

Gender Equality Policies and Initiatives for STEM Skills in Greece

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Abstract

This paper describes policies and initiatives to foster gender equality in Science, Technology, Engineering, and Mathematics (STEM)-related education and employment in Greece. Various Greek government authorities are responsible to issue and implement policies for promoting gender equality and non-discrimination. Many initiatives aim at empowering women with digital skills. National and European Union (EU) statistics show that there exists a wide gender gap in STEM-related higher education participation, employment, and salaries in Greece. Although there exists a gender gap in STEM education participation and graduation, the gender gap in digital skills is narrow. Furthermore, the gender gap in STEM unemployment, employment, high rank job positions, and salaries is wide. Finally, the paper recommends both specific actions to be taken in order to increase women participation in STEM and specific indicators to monitor them.

Keywords: digital skills, gender differences, gender equity, gender gap, gender inequality, non-discrimination, policies, STEM skills.

1. Introduction

Gender inequalities is a global problem in many society sectors in most countries. In Greece, a variety of authorities elaborate, formulate, and implement policies and initiatives for promoting gender equality and non-discrimination. According to the Greek legal framework, people who fall victim to a Discrimination include people having some kind of disability, homosexuals, immigrants, Roma, women, and the elderly (Balourdos et al., 2014). Laws 1483/1984 and 3996/2011 protect pregnancy and maternity. An important complement in the field of discrimination is Law 4097/2012 regarding equal treatment for both men and women in their professional activities. A recent updated Law 4604/2019 aims at promoting gender equality, preventing and combating gender-based violence. According to article 14 of Law 4443/2016, the promotion of equal treatment is assigned to the “Greek Ombudsman” (<https://www.synigoros.gr/>) for cases of violation of the law against discrimination in the private and public Sector. It investigates problems that were caused by legislation or administrative actions or omissions, and intervenes in order to protect the people’s rights. Also, it monitors and promotes the application of equal treatment in both the public and private sectors. Other authorities include the “General Secretariat for Transparency and Human Rights” of the “Ministry of Justice”, and the “Directorate of Social Protection and Social Cohesion” of the “Ministry of Labor, Social Security and Social Solidarity”. Sanctions for violations of labor legislation are imposed by the “Labor Inspection Body” (SEPE, <https://www.sepenet.gr/>). In addition, the “Economic and Social Council of Greece” (<http://www.oke.gr/>) promotes the social dialogue and makes proposals to the Government and the social partners regarding non-discrimination. It proposes to the government policies and laws on equal treatment. The

“Greek National Commission for Human Rights” (GNCHR, <http://www.nchr.gr/>) is an independent advisory body to the Greek State regarding the protection of human rights protection, and nondiscrimination. Human rights organizations are represented in it. Its mission includes: i) monitoring and promoting advancements regarding human rights protection, ii) Co-operation with international organizations, such as the United Nations Organization, the Council of Europe, etc., and iii) Policy advice on human rights issues.

The “General Secretariat for Family Policy and Gender Equality” (<https://www.isotita.gr/>) is the governmental agency responsible to plan, apply, and monitor the implementation of policies on gender equality. The “Research Centre for Gender Equality” (KETHI, https://www.isotita.gr) is a Legal Entity under Private Law of the Ministry of Labor and Social Affairs (General Government Body), supervised by the “General Secretariat for Family Policy and Gender Equality” and is governed by a five-member Administrative Board. KETHI implements national policies and institutional interventions aiming at the promotion of gender equality in all sectors: social, political, cultural and economic life, and the elimination of gender discriminations, stereotypes, and inequalities.

Furthermore, the “Labor Institute” (INE, 2019) of the “General Confederation of Workers of Greece” (GSEE, <https://gsee.gr/>) is also engaged in gender issues in the workplace and maternal and family protection issues, with the aim of improving working conditions and the quality of life of working women. According to the “Labor Institute” (INE, 2019), the Greek law protects working women with respect to discrimination before, during and after employment. Furthermore, the law protects maternity, motherhood, child care and nurture, treatment of sick and/or special needs child, as well as other cases. The protection is manifested both during the employment and during the operation of the employment relationship, and is supplemented by the protection against dismissal. It should be emphasized that, together with the continuation of the efforts for the full institutionalization of the working mother, there remains the guarantee of equality in practice and equal opportunities.

