263.
- García Roca, Joaquin (2000). Trabajo social, in Adela Cortina and Jesús Conill, dirs, *Diez palabras clave en ética de las profesiones*. Estella: Verbo Divino.
- González, Julia and Robert Wagenaar (2003) *Tuning Educational Structures in Europe*. Bilbao: Universitat de Deusto, [DOA: 14/09/2018]. Retrieved from: [http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI\\_Final-Report\\_SP.pdf](http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI_Final-Report_SP.pdf)
- Gross, Bruce, Van Wijik, Christine, and Mukherjee, Nilanjana (2001). Linking Sustainability with Demand, Gender, and Poverty: A Study in Community-Managed Water Supply Projects in 15 Countries. Delft: IRC International Water and Sanitation Centre.
- Hakanson, Malin (2005). The Impact of Gender on Citations: An Analysis of College & Research Libraries, *Journal of Academic Librarianship, and Library Quarterly*. College & Research Libraries 66 (4): 312–322.
- Harding, Sandra, ed. (1987) *Feminism and Methodology: Social Science Issues*. Bloomington: Indiana University Press.
- Harrell, Maralee (2016), On the Possibility of Feminist Philosophy of Physics. In: Maria Cristina Amoretti and Nicla Vassallo (eds). *Meta-Philosophical Reflection on Feminist Philosophies of Science*. *Boston Studies in the Philosophy and History of Science*, vol. 317. Springer, Cham (pp. 24-25).



## General framework for incorporating the gender perspective in higher education teaching

- Harvey, Melinda and Julieanne Lamond (2016). Taking the Measure of Gender Disparity in Australian Book Reviewing as a Field, 1985 and 2013. *Australian Humanities Review* 60: 84-107.
- Hayden, Dolores (1980). What Would a Non-Sexist City Be Like? Speculations on Housing, Urban Design, and Human Work. *Signs* 5 (3): S170–S187.
- Hemmati, Minu, Anna Bach (2017): Gender & Chemicals. Questions, Issues and Possible Entry Points. Berlin: MSP Institute.
- Hesse-Biber, Sharlene Nagy and Patricia Lina Leavy, eds (2007). *Feminist Research Practice: A Primer*. Thousand Oaks, CA: Sage.
- Ho, Daniel E. and Mark G. Kelman (2014). Does Class Size Affect the Gender Gap? A Natural Experiment in Law. *The Journal of Legal Studies* 43 (2): 291–321.
- Hunter, Paul R., Alan M. MacDonald and Richard C. Carter (2010). Water Supply and Health. *Public Library of Science (PLoS) Medicine* 7 (11): 1-9.
- Hutton, Guy, Haller, Laurence, y Bartram, Jamie (2007). Global Cost-Benefit Analysis of Water Supply and Sanitation Interventions. *World Health Organization Journal of Water and Health*, 5 (4), 481-502.
- Kortendiek, Beate (2011) Supporting the Bologna process by gender mainstreaming: A model for the integration of gender studies in higher education curricula. In Laura Grünberg (ed.), *From Gender Studies to Gender in Studies. Case Studies on Gender-Inclusive Curriculum in Higher Education*. Bucharest: UNESCO, pp. 211–28.
- LaFrance, Adrienne (2016). I Analyzed a Year of My Reporting for Gender Bias (Again), *The Atlantic*, 17/02/2016, [DOA: 14/09/2018]. Retrieved from: <https://www.theatlantic.com/technology/archive/2016/02/gender-diversity-journalism/463023/>
- Lovenduski, Joni (1998). Gendering Research in Political Science. *Annual Review of Political Science* 1: 333–356.
- Letherby, Gayle (2003). *Feminist Research in Theory and Practice*. Buckingham: Open University.
- Maliniak, Daniel, Ryan Powers and Barbara F. Walter (2013). The gender citation gap in International Relations. *International Organization* 67 (4): 889–922.
- Margolis, Eric (ed.) (2001). *The Hidden Curriculum in Higher Education*. New York: Routledge.
- Minnarch, Elizabeth K. (2010). *Transforming knowledge*. Philadelphia: Temple University Press, 2nd ed.
- Okin, Susan M. (2005). ‘Forty acres and a mule’ for women: Rawls and feminism. *Politics, Philosophy and Economy* 4 (2): 233-248.
- O'Neill, Brenda and Elisabeth Gidengil (eds) (2006). *Gender and Social Capital*. London: Routledge.
- Postma, Leonie, Van Wijk, Christine y Otte, Corinne (2003). Participatory Quantification in the Water and Sanitation Sector. *Participatory Learning and Action (PLA) Notes*, 47, 13-18.
- Scott, Joan W. (1986) Gender: A Useful Category for Historical Analysis. *American Historical Review* 91 (5): 1053–1075.
- Scott, Joan W. (2008). *Género e historia*. Mexico City: Fondo de Cultura Económica.
- Pilowsky, Daniel J., Wickramaratne, Priya J., Poh, Ernest, Hernández, Mariely, Batten, Lisa A., Flament, Martine F., Stewart, Jonathan W., Blier, Pierre, Weissman, Myrna M. *Psychopathology and Functioning and among Children of Treated Depressed Fathers and Mothers*. *J Affect Disord* 2014; 164: 107-111.

