Chapter 7
The Impact of Gender in ICT Usage, Education and Career:
Comparisons between Greece and Germany

Bernhard Ertl
Universität der Bundeswehr München, Germany

Kathrin Helling
Leopold-Franzens-Universität Innsbruck, Germany

Kathy Kikis-Papadakis
Institute for Applied Computational Mathematics, Greece

ABSTRACT

Gender is an important issue in the context of information and communication technologies (ICT). Studies show that ICT use is subject to gender bias, e.g. in relation to ICT use and interests. This contribution describes the current situation of gender and ICT professions in Germany and Greece. Based on an empirical study, it shows particular areas in ICT education that suffer from gender inequalities in both countries. Furthermore, the chapter elaborates how gender inequalities develop from secondary to professional ICT careers based on statistics from Germany and Greece.

INTRODUCTION

Germany and Greece have different economic structures. In Germany, 72 percent of the work force relate to services, 27 percent to industry and less than one percent to agriculture. Thus, Germany has a industrial history with huge exports of industrial goods, mainly machines, vehicles and chemicals (CIA, 2010a). In contrast, Greece has a stronger agricultural tradition: 65 percent of the work force relate to services, 22 percent to industry, and 12 to agriculture. This results in comparably few exports of mainly food and beverages, and manufactured goods (CIA, 2010b). Comparing both countries, Greece's exports value about 1.5 percent of the German exports.

As a consequence of recession-driven economic development, the information and communication technology sector has weakened in recent years in OECD countries. Still, an ICT growth of about 4 percent was observed in 2008. Although there was a decrease in 2009 due to the current financial crisis, a general upturn is expected in the long-term because of constant development of the ICT services, software, products for Internet use and communication, and infrastructure. The ICT skills of the work force contribute to the growth: the overall share of employees in ICT specialist occupations is 4 percent and increasing rapidly, and 20 percent of employment relates to occupations that use ICT extensively (OECD, 2008). The report shows that Germany is ahead of Greece with regard to the development of the ICT sector, e.g. Germany has a tertiary share of top performing ICT companies, it is spending a greater amount in ICT market segments, it has a tertiary share of ICT services in total business services, and a tertiary share of ICT employees in the business sector, and so forth.

Apart from these differences in the economic structure and ICT business sector development, the educational systems of both countries can be compared. Even though there are many differences, for example with regard to the education policy developments in both countries, or the educational attainment of the population, both countries have a similar humanistic secondary tradition with an average schooling expectancy of 16 years in Germany and 17 years in Greece. In addition, the public educational expenditures are on a similar level, 4.4 percent of the GDP in Greece and 4.6 percent in Germany (CIA, 2010a; 2010b). In this context, it is interesting to note how far gender differences reach in ICT usage, in ICT education at secondary level, in tertiary education, and in ICT-related careers in both countries. Currently, females profit less than men from the growth and employment prospects of the ICT sector, and approaches to facilitate girls at secondary level to take up ICT-related careers should be considered.

Germany and Greece have recently made progress with respect to reducing gender inequalities in using information and communication technologies. An increasing number of citizens are using ICT, and in the context of Internet usage recent studies were able to show an increase in all age groups for both countries (see Initiative D21, 2008; Observatory for the Greek IS, 2008). However, the studies also reveal that the number of male Internet users steadily exceeds the number of female users, and the gap increases with the user age.

At secondary level, self-efficacy and competencies for computer use follow the traditional western stereotype (to exemplify, see OECD, 2005): boys show more confidence than girls in performing computer tasks.

Educational trajectories from secondary to university and the uptake of careers in ICT-related professions increase gender imbalance (European Commission, 2006): Particularly in the context of ICT, the higher the level of professional development, the lower the percentage of women involved. Even if women are employed in ICT professions, they earn less for their work than their male colleagues.

In this chapter, gender differences in ICT usage behaviour, in interests and self-confidence levels at secondary, in university enrolments and professional career choice are compared between Germany and Greece and reflected in the context of existing literature and studies. Specifically, Internet usage statistics in German and Greek households are described from a gender perspective. Further, gender differences exist in the educational system especially in ICT-related subjects at secondary and university. The ICT interests and self-confidence of pupils at secondary is analysed, and tertiary education statistics of computer science and other related subjects are described. Career pathways in Germany and

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