A specific field where there are still gender inequalities all over the world is the Science, Technology, Engineering and Mathematics (STEM) profession (García-Holgado et al., 2020; Wang & Degol, 2017). According to UNESCO (2018c), the percentage of women STEM researchers among all STEM researchers are 28.8% (Worldwide), 45.4% (Latin America and the Caribbean), 32.3% (North America and Western Europe), 39.5% (Central and Eastern Europe), 39.8% (Arab States), 48.1% (Central Asia), 23.4% (East Asia and the Pacific), 18.5% (South and West Asia), and 31.3% (Sub-Saharan Africa). It seems that working environments in engineering are not open to women (Riley et al., 2014). Specifically for Greece, women represent 38% of the total STEM researchers.

2. STEM Women Organizations in Greece

During the last years, the number of Greek women in the engineering profession has increased (“Technical Chamber of Greece”, https://web.tee.gr). However, there is a trend for female engineers to earn lower salaries than men, and be employed in the public sector. In Greece there are several STEM women's organizations that promote the STEM in women's education, mentoring, participation in jobs and society.

The “Hellenic University Women's Association” (E.L.E.G.Y.P., http://www.elegyp.gr) is a non-profit, scientific association whose main goal is to enhance the position and prestige of women in the Greek universities, and to promote their scientific and social contributions. Specifically, E.L.E.G.Y.P., which is an independent legal entity independent of political expediency, seeks to develop support mechanisms for university women in their workplace, to ensure their equal participation in all bodies, committees, programs and activities of Universities which includes the promotion of dialogue, teaching and research on issues of gender, society and science.

By participating in EU programs for STEM women, the “Association of Graduate Greek Engineers” (EDEM, <http://www.edem-net.gr/>) acquired experience and material for counseling / mentoring for women of science and technological studies. The counseling process focuses on factors that will help them plan their careers and achieve their goals, such as communication, networking, leadership skills, etc.

The vision of the “Greek Chapter of the ACM-W” (ACM's Council on Women in Computing, <http://acmw-gr.acm.org/index.php/en/>) is to foster gender equity, as well as enhance gender balance in ICT-related scientific fields and professional sectors in Greece. Other STEM women organizations in Greece include the following: “Women TechMakers” (WTM) Greece (<https://womentechmakers.gr/>); EMPOWA (<http://www.ekt.gr/en/projects/21589>); “iforU Greek mentoring network” (<http://iforu.gr/>); FPower (<https://www.linkedin.com/company/fpower/>); “Women Act” (<https://women-act.org/>); “Women On Top” (<https://womenontop.gr/>); “LeanIn Greece” (<https://leanin.org/circles/leanin-greece>).

3. National and European statistics for STEM women in Greece

3.1 Education

Regarding Greek education, high school girls achieved similar mean score in mathematics (451) to that of boys (452) in PISA (OECD, 2018b; OECD, 2020a), while girls achieved higher mean score in science (457) than that of boys (446) (OECD, 2020b).

The graduation rates at universities are almost the same for men and women for up to about 75 months of studies, after which time the graduation rate of women is than that of men (Caroni, 2011). About 8.0% of female students fail to graduate compared to 14.6% of male students (Caroni, 2011). In 2016, the first-time tertiary graduation rates for Greek students younger than 30 was 50% for women (versus 30% for men) (OECD, 2018a).

3.2 Digital Skills

Although Greece ranks last in the EU on the Gender Equality Index with 52.2 out of 100 points (the EU average is 67.9 out of 100 points) (EIGE, 2020), the situation in STEM related issues is not worse than the average EU. Regarding Internet skills, 68% of women are regular Internet users (versus 71% of men); 33% of women use online banking (versus 42% of men); 7% of women use professional social networks (versus 9% of men); 33% of women use e-government services (versus 40% of men) (Women in Digital Scoreboard, 2019). Furthermore, 44% of women have at least basic digital skills (versus 49% of men), 20% have above digital skills (versus 23% of men), and 50% have at least basic software skills (versus 55% of men). According to the recent Gender Equity Index 2020 (EIGE, 2020), among Greek people aged 25-29 year, women have above basic digital skills at 46% (versus men at 37%). Among Greek scientists and engineers (aged 25-64 years) in high-technology sectors, there are 21% women (versus 79% men) (similar to the average EU gender gap). The gender pay gap in ICT in Greece is 12% (similar to the average EU which is 11%) (EIGE, 2020).