## General framework for incorporating the gender perspective in higher education teaching

- Sánchez de Madariaga, Inés (2009). Vivienda, movilidad y urbanismo para la igualdad en la diversidad: ciudades, género y dependencia. *Ciudad y territorio: Estudios territoriales* 161-162: 581-598.
- Sánchez de Madariaga, Inés (2013). The mobility of care. Introducing new concepts in urban transportation, in Sánchez de Madariaga, Inés and Marion Roberts (eds). *Fair share cities. The impact of gender planning in Europe*. Ashgate, Aldershot-New York.
- Spivak, Gayatri C. (1994). "Can the Subaltern Speak?". In Patrick Williams and Laura Chrisman (comps.) *Colonial Discourse and Post-colonial Theory*. New York: Columbia University Press.
- Subirats, Marina (2013). La educación androcéntrica: de la escuela segregada a la coeducación, in Díaz, Capitolina and Dema, Sandra (ed.) *Sociología y Género*, Madrid: Tecnos.
- True, Jacqui (2012). *The Political Economy of Violence against Women*. Oxford: Oxford University Press.
- Verge, Tània (2016) The Virtues of Engendering Quantitative Methods Courses. *PS: Political Science & Politics* 49 (3): 550–553, Symposium "Mainstreaming Gender in the Teaching and Learning of Politics".
- Verge, Tània and Teresa Cabruja (2017) *La perspectiva de gènere en docència i recerca a les universitats de la Xarxa Vives. Situació actual i reptes de futur*. Castelló de la Plana: Xarxa Vives d'Universitats, [DOA: 14/09/2018]. Retrieved from: <http://vives.org/PU3.pdf>
- Walby, Silvia (2009). *Gender and the Financial Crisis*. Lancaster University. Online resource, [DOA 14/09/2018]. Retrieved from: [http://www.lancaster.ac.uk/fass/doc\\_library/sociology/Gender\\_and\\_financial\\_crisis\\_Sylvia\\_Walby.pdf](http://www.lancaster.ac.uk/fass/doc_library/sociology/Gender_and_financial_crisis_Sylvia_Walby.pdf).
- Weiss, Harold, Thomas J. Songer and Anthony Fabio (2001). Fetal deaths related to maternal injury. *JAMA* 286 (15): 1863–1868.
- Wehrwein, Erica A., Heidi L. Lujan and Stephen E. DiCarlo (2007). Gender differences in learning style preferences among undergraduate physiology students. *Advances in Physiology Education* 31 (2): 153–157.
- Westmarland, Nicole (2001) The Quantitative/Qualitative Debate and Feminist Research: A Subjective View of Objectivity. *Forum: Qualitative Social Research* 2 (1): Art. 13 (digital publication), [DOA: 14/09/2018] . Retrieved from: <http://www.qualitative-research.net/index.php/fqs/article/view/974/2124>
- Wizemann, Theresa M. (Ed.) (2012). *Sex-Specific Reporting of Scientific Research: A Workshop Summary*. Washington, D.C.: National Academies Press.
- Zancan, Marina (1998). *Il doppio itinerario della scrittura. La donna nella tradizione letteraria italiana*. Turin: Einaudi.

