

## Chapter 40

# Gender Divides in Higher Education: Awareness of Key Competencies in the Building Industry

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### ABSTRACT

*Cultures differ in nature and intensity of differentiation between the sexes, gender, gender roles, gender-role ideologies and gender stereotypes, but gender differentiation exists universally. This chapter explores the awareness students of building-related degrees from different cultural backgrounds have gained about their capabilities as future professionals. More particularly, the chapter will analyze the acquisition and development of competencies that go beyond the technical skills demanded by most companies in the building industries (i.e. project management, safety control or computer-aided design). These additional skills seem to resonate with male-oriented meanings, especially for on-site jobs, although it appears that traditional gender associations have been dislodged in many contexts. To that end, a survey including competency choices was completed by a population of 100 students from different countries. Results from the study seem to point out that gender gaps have been bridged in many cases. When differences are observed, they do not account for the bulk of data, and are distributed randomly. This finding runs contrary to prior expectations about stereotyping in career choice and awareness of self-capacities.*

### INTRODUCTION

This chapter is premised on the assumption that gender divides still exist in higher education career choices, and what is more important, in career paths. On equal opportunities in most western societies, women and men tend to harbor different expectations as far as life-learning and life projection are concerned.

Society at large, and the construction industry for that matter, demands professionals endowed with a set of skills and competencies that go beyond the curricular subjects and training acquired during their college degrees. Now far from traditional stereotypes in career choice in Spanish Universities, females

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are more likely to opt for technical studies, in particular, for building engineering studies in a more egalitarian way than years ago. Classrooms are roughly formed by both male and female students, and results show a balanced distribution of scores regardless of gender. Accordingly, it seems that curricular maths, physics, materials or structures are no longer an only-male domain<sup>1</sup>.

However, this author aims to point out that there is a demand for skills students can hardly acquire at college. These skills can be defined as high level skills, and comprise, among others, management, problem solving, planning, adaptability, collaboration or awareness of other roles and intercultural awareness (UKCLES Report, 2013).

Given similar higher education conditions and learning scenarios, the author of this chapter will explore the existence of an educational gender gap in as much as male and female students are supposed to learn, use and develop the same high level skills. Yet, different expectations and results both in terms of curricular choice, productivity and achievement and in higher order skills are still to be found.

For the sake of methodological purposes, and starting from different sample populations, this study was finally limited to 4 main groups, namely:

1. Foreign—male,
2. Foreign—female,
3. Spanish—male,
4. Spanish—female.

Students from other nationalities were from Poland, Germany, China, Italy, France and Portugal. Broadly speaking, all 4 groups pursue a degree in Building Engineering Colleges in the Universidad Politécnica de Madrid, or in universities other than the Spanish higher education context. The total population in the study was of 100 students, 50 females (25 Spanish/25 foreign) and 50 males (15 Spanish/35 foreign).

A central concern of this chapter is to observe and discuss the potential differences between:

- Males and females,
- In Spain and across cultures,
- In the ways they perceive their capacities, and
- Skills as current students and future professionals in the building engineering industry.

Gender is a multifaceted phenomenon with major implications that have a psychological, socio-personal and professional impact on individuals. The way we feel, the perception we have about ourselves, about our worth and capabilities are crucial to viewing gender as a central variable in human development. This chapter will delve into some of these issues with special emphasis on educational aspects, stereotyping and the social constructionist theory<sup>2</sup>. The building engineering industry, over most technical career choices, has particularly been a male dominated environment. It thus seemed the right context to carry out the study.

## **BACKGROUND**

Since the 1980s gender studies have become the breeding ground where different research positions can interact and develop. Touching on areas such as sociolinguistics, psycholinguistics, social-anthropology

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