In Greece, during the EU Code Week, there were 368 coding activities. 44% of the 37.200 participants were girls or women (DESI – Greece, 2019). Correspondingly, the Ministry of Administrative Reconstruction (MAR), as coordinator of the Greek Coalition for Digital Skills, designed a national activity to promote computer programming (coding). More than half of the participants were girls and women.

3.3 Unemployment

However, women face unemployment more severely than men. In 2017, the women unemployment rate was 25.3% (versus 16.8% for men). Similarly, according to a survey by Hellenic Statistical Authority (ELSTAT, 2016), the unemployment rate for women was 27.6% (versus 19.4% for men). Tertiary educated women in Greece hold the highest unemployment rates (18.6 %) among corresponding women in EU (She figures, 2018).

3.4 Employment

Also, there is a gender gap with regards to employment and payment. According to Eurostat (2020), 39% of scientists and engineers are women. In 2019, among all 105,600 women scientists and engineers, 5% work in high technology sectors, 4% in manufacturing, 1.3% in high and medium high-technology manufacturing, 92% in services, 83.2% in total knowledge-intensive services and 4% in other NACE activities. Also, among all 537,500 women employed in science and technology, 3.4% work in high technology sectors, 3% in manufacturing, 1% in high and medium high-technology manufacturing, 95.2% in services, 87.9% in total knowledge-intensive services and 1.7% in other NACE activities.

In 2020, females classified as HRST (i.e., having successfully completed an education at the third level or being employed in science and technology) were 44.9% of the total active Greek population 25-64 years old, compared to the 51.7% in EU27 (<https://ec.europa.eu/eurostat/>).

Although there are not gender differences in computer use (ELSTAT ICT Survey, 2014), women occupy job positions with less creativity and development potential. Also, women occupy only 30% of jobs in new technology sectors. According to Women in Digital Scoreboard (2019), 1.37% of individuals in 20-29 years age are women STEM graduates (versus 2.04% men); and 0.4% of total employees are women ICT specialists (versus 2.5% men). In 2019, there were 17,900 Greek women and 47,400 Greek men employees with ICT education (Eurostat, 2019). Women counted 27.4% of all Greek employees with ICT education compared to an EU average of 17.3% (Eurostat, 2019). Finally, women account for only 10.9 % of employed people in the ICT sector (DESI - Greece, 2019).

3.5 Researchers

In 2011, 37% of researchers were females distributed to the following sciences: 30.7% (Natural sc.), 29.5% (Eng. & Tech), 43% (Medical sc.), 33.1% (Agricultural sc.), 46% (Social sciences & Humanities) (UNESCO, 2015). Also, 30.8% of researchers in the business sector were females.

In 2013, there were 0.23% women (versus 0.36% men) doctorate holders in the working age population aged 25-64 years old (OECD, 2013).

In 2014, women working part-time in education and in research & development activities earned 23.1% less than their male colleagues, while the gender pay gap across the Greek economy was in the order of 12.5% (She figures, 2018).

In 2015, women researchers made up 38.0% of the total number of researchers which is higher than the EU average (She figures, 2018; UNESCO, 2018c). However, the proportion of researchers among male R&D personnel in all sectors of the economy combined exceeded that of women by 13.7% (She figures, 2018).

In 2017, 42.3% of women were working in knowledge intensive activities (versus 29.8% of men) (She figures, 2018). In 2017, 13% of women were working in knowledge related activities in business (versus 11.5% of men).

Furthermore, women account for 43% of researchers in the public sector (higher than the European average of 42.5%) and 27.6% of researchers in the business sectors (higher than the European average of 20.2%) (She figures, 2018). Women researchers were more likely to work in the field of engineering and technology (23.7 %), in the field of natural sciences (47 %), and in social sciences (44%) (She figures, 2018).