## Teaching resources

- Atgender Book Series *Teaching with gender*, [DOA: 14/09/2018]. Retrieved from: <http://atgender.eu/category/publications/volumes/>
- BALTIC Center. EU Horizon 2020. Tools and Resources on Gender-Sensitive Teaching Methods in Higher Education, [DOA: 14/09/2018]. Retrieved from: <http://oceanrep.geomar.de/41854/1/Baltic%20Gender%20Online%20Material.pdf>

## General framework for incorporating the gender perspective in higher education teaching

- Cátedra UNESCO UPM de Género - Comisión Europea (2017). *Innovaciones de Género en Ciencia, Salud & Medicina, Ingeniería y Medioambiente*. Edición Española, [DOA: 14/09/2018]. Retrieved from: <http://genderedinnovationsesp.gendersteunescochair.com/#!/up>
- Centre de Documentació Joaquina Alemany i Roca, Institut Català de les Dones [DOA: 14/09/2018]. Retrieved from: [http://dones.gencat.cat/ca/ambits/centre\\_documentacio/](http://dones.gencat.cat/ca/ambits/centre_documentacio/)
- Direcció General d'Igualtat, Generalitat de Catalunya (2018). Guia per a la incorporació de la diversitat sexual i de gènere a les universitats catalanes a partir de la Llei 11/2014, [DOA: 14/09/2018]. Retrieved from: [http://treballiaferssocials.gencat.cat/web/.content/01departament/08publicacions/ambits\\_tematicas/igualtat/Guiaiversitatsexualigenerereuniversitats/Guia-diversitat-sexual-i-generere-universitats\\_DEFINITIVA.pdf](http://treballiaferssocials.gencat.cat/web/.content/01departament/08publicacions/ambits_tematicas/igualtat/Guiaiversitatsexualigenerereuniversitats/Guia-diversitat-sexual-i-generere-universitats_DEFINITIVA.pdf)
- EGERA Project (2017). Collected good practices in introducing gender in curricula, [DOA: 14/09/2018]. Retrieved from: [http://www.egera.eu/fileadmin/user\\_upload/Deliverables/D44\\_Collected\\_Good\\_Practices\\_in\\_Introducing\\_Gender\\_in\\_Curricula\\_78106.pdf](http://www.egera.eu/fileadmin/user_upload/Deliverables/D44_Collected_Good_Practices_in_Introducing_Gender_in_Curricula_78106.pdf)
- Escuela Andaluza de Salud Pública. Consejería de Salud (2010). *Guía para incorporar la perspectiva de género en salud*, [DOA:14/09/2018]. Retrieved from: <http://www.easp.es/project/guia-para-incorporar-la-perspectiva-de-genero-a-la-investigacion-en-salud-2/>
- GENDER-NET. Manuals with guidelines on the Integration of sex and gender analysis into research contents, recommendations for curricula development and indicators, [DOA: 14/09/2018]. Retrieved from: [http://www.idi.mineco.gob.es/stfls/MICINN/Ministerio/FICHEROS/UMYC/GENDER\\_NET\\_D3\\_11\\_Manuals\\_with\\_guidelines.pdf](http://www.idi.mineco.gob.es/stfls/MICINN/Ministerio/FICHEROS/UMYC/GENDER_NET_D3_11_Manuals_with_guidelines.pdf)
- Generalitat de Catalunya [online resource]: XTEC - Xarxa Telemàtica Educativa de Catalunya: Coeducació i Igualtat de gènere: Formació [online], [DOA: 17/09/2018]. Retrieved from: <http://xtec.gencat.cat/ca/curriculum/coeducacio/formacio/>
- López Villar, Cristina (2015). *Recursos para introducir a perspectiva de xénero na docència universitària*. Universidade da Coruña, [DOA: 14/09/2018]. Retrieved from: [https://www.udc.es/export/sites/udc/oficinaigualdade/\\_galeria\\_down/documentos/bibliografia.pdf](https://www.udc.es/export/sites/udc/oficinaigualdade/_galeria_down/documentos/bibliografia.pdf)
- Mihajlovic Trbov, Jovana and Hofman, Ana. (2017). Toolkit for integrating Gender-Sensitive Approach into Research and Teaching. GARCIA PROJECT. EU. 7th Framework Programme, [DOA: 14/09/2018]. Retrieved from: [http://garciaproject.eu/wp-content/uploads/2015/12/GARCIA\\_working\\_paper\\_6.pdf](http://garciaproject.eu/wp-content/uploads/2015/12/GARCIA_working_paper_6.pdf)
- Observatori per a la Igualtat de la UAB. Banc de recursos per a la docència, [DOA: 14/09/2018]. Retrieved from: <http://observatori-diagnostics.uab.es/Recursos/Banc.asp>
- Schiebinger, Londa, Klinge, Ineke, Sánchez de Madariaga, Inés y Schraudner, Martina. Stanford University (2013) *Gendered Innovations in Science, Health & Medicine, and Engineering, How gender analysis contributes to research*, [DOA: 14/09/2018]. Retrieved from: <https://genderedinnovations.stanford.edu/>
- Tomé, Amparo (2017). "Guía de Buenas prácticas. Diagnóstico del centro en materia de igualdad entre hombres y mujeres". Emakunde [online], [DOA: 14/09/2018]. Retrieved from:

