

genSET

Promoting Consensus and Integrated Action on Gender Issues in Science

ELIZABETH POLLITZER

The influential ETAN report¹ containing the first comprehensive analysis of women's status in European science drew attention in 2000 to the striking fact that whatever the percentage of female undergraduates, only 10 per cent of professors were women in almost every subject. The report called for a new set of measures to be implemented, collectively termed as "mainstreaming" that would go beyond the legal right to equality. This strategy has not produced the results hoped for. In particular, it has failed to convince science leadership of the value of the gender mainstreaming objectives. The latest statistics gathered (2006) show that women constitute 59% of university graduates; 45% of graduates at PhD level; 44% of those employed at first postdoc level; and 18% at full professor level. The increase at the professor level has been largely due to the enlargement of the EU from 15 to 27 countries².

The 10 years of the championship of gender equality issues by the European Commission has helped (with varying degrees of effectiveness) to embed gender-mainstreaming goals within various treaty obligations and funding programmes, and has led to the development of gender expertise on issues of pan-European concern, such as, for example, future research skills demands, workforce mobility inside the European Research Area (ERA) and changing work conditions. In 2010, however, important examples of renewed institutional interest in the benefits of tackling gender issues in science started to emerge. Guided by the advice from its Working Group on Gender Equality, the European Research Council (ERC) has adopted a gender action plan to guide its funding policy³; the League of European Research Universities (LERU) holds regular meetings of "gender representatives"⁴; the Royal Society of Edinburgh set up a Working Group to define a strategy on women in STEM for Scotland (for business and academia)⁵; The Research Council Norway included a requirement for information on gender and/or biological sex factors in research process as part of proposal selection criteria⁶, and University of Tromsø adopted the genSET Consensus Report on the Gender Dimension in Science as the guiding principles for their gender equality work⁷. The climate for action on gender issues in science appears to be friendlier now than ever before.

With 30 years of accumulated body of research, ample and persuasive evidence is readily available to demonstrate how gender issues impact science. Two conclusions stand out. Firstly, that biological, sex differences and social, gender differences between women and men cannot explain the ‘leaky pipeline’ – the fault does not lie with the women, it is institutions that need ‘fixing’. Secondly, if ignored in research process these factors can have significant impact on the quality of science knowledge making. The traditionally cherished assumption of scientific principles that science is ‘gender neutral’ can, in fact, undermine the most important aspect of scientific research, namely its scientific quality by propagating practices, norms and organisational relationships that promote ‘collective blindness’ on how gender issues impact science. Increasing the proportion of women in fields and decision making positions where they are underrepresented is important both on grounds of social justice and because diverse teams are more creative and innovative than mono-teams and the presence of women on the team has been shown to enhance cooperation and the team’s collective intelligence⁸. However, raising numbers is insufficient to tackle problems of quality in scientific knowledge making because sensitivity to gender issues in the context of scientific inquiry does not come automatically to women or men. Its analysis for the inclusion in research process is knowledge that has to be learnt and encouraged⁹. Part of social responsibility of science should be to adopt such understanding as a science excellence value.

An open dialogue is needed to continue raise awareness and enable progress in mainstreaming gender in science, involving policy makers, gender experts, and actual scientists, together with extensive consultation not only with gender research scholars, but also with those responsible for implementation of gender action plans in scientific institutions. Policy makers must find ways to engage scientists in the discussion about the relevance of the gender dimension in all research areas. This makes the emphasis of improving the quality of knowledge production and research through gender mainstreaming, an especially important point to communicate to the scientific community.

genSET

The FP7 SiS funded project, genSET, www.genderinscience.org, was set up out of recognition that one of the major reasons why progress on mainstreaming of gender in science has been so very slow, despite the extensive knowledge about gender issues available to inform policy and action, is that many science institutions lack the capacity and experience to translate empirical studies and generic gender equality recommendations into implementable gender actions plans that match their own needs and circumstances.

The genSET project, which started in September 2009, aims to develop practical ways in which gender knowledge and gender mainstreaming expertise can be incorporated within European science institutions in order to improve individual and collective capacity for action to increase women’s participation and status in science at all levels. A core part of genSET activities is dialogue between gender experts and science leaders to agree on the practical guidelines for implementing gender action plans within existing institutional mechanisms. Involved in the knowledge transfer are 100 European science stakeholder institutions, the focus of which are five core gender issues in: 1) assessment of people and work; 2) recruitment and retention; 3) science knowledge-making; 4) research process; and 5) science excellence value system.

To demonstrate the benefits of tackling gender issues in science, the genSET project has maximised opportunities to engage science institutions in the dialogue and knowledge exchange. In addition to assembling the 100+ strong Stakeholder Network, the project has created the role of Patron, which enables highly influential (on national and European scene) science institutions to demonstrate high-level support for consensus and action on the gender dimension in science. Currently, Patrons include: CSIC, European Science Foundation, Euroscience, Fraunhofer, Swedish National Agency for Higher Education, The Research Council Norway, TNO and COST. Others are expected to join them later in the year.