In the higher education sector, women account for 37.7% of researchers (lower than the European average of 42.1%) (She figures, 2018). Also, 14.9% of women held level A academic positions, (higher than the European average of 7.4%) (She figures, 2018).

Regarding research and innovation outputs and results, in 2017, normalized relative impact index for scientific publications by Greek women was 0.98 (where 1 corresponds to equal number of men and women authors) higher than the European average of 0.90 (She figures, 2018).

3.6 Professors

Historically, in 1963, there were only 11 (3%) female University professors at the University of Athens faculty. This number increased to 32 (5% in 1973), 60 (7% in 1980), 285(29.5% in 1983), 589 (27% in 1993), 706 (34.5% in 2003) (Vosniadou & Vaiaou, 2008) and 749 (36.5% in 2010) (THE.FYL.IS., 2010). In 2003, in all Higher Education Institutes, there was none female rector and only 5 female vice-rectors (12.5%), 3 school deans (9.5%), 24 department chairs (13%), 2 engineering department chairs (5.5%), 27 department vice-chairs (16%) and 3 engineering department vice-chairs (10%) ((THE.FYL.IS., 2003). According to She figures (2018), 11.1% of heads of higher education institutes were women.

The share of women among all academic staff, irrespective of grade (35.1%) was among the lowest in EU (She figures, 2018). The proportion (%) of women researchers among grade A staff, in 2016, were: 16% (Natural Science), 12,3% Engineering & Technology), 27,0% (Medical Sciences), 16,4% (Agricultural Sciences), 26,1% (Social Sciences), 36,1% (Humanities).

3.7 Members in High Level Committees

In 2005, although women faculty members in Universities made up 27% of the total number of faculty members, there were only 3 women members (out of a total of 62 members) in the National Research and Technology Council (ESET) where decisions are made on national research policy. In 2014, there was only one female member (out of a total 11 members) in the National Council for Research and Technology (ESET) that is the highest governing body of the State responsible for shaping and implementing the National Policy Research, Technology and Innovation. In 2019, there were 4 women members (out of a total 11 members) in the National Council for Research, Technology and Innovation (ESETEK).

Among 1476 persons of elected Members of Parliament during the period 1989 - 2019, 84% are men and 16% are women (Social Data Kaleidoscope, <https://socioscope.gr/index.html#>). The parliamentary composition with the lowest number of women is in the period 1989a with only 4% women. The highest percentage is recorded in the period 2015 with the percentage of women amounting to 23.2%.

In 2005, there were no women on the National Education Council (ESYP), and only one female member. In 2017, there were only 4 women members (out of 22 members) in the National Council for Education and Human Resources Development (E.S.E.K.A.A.D.) whose purpose is to advise on the educational policy, as well as employment without discriminations. In 2005, there was only one female member of the 10-member "Wise Men" committee proposes changes in the Greek education system. In 2020, there was one female member (out of a total three members) of the university teachers committee appointed by the Institute of Educational Policy to reform STEM education. Summarizing, there are not significant gender differences in STEM during secondary education.

4. STEM Women face Difficulties and Challenges

Women face many difficulties during their whole life in following a STEM education and employment. Women should overcome stereotypes about STEM careers during their education, job seeking, and employment periods. Previous studies report various barriers that women encounter in STEM higher education such as stereotypes, biases, non-inclusive environments, isolation, absence of mentoring and supportive policies causing stress and exhaustion (Blackburn, 2017). Furthermore, they face extra difficulties with regards to economics, maternity, motherhood, employment, and evolution in job positions. Furthermore, due to financial cuts, there are not many Initiatives to promote the women participation in STEM professions. Thus, the following challenges can be identified:

- Socio-cultural (Gender stereotypes, male dominant jobs, recruitment biases);
- STEM Misconceptions (scientist “nerve”, unaware of women fit to STEM job /career);
- Personal Circumstances (female role in family, pregnancy, maternity, work-life balance);
- Early-stage career (unaware of STEM career opportunities);
- Career development (lack of career management skills, leadership).

The next section describes Policies and Initiatives aiming to support Greek women to follow a STEM education and career, to enter in STEM jobs, and evolve into high rank job positions.