## General framework for incorporating the gender perspective in higher education teaching

[http://www.emakunde.euskadi.eus/contenidos/informacion/proyecto\\_nahiko\\_formacion/es\\_def/adjuntos/2008.01.16.amparo.tome.buenas\\_practicas.pdf](http://www.emakunde.euskadi.eus/contenidos/informacion/proyecto_nahiko_formacion/es_def/adjuntos/2008.01.16.amparo.tome.buenas_practicas.pdf)

- UNESCO. (2015) *A Guide for Gender Equality in Teacher Education Policy and Practices*. UNESCO, Paris, [DOA: 14/09/2018]. Retrieved from: <http://unesdoc.unesco.org/images/0023/002316/231646e.pdf>
- Unidad de Igualdad de la Universidad de la Laguna. Materiales para la docencia en perspectiva de género, [DOA: 14/09/2018]. Retrieved from: <http://www.igualdad.ull.es/materiales.html>
- Unitat d'Igualtat, Pompeu Fabra University. Resource bank for teaching - Includes references to handbooks, academic journals and MOOCs specialising in gender studies by discipline [DOA: 14/09/2018]. Retrieved from: <https://www.upf.edu/web/igualtat/recursosdocents>
- Unitat d'Igualtat of the Universitat d'Alacant and Xarxa Universitat, Docència i Gènere of the UA. Portal de Recursos Docents amb Perspectiva de Gènere per a la Docència Universitària, [DOA: 14/09/2018]. Retrieved from: <https://web.ua.es/es/unidad-igualtat/docencia-igualtat/>
- Women's and Gender Research Network NRW (Netzwerk Frauen- und Geschlechterforschung NRW, North Rhine-Westphalia, Germany). *Gender Curricula*. Includes 55 disciplines, [DOA: 14/09/2018]. Retrieved from: [http://www.gender-curricula.com/en/gender-curricula/gender-curricula-detailansicht/?uid=11&casegroup=4&cHash=1455925368&print=1:](http://www.gender-curricula.com/en/gender-curricula/gender-curricula-detailansicht/?uid=11&casegroup=4&cHash=1455925368&print=1)
- Xarxa Vives d'Universitats (2018). *Guies per a una docència universitària amb perspectiva de gènere*. Available online: <https://www.vives.org/>