The Consensus Report

To date, the most significant output from genSET has been a series of three, 2-day consensus seminars conducted between March-June 2010, where a panel of 14 science leaders from across Europe, deliberated how European science institutions can best take advantage of the benefits in recognizing the gender dimension in scientific research, resulting in a report, *Recommendations for Action on the Gender Dimension in Science*. The Report contains an overall gender equality strategy that targets improvements in knowledge making, managing human capital, institutional practices and processes, and regulation and compliance, well as thirteen evidence-based recommendations that have come out of the deliberations, informed by collaboration with gender experts and institutional stakeholders, and based on the panel members' comprehensive personal experiences as members and leaders of scientific institutions¹⁰. These recommendations target common gender problems in science and offer practical suggestions how to tackle them. They are listed below in an abridged form.

Consensus Recommendations

Improving Knowledge Making

R1: Leaders must be convinced that there is a need to incorporate methods of sex and gender analysis into basic and applied research; they must “buy into” the importance of the gender-dimension within knowledge making.

R2: Scientists should be trained in using methods of sex and gender analysis. Both managerial levels and researchers should be educated in such sex and gender analysis. Training in methods in sex and gender analysis should be integrated into all subjects across all basic and applied science curricula.

R3: In all assessments – paper selection for journals, appointments and promotions of individuals, grant reviews, etc. – the use and knowledge of methods for sex and gender analysis in research must be an explicit topic for consideration. Granting agencies, journal editors, policy makers at all levels, leaders of scientific institutions, and agencies responsible for curricula accreditation, should be among those responsible for incorporating these methods into their assessment procedures.

Improving Human Capital

R4: Research teams should be gender diverse. Institutions should promote gender diversity in research teams through a variety of incentives (e.g. quality recognition and allocation of resources) and through transparency in hiring.

R5: Gender balancing efforts should be made in all committees, with priority given to key decision-making committees. Panels for selection of grants and applicants must be gender diverse. This must be the goal for management teams as well.

R6: Institutions should seek to improve the quality of their leadership by creating awareness, understanding and appreciation of different management styles. This can be achieved through training, self-reflection, and various feedback mechanisms. Diversity training, specifically, is essential to this process.

R7: Women already within scientific institutions must be made more visible. All public relations activities from scientific institutions should be gender-proofed (represent women appropriately), while avoiding tokenism. This could be done by including women in all promotional campaigns for scientific careers, by leaders nominating women for prizes, and by recognising women's achievements appropriately.

Improving Practices and Processes

R8: Assessment procedures must be re-defined to focus on the quality, rather than quantity, of individuals' publications and research output. This must be consistently applied in individual, departmental, and other levels of assessment.

R9: Persons with disproportionate committee and administrative duties should be provided with additional support staff or reduced teaching assignments to ensure that their research does not suffer.

R10: Policies and procedures specifically affecting working conditions that differentially impact men and women in scientific institutions must be reviewed and revised, ensuring positive benefits for personal and professional development for both men and women.

R11: Specific strategies should be employed for attracting women to apply for scientific positions. Announcements for recruitment should be formulated so that they encourage women to apply.

Improving Regulation and Compliance

R12: Explicit targets to improve gender balance and action plans to reach them must be included in the overarching gender strategy of scientific institutions. The progress must subsequently be regularly monitored and be made public.

R13: Gender issues must be an integral part of internal and external evaluation of institutions. Policies at all levels must require this inclusion. This should begin with a critical review of gender mainstreaming processes within each institution, identifying current successes and failures.

Conclusions

While the Consensus Report drew extensively on research evidence (some 120 research reports) related to the effects of gender balance in scientific knowledge making and in the procedures related to scientific institutions, it dealt only with a small fraction of the case studies and expertise available across Europe. After collaborating with gender experts on the Report, members of the Panel were keenly aware of the importance of publicizing and integrating such knowledge into the discussions about gender mainstreaming within scientific institutions. This must happen on a European level, crossing cultural and linguistic barriers.

Notes

1. European Commission (2000) Science policies in the European Union. Promoting excellence through mainstreaming gender equality. A report for the ETAN expert working group on women and science. Research Directorate-General. ftp://ftp.cordis.europa.eu/pub/improving/docs/g_wo_etan_en_200101.pdf
2. European Commission (2009) *She Figures 2009: Statistics and Indicators on Gender Equality in Science*. Brussels: Director-General for Research. < http://ec.europa.eu/research/science-society/document_library/pdf_06/she_figures_2009_en.pdf >
3. European Research Council (2011) Gender Equality Action Plan. http://erc.europa.eu/pdf/ERC_ScC_PR_Gender_Equality_Plan.pdf
4. LERU (2010) Harvesting talent: strengthening research careers in Europe, January 2010. http://www.leru.org/files/publications/LERU_paper_Harvesting_talent.pdf
5. Boulton, Geoffrey (2011) Royal Society of Edinburgh, private communications
6. genSET (2010) Recommendations for Action on the Gender Dimension in Science, Consensus report produced by a panel of 14 European science leaders as part of the FP7 SiS funded genSET project, www.genderinscience.org
7. University of Tromsø (2010) The University of Tromsø adopts genSET Recommendations in new gender action plan http://www2.uit.no/ikbViewer/page/nyheter/artikkel?p_document_id=207829
8. Woolley, Anita *et al* (2010) Evidence for a Collective Intelligence Factor in the Performance of Human Groups", *Science*, Vol. 329 No. 6000, October 1, 2010.
9. Pollitzer, Elizabeth *et al* (2011) Women in science and medicine. *The Lancet*, 377, p. 811.
10. genSET, <http://www.genderinscience.org>