5. Public policies and initiatives to support Greek women in STEM professions

The *General Secretariat for Gender Equality (GSGE, <https://www.isotita.gr>)*, a Greek public authority, designs, implements, and monitors gender equity policies and actions. In 2017, it published the "*National plan for gender equity 2016 - 2020*" (NPGE, 2017) aiming at gender equality that includes the inclusion of gender in all policies and the implementation of actions and interventions to prevent, eliminate, and respond to any gender inequalities. Its strategic objectives include the following: 1) Protection of women's human rights, with emphasis on vulnerable population groups, migrant women, and refugee women; 2) Preventing and combating violence against women in the family, work and society; 3) Supporting women's employment and compromise professional and family life; 4) Promoting equality in education, culture, media, news, and sports; 5) The removal of gender inequalities in health; 6) Balanced participation of women in decision-making bodies. Regarding ICT, it aims at ‘Motivating women to use ICT’. Greece needs to raise awareness, motivate and train the women in ICT skills in order to participate and prosper in the digital society and economy.

The “*National Action plan for Digital Skills and Jobs in Greece*” (GNAP, 2018) is another Initiative that aims (among others) to improve the dialogue and interconnection between women and Greek companies by promoting to women the attractiveness of ICT careers and strengthening the trust of companies in women as ICT employees. Among its objectives is to increase the digital skills of girls and women in order to integrate the female talent into the workforce. It defined the following two priorities to promote gender equality: i) Priority 11: Empower Women & Girls to Go Digital (WGGD) in Greece; ii) Priority 12: Better Employment Conditions for Female Talent with Digital Skills. In addition, it defined the following three Strategic Objectives (SO): i) SO 16: Re-starting for the WGGD Pledge; ii) SO 17: Up skilling Female labor force with Targeted Training activities; iii) SO 18: Innovation Hub for Women in Technology (GNAP, 2018).

More specifically, with regards to “SO 17: Up skilling Female labor force with Targeted Training activities”, “Action 30: Targeted Training activities a Digital Up skilling of Greek Female labor force” plans the following activities: 1) ICT training; 2) Exploiting the Internet to find information and work; 3) Updating existing public digital services and exploiting e-learning; 4) Exploiting ICT software and applications in the culture sector; 5) Creation of workshops to produce ideas and proposals for the creation of innovative tools tailored to the needs of vulnerable populations; 6) Training in e-entrepreneurship and social networking tools; 7) Provision of certifications which would be very useful in finding a job (GNAP, 2018).

With regards to “SO 18: Innovation Hub for Women in Technology “, “Action 31: Development of an Innovation Hub for Women in Technology” aims at: i) Monitoring the use of ICTs by women and men in the framework of the "Gender Monitoring Observatory" and the preparation of a relevant newsletter on a yearly basis; ii) Specialized actions for the development of digital skills for special population groups. Also, “Action 32: e-Leadership promotion for women in public sector” aims at: i) promoting e-Leadership for women in public sector; ii) Developing Career Days for Women in Public Sector in the context of which women will encourage to design a carrier path based on Digital skills and e-Leadership (GNAP, 2018).

The “*General Secretariat for Gender Equality*” (GSGE) of the Ministry of Interior, in collaboration with “*European Center for Women in Technology*” (ECWT), developed an alliance of Greek entrepreneurs, business executives, public policy makers, academia, and female role models in order to motivate, help and continuously support Greek women to follow ICT careers. The “*Women and Girls Go Digital initiative*” (WGGD), coordinated by GSGE, brings together 22 Greek and 4 European stakeholders aiming at supporting women in STEM careers and enhancing their digital skills. It organizes workshops and training, promotes women involvement in digital activities and employment, transfers knowledge from best EU practices, and participates in related projects. For example, in the e-Women project, ECWT provides information regarding best practices in Norway aiming at supporting women’s employability through digital skills, ICT startups, and prepare interconnection through a new business innovation center (hub) in Athens.