## Other support materials

- Caprile, María (coord.), (2012). Guia pràctica per a la inclusió de la perspectiva de gènere en els continguts de la investigació. Barcelona: Fundació CIREM. Architecture and town planning section coordinated by Inés Sánchez de Madariaga, [DOA: 14/09/2018]. Retrieved from: <http://www.igualdad.ull.es/archivos/documentacion/Guia-innovaciones.pdf>
- Gender Balance Assessment Tool (GBAT) – App to determine the gender gap in the volume of teaching guides by male and female writers, [DOA: 14/09/2018]. Retrieved from: <https://jsumner.shinyapps.io/syllabustool/>
- Gender Equality in Acadèmia and Research - GEAR tool (EIGE), [DOA: a 14/09/2018]. Retrieved from: <http://eige.europa.eu/gender-mainstreaming/toolkits/gear>
- UN Women Training Centre Gender Equality Glossary, [DOA: 14/09/2018]. Retrieved from: <https://trainingcentre.unwomen.org/mod/glossary/view.php?id=150&mode=letter&hook=P&sortkey=&sortorder=asc>
- Hey, Barbara (2010). *Guidelines on gender fair curriculum development*. WUS Austria, [DOA: 14/09/2018]. Retrieved from: [https://www.wus-austria.org/files/docs/Publications/guidelines\\_gender\\_fair\\_curriculum\\_development.pdf](https://www.wus-austria.org/files/docs/Publications/guidelines_gender_fair_curriculum_development.pdf)
- IGAR Tool (2017). Models of the Integration of the Gender Analysis into University Curricula (IGAUC), [DOA: 14/09/2018]. Retrieved from: <http://igar-tool.gender-net.eu/en/tools/tools-for-igauc/models-on-the-integration-of-the-gender-analysis-into-university-curricula>
- Ministerio de Ciencia e Innovación (2011). *Manual. El género en la investigación*. Madrid: Unidad de Mujeres y Ciencia. Ministerio de Ciencia e Innovación [Translation of the Toolkit: Gender in Research from Yellow Window], [DOA: 14/09/2018]. Retrieved from: [http://www.idi.mineco.gob.es/stfls/MICINN/Investigacion/FICHEROS/El\\_genero\\_en\\_la\\_investigacion.pdf](http://www.idi.mineco.gob.es/stfls/MICINN/Investigacion/FICHEROS/El_genero_en_la_investigacion.pdf)
- Resources produced in 2016 as part of ERA-NET GENDER-NET: 1) IGAR Tool: Recommendations for Integrating Gender Analysis into Research; and 2) Manuals with guidelines on the integration of sex and gender analysis into research contents, recommendations for curricula development and indicators, [DOA: 14/09/2018]. Retrieved from: [http://www.gender-net.eu/IMG/pdf/GENDER-NET\\_D3-11\\_Manuals\\_with\\_guidelines\\_on\\_the\\_integration\\_of\\_sex\\_and\\_gender\\_analysis\\_into\\_research\\_web.pdf](http://www.gender-net.eu/IMG/pdf/GENDER-NET_D3-11_Manuals_with_guidelines_on_the_integration_of_sex_and_gender_analysis_into_research_web.pdf)
- Gender Thesaurus - Spanish Women's Documentation Centres and Libraries Network, [DOA: 14/09/2018]. Retrieved from: [http://www.juntadeandalucia.es/iam/catalogo/doc/web/tesauro\\_genero.pdf](http://www.juntadeandalucia.es/iam/catalogo/doc/web/tesauro_genero.pdf)
- The Horizon 2020 Regulation, Work Programme 2018-2019, Science with and for Society, SwafS-13-2018, Gender Equality Academy and dissemination of gender knowledge across Europe, [DOA: 14/09/2018]. Retrieved from: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/swafs-13-2018.html>
- Toolkit for integrating a gender-sensitive approach into research and teaching, EU-funded structural-change GARCIA project (Gendering the Academy and Research: Combating Career Instability and Asymmetries), [DOA: 14/09/2018]. Retrieved from: [http://garciaproject.eu/wp-content/uploads/2015/12/GARCIA\\_working\\_paper\\_6.pdf](http://garciaproject.eu/wp-content/uploads/2015/12/GARCIA_working_paper_6.pdf)

## General framework for incorporating the gender perspective in higher education teaching

- Toolkit — Gender in EU-funded research, [DOA: 14/09/2018]. Retrieved from: [http://www.yellowwindow.com/genderinresearch/index\\_downloads.html](http://www.yellowwindow.com/genderinresearch/index_downloads.html)

## Glossary

**Androcentrism:** A view placing men and their characteristics at the centre of the universe, taking them as the parameter for studying and analysing the situation and experience of the human race as a whole. It confuses men with humanity. It is a specific form of sexism manifested particularly in the concealment of women and failure to define them (Emakunde).

**Coeducation:** Educational measures that promote real equality of opportunity and value the experience, aptitudes, and the social and cultural contribution of women and men indistinctly without sexist, homophobic, biphobic, transphobic or androcentric stereotypes or discriminatory attitudes on the grounds of sex, sexual orientation, gender identity or gender expression (Law 17/2015).

**Direct discrimination:** A situation in which one person is, has been or could be treated less favourably than another in the same situation on the grounds of sex or because of circumstances directly related to their biological condition. Discriminatory measures on the grounds of sex do not include those which, while proposing different treatment for women and men, have a reasonable, objective justification, such as those based on promoting positive action: in favour of women, on the need for special protection for biological reasons or the promotion of the joint responsibility of women and men in household tasks and care work (Law 17/2015).

**Domestic work and care:** unpaid work related to domestic tasks and the care of the members of the family, which is basic to the labour market as it makes it possible for people to enjoy the best health and education so that they are productive in the labour market or can be so in future. Domestic work and care, which have traditionally been assigned to women, include cleaning and maintaining the home, the domestic economy, looking after children and dependants, dealing with medical and educational matters and, in general, all activities that contribute to the well-being of the family (Law 17/2015).

**Gender-blind and gender-neutral legislation:** Legislation that is drafted in universal terms, ignoring gender-specific situations and power relations between women and men that underpin sex- and gender-based discrimination, including gender-based violence against women. The scrutiny of gender-neutral laws that treat women and men alike is necessary in order to evaluate whether they will hinder or accelerate gender equality and eliminate sex- and gender-based discrimination (EIGE, 2016).

**Gender-blind and gender-neutral policies:** Policies that are not specifically aimed at either women or men and are assumed to affect both sexes equally. However, they may actually preserve existing gender inequalities or even result in having a differential impact on women and men, in particular women and men from disadvantaged groups. Gender-neutral policies do not promote substantive gender equality (EIGE, 2016).

**Gender blindness:** Failure to recognise that the roles and responsibilities of women/girls and men/boys are ascribed to, or imposed upon, them in specific social, cultural, economic and political contexts. Gender-blind projects, programmes, policies and attitudes do not take into account these different roles and diverse needs. They maintain the status quo and will not help transform the unequal structure of gender relations (EIGE, 2016).

**Gender diversity:** Emphasises the need to incorporate common gender values. It is a way of tackling the complexity and ambiguity of different situations. Women are not seen as a disadvantaged group demanding their rights but as individuals who have values to contribute to society in general (*Estimar no fa mal. Dossier pedagògic*. Government of Catalonia).

## General framework for incorporating the gender perspective in higher education teaching

**Gender equality:** Men and women have the same possibilities for personal development and decision-making, without the limitations imposed by traditional gender roles, so that the different behaviour, aspirations and needs of women and men are considered, valued and favoured equally (Law 17/2015).

**Gender equity:** The fair distribution of rights, benefits, obligations, opportunities and resources based on the recognition of and respect for the difference between women and men in society (Law 17/2015).

**Gender mainstreaming:** The (re)organisation, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated into all policies at all levels and all stages, by the actors normally involved in policymaking. Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a way to make women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality (EIGE, 2016).

**Gender perspective:** Considering the differences between women and men in a context or activity when analysing, planning, designing and implementing policies, taking into account the way in which different activities, situations and needs affect women. The gender perspective allows one to view women and men from their biological, psychological, historical, social and cultural perspectives and allows us to find lines of thought and action to eradicate inequality. (Law 17/2015)

**Gender roles:** Social and behavioural norms which, within a specific culture, are widely considered to be socially appropriate for individuals of a specific sex. Collectively, gender roles often determine the traditional responsibilities and tasks assigned to women, men, girls and boys. Gender-specific roles are often conditioned by household structure, access to resources, specific impacts of the global economy, occurrence of conflict or disaster, and other locally relevant factors such as ecological conditions. Like gender itself, gender roles can evolve over time, in particular through the empowerment of women and transformation of masculinities (EIGE, 2016).

**Gender stereotypes:** Simplified images that attribute fixed roles regarding supposedly "correct" or "normal" behaviour in a particular situation according to the individual's sex. Gender stereotypes are at the root of discrimination between men and women and help to justify and perpetuate it (Law 17/2015).

**Hidden curriculum:** Hidden curriculum refers to the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in school. While the "formal" curriculum consists of the courses, lessons, and learning activities students participate in, as well as the knowledge and competencies educators intentionally teach to students, the hidden curriculum consists of the unspoken or implicit academic, social, and cultural messages that are communicated to students while they are in school (The Glossary of Education Reform).

**Indirect discrimination:** A situation of discrimination created by a supposedly neutral legal provision, criterion, interpretation or practice that can prejudice one sex more than the other, unless they are appropriate and necessary and can be justified with objective criteria that have no connection with questions of gender (Law 17/2015).

**Intersectionality:** An analytical tool for studying, understanding and responding to the ways in which sex and gender intersect with other personal characteristics/identities, and how these intersections



## General framework for incorporating the gender perspective in higher education teaching

contribute to unique experiences of discrimination. It starts from the premise that people live multiple, layered identities derived from social relations, history and the operation of structures of power. Intersectional analysis aims to reveal multiple identities, exposing the different types of intersectional and multiple discrimination and disadvantage that occur as a consequence of the combination of identities and the intersection of sex and gender with other grounds (EIGE, 2016).