Furthermore, there are other programs and projects aiming at STEM women empowerment. The “*Regeneration program*” (<http://www.regeneration.gr>) offers specialized, customized training on specific sectors (e.g. ICT) where there is a gap between available empty positions and trained/skilled junior candidates. It connects the training to the real needs of the local businesses and promotes job placements. After the training many women are hired. It helps to fight both youth unemployment and the brain drain phenomenon in Greece. It aims at: i) Improving employability by equipping job candidates with skills needed by businesses; ii) Fighting brain drain; iii) Bridging the gap between the new graduate and the job market; iv) Fostering the digital transformation and modernization of Greek companies by interconnecting universities, companies, research centers, public authorities, and individuals.

The “*Innovation and Employability for Women*” (“*ie-Women*”, <http://iewomen.iit.demokritos.gr/>) project organized educational programs in entrepreneurship and social media for improving employability of women and female entrepreneurs in digital economy. It aims at ICT training accompanied by the development of women self-confidence and the breaking of negative attitudes towards computer use. It promotes ICT professions to be made more attractive as a career choice for women, and encourages the strengthening of collaboration across relevant stakeholders.

The “*women4it*” project (<http://www.women4it.eu>) goals include the following: i) To create attractive employment opportunities for young people in the digital economy; ii) To provide access to an online employability profiling tool for individual testing; iii) To ensure free and available digital training and opportunity so as to help individuals access a community of leading European digital workforce; iv) To promote IT jobs for women as a source of economic growth and role models.

The “*eSKILLS4ALL*” project (<http://www.eskills4all.eu>) aims at empowering unemployed adults (with a focus on women) through training. It promotes digital literacy, and combats skills mismatches and unemployment of low-skilled unemployed adults (with a focus on women) by providing an interactive assessment tool helping them to up-grade their digital competences. The project also aims at enhancing employment prospects of unemployed adults by providing both an on-line and an in-house service that will support unemployed adults in their search for a job. It provides training to unemployed adults, connections with businesses, and a network of public and private organizations offering guidance and advice.

6. Recommendations for increasing women participation in STEM

In order to decide potential actions, policies and strategies to reduce gender gap in STEM studies, decision makers should understand the reasons for women underrepresentation in STEM. Previous studies (Wang & Degol, 2017) identified six reasons: (a) cognitive ability, (b) relative cognitive strengths, (c) occupational interests or preferences, (d) lifestyle values or work-family balance preferences, (e) field specific ability beliefs, and (f) gender-related stereotypes and biases. Furthermore, four main questions should be answered (García Peñalvo et al., 2019): 1) Which are the key stakeholders to build public policies to support the participation of women in STEM? 2) What kind of bridges from public policies could support the work of the university? 3) How can universities feedback into public policies? 4) What are good examples of public policies that have had a good impact?

Next, we recommend the following specific actions to be taken in order to increase women participation in STEM.

- Raise public awareness on gender issues;
 - Media campaigns on women achievements in STEM;
 - Increase awareness on women participation and fit in STEM;
 - Familiarize girls with STEM from a young age;
 - Inspire girls with successful women in STEM role models;
 - Educate parents regarding the girls' opportunities in STEM professions;
 - Provide counseling and advise to girls and parents regarding STEM careers;
 - Sensitize and incite teachers regarding girls fit in STEM;
 - Redesign school books with women role models examples;
 - Increase women self-efficacy and attitude towards STEM;
 - Sensitize employees in hiring women in STEM jobs;
 - Sensitize media to promote women in STEM;
 - Identify and fight barriers that prevent women to enter STEM professions, and advance in STEM professions.
 - Promote the image of STEM female leaders in high rank positions both in public and private organizations;
 - Promote the image of STEM female researchers;
 - Provide mentoring and coaching to young women entering the STEM profession;
 - Empower women with lifelong training on STEM knowledge & skills;
 - Present the variety of opportunities in STEM professions;
 - Support young women entering in STEM careers;
 - Advertise best practices and cases of integrating women in STEM professions;
 - Award successful women in STEM professions;
 - Award businesses for employing STEM women at high rates and positions;
 - Provide flexible continuous education in STEM so that women can adjust their schedule;
 - Decrease women unemployment by public-financing women in pregnancy and maternity/motherhood;
 - Provide childcare facilities to women;
 - Support women networking with other STEM women role models;
 - Develop peer support networks of STEM women;
 - Provide networking opportunities to women in STEM research (e.g. conferences, seminars);
 - Provide networking opportunities to women in STEM profession;
 - Promote STEM women leadership in the public sector;
 - Promote STEM women participation in prestigious positions in the public sector (e.g. ministers, university deans, institutes directors, high rank committees);
 - Monitor the gender issues in STEM education, research, jobs, etc.;
 - Award STEM women talents (students, Ph.D. theses, researchers, innovators, entrepreneurs, etc.);
 - Legislate policies supporting women (e.g., maternity leave);
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In order to monitor the status and measure the success of initiatives in women participation in STEM, the following Key Indicators for measuring the STEM gender gap could be monitored:

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- ✓ PISA average scores in mathematics, science & informatics by women;
 - ✓ Women attitudes towards STEM;
 - ✓ Number of STEM training and mentorship programs for women;
 - ✓ Number (and percentage) of women participants in STEM training and mentorship programs;
 - ✓ Number (and percentage) of female students in University STEM departments;
 - ✓ Number (and percentage) of women earned a B.Sc. degree in STEM per year;
 - ✓ Number (and percentage) of female students in University STEM M.Sc. programs;
 - ✓ Number (and percentage) of women earned a MSc degree in STEM per year;
 - ✓ Number (and percentage) of female Ph.D. candidates in STEM;
 - ✓ Number (and percentage) of women earned a Ph.D. degree in STEM per year;
 - ✓ Number (and percentage) of women part-time STEM researchers in Universities;
 - ✓ Number (and percentage) of women adjunct teaching staff STEM in Universities;
 - ✓ Number (and percentage) of women professors in University STEM departments;
 - ✓ Number (and percentage) of women department chairs in University STEM departments;
 - ✓ Number (and percentage) of full-time women STEM researchers in Universities, Research Institutes or Labs;
 - ✓ Number (and percentage) of STEM educated women working as STEM professionals;
 - ✓ Distribution (and percentages) of women researchers working in STEM in higher education, government, and business/industry sectors;
 - ✓ Number (and percentage) of women in STEM business/industry director boards;
 - ✓ Number (and percentage) of STEM women in business/industry director boards;
 - ✓ Number (and percentage) of women in STEM public high rank committees and boards;
 - ✓ Number (and percentage) of STEM women in public high rank committees and boards;
 - ✓ Number of Networking events connecting young and advanced women STEM scientists, entrepreneurs, leaders, sharing knowledge, opportunities and experiences; connecting women and men;
 - ✓ Number (and percentage) of women participants in such Networking events;
 - ✓ Number of scientific conferences/workshops on STEM gender issues;
 - ✓ Number (and percentage) of women participants in such conferences/workshops;
 - ✓ Number of papers by researchers in gender issues in STEM;
 - ✓ Percentage (and percentage) of women authors of such papers;
 - ✓ Number (and percentage) of unemployed STEM educated women;
 - ✓ Average (min, and max) salary of women in STEM professions;
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7. Conclusions and Future Research

This paper describes policies and initiatives to decrease gender inequalities in STEM-related education and employment in Greece. There is a variety of Greek government authorities responsible to issue and implement policies for promoting gender equality and non-discrimination. Many initiatives aim at empowering women with digital skills. In addition, several professional organizations promote women participation in Science, Technology, Engineering, and Mathematics (STEM)-related education and employment. National and European Union (EU) statistics show that there exists a wide gender gap in STEM-related higher education participation, employment, and salaries in Greece. However, the gender gap in the production of STEM scientific publications is extremely narrow, and it is the narrowest among all EU states. Although Greek women have advanced their position in STEM professions, there is still much space for improvement. There is a small but steady improvement in closing the gender gap especially with regards to digital skills of young Greeks.

Future research may consider to compare the gender gap among the specific STEM disciplines (e.g., Informatics, Mathematics, Physics, Chemistry, Biology, Civil Engineering, Mechanical Engineering, Electrical Engineering) and identify those that need urgent intervention. Also, future research may compare the effect of some recommended actions (Section 6) on the actual women participation in STEM education and professions using some of the recommended indicators (Section 6).

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