**Parity:** A situation in which the presence of either sex in a group does not exceed 60% of the total and does not fall below 40%, with a tendency towards 50% of each sex (Law 17/2015).

**Positive measures:** Action aimed at favouring access by members of certain categories of people, in this particular case, women, to rights which they are guaranteed, to the same extent as members of other categories, in this particular case, men (EIGE, 2016).

Specific measures in favour of women that public authorities, individuals and legal entities should adopt to correct situations in which women are clearly not equal to men. These measures, which will be applicable as long as such situations persist must be reasonable and proportional with regard to the objective pursued in each case (Organic Law 3/2007).

**Sexist violence:** Violence perpetrated against women as a result of discrimination and the unequal position they occupy in the system of power relations between men and women. The methods used may be physical, economic or psychological, and include threats, intimidation and coercion, resulting in physical, sexual or psychological harm or suffering and may occur in a public or private situation (Law 5/2008).

**Make visible:** To make women and their contributions to culture and science visible in education (Centre Dolors Piera d'Igualtat d'Oportunitats i Promoció de les Dones, University of Lleida).

### Sources of the glossary:

- EIGE (2016). *Gender Equality Glossary and Thesaurus*. Vinius: European Institute for Gender Equality. Online resource, [DOA: 14/09/2018]. Retrieved from: <http://eige.europa.eu/rdc/thesaurus>
- Glosario, Emakunde. Eusko Jaurlaritza. Online resource, [DOA: 14/09/2018]. Retrieved from: [http://www.emakunde.euskadi.eus/contenidos/informacion/politicas\\_evaluaciones\\_2/es\\_def/adjuntos/GLOSARIO%20DEFINITIVO%20web.htm](http://www.emakunde.euskadi.eus/contenidos/informacion/politicas_evaluaciones_2/es_def/adjuntos/GLOSARIO%20DEFINITIVO%20web.htm)
- Generalitat de Catalunya. *Estimar no fa mal. Dossier pedagògic*, [DOA: 14/09/2018]. Retrieved from: [http://dones.gencat.cat/web/.content/03\\_ambits/docs/vm\\_dossier\\_pedagogic.pdf](http://dones.gencat.cat/web/.content/03_ambits/docs/vm_dossier_pedagogic.pdf)
- Centre Dolors Piera d'Igualtat d'Oportunitats i Promoció de les Dones, Universitat de Lleida. Glossari de Termes, [DOA: 14/09/2018]. Retrieved from: <http://www.cdp.udl.cat/home/index.php/ca/assessorament/glossari-d-igualtat>
- Spain. Organic Law 3/2007, of 22 March, for Effective Equality between Women and Men, [DOA: 14/09/2018]. Retrieved from: <https://www.boe.es/buscar/act.php?id=BOE-a-2007-6115>
- Catalonia. Law 5/2008, of 24 April, on the right of women to eradicate sexist violence, [DOA: 14/09/2018]. Retrieved from: <https://www.parlament.cat/document/nom/TL75.pdf>

## General framework for incorporating the gender perspective in higher education teaching

- Catalonia. Law 17/2015, of 21 July, on effective equality between women and men, [DOA: 14/09/2018]. Retrieved from: [http://portaljuridic.gencat.cat/ca/pjur\\_ocults/pjur\\_resultats\\_fitxa/?action=fitxa&mode=single&documentId=698967&language=ca\\_ES](http://portaljuridic.gencat.cat/ca/pjur_ocults/pjur_resultats_fitxa/?action=fitxa&mode=single&documentId=698967&language=ca_ES)
- The Glossary of Education Reform, [DOA: 14/09/2018]. Retrieved from: <https://www.edglossary.org/>

## WORKING GROUP

Document produced by the working group consisting of:

- Glòria González Anadón (Universitat Autònoma de Barcelona), coordinator
- Tània Verge Mestre (Universitat Pompeu Fabra), coordinator
- Eulalia Pérez Sedeño (Consejo Superior de Investigaciones Científicas, CSIC)
- M. Teresa Ruiz Cantero (Universitat d'Alacant)
- Inés Sánchez de Madariaga (Universidad Politécnica de Madrid)
- Encarna Bas Peña (Universidad de Murcia)
- M. Àngels Gensana Riera (Institut Català de les Dones)
- Eva Benito Moré (AQU Catalunya)





Agència  
per a la Qualitat  
del Sistema Universitari  
de **Catalunya**



[www.aqu.cat](http://www.aqu.cat)



@aquacatalunya