

SUPPORT PROGRAMMES FOR WOMEN IN SCIENCE IN LITHUANIA AND EU COUNTRIES

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Abstract

Having gained higher education, women have a possibility to choose the area of scientific work just like men. However, the name of a woman scientist is usually associated with a single woman without children. These stereotypes have several causes: first, women scientists find it difficult to combine scientific activity with family care; second, they have to spare time for bringing up children. Currently the stereotypes on differences of genders and professions as well as women's duties to society and family are less influential in Western Europe and USA. The changing society accepts a businesswoman, woman scientist, woman politician, etc., but does not consider her psychological state: she has to overcome the stereotypical opinion and pursue a career in some field, while men inherently dominate in scientific fields. After literature overview, programmes supporting women scientists in Lithuania and foreign countries were identified and analysed. In 2001 in Lithuania a Coalition of Non-Governmental Organisations for Protection of Women's Human Rights was established. The aim of the Coalition is to unite Lithuanian non-governmental organisations in order to have equal rights of genders de facto. Many EU countries (Austria, Estonia, Germany, Greece, Hungary, Italy, Holland, Spain, Sweden, UK), have prepared and are implementing programmes supporting women scientists working in various scientific fields. The analysis of Lithuanian and European countries programmes of supporting women scientists allowed to draw the following conclusions: the career issues of women scientists are primarily analysed in the context of equal gender opportunities; the situation of women scientists in academic communities of Lithuania and EU is similar; non-governmental organisations and various programmes provide double support – facilitate the load of family problems and provide opportunity of active participation in scientific activity; Organisations of European Union countries gather into units and create a wide network of organisations, embracing many countries.

Keywords: gender, stereotypes, women in science, support programmes, career.

Introduction

Having gained higher education, women have a possibility to choose the area of scientific work just like men. However, the name of a woman scientist is usually associated with a single woman without children. These stereotypes have several causes: first, women scientists find it difficult to combine scientific activity with family care and problems; second, they have to spare time for bringing up children.

Analysis of establishment of stereotypes is an important issue in gender studies. G. Merkys, G. Purvanekienė, J. Ruskus, I. Kazlauskaitė have presented the definition of stereotypes: “permanent, generalized, schematized and often inaccurate images of a particular group of people” (Merkys, Purvanekienė, Ruskus, Kazlauskaitė, 2001). D. Mayers states that gender stereotypes mean what people think of the behaviour of men and women, what their roles are and what is expected from them (Mayers, 1998).

According to V. Šidlauskienė, A. Kovierienė, D. Saparnienė, professional gender stereotypes in society manifest through tendentious attribution of the so-called “second-rate” professions to women, i.e., relatively less remunerative, representing lower social status and providing fewer opportunities for social mobility (Šidlauskienė, Kovierienė, Saparnienė, 2007). These are usually professions and positions of services and non-creative jobs (e.g. secretary, housemaid, saleswoman, waitress, nurse, kindergarten te-

acher, etc.), whereas men are attributed prestigious professions and positions implying power, status and might.

The difference between men and woman as potential users of functions of technical objects actually exists and arouses many discussions in contemporary society. Most investigations suggest causes of stereotypes related to the socialisation process (Herr, Kramer, 1984; Berryman, 1985; Brush, 1991; Fuller, Grant and etc., 1997), while other investigations relate aptitude for technology with natural (biological) peculiarities of genders (Hausman, 2000).

Stereotypical attitudes towards male and female works are established in the society. Scientists E. L. Herr and S. H. Kramer noticed that girls usually have as extensive professional intentions as the boys have, but are less confident that they will be able to achieve them (Herr, Kramer, 1984). Some girls hardly give any attention to things, not related to household and “feminine” professions. They would feel guilt and shame if they resolved to turn away from roles, traditionally attributed to them. S. Berryman presents girls' thoughts on their future: they are more willing to see themselves as bringing up children and only a small part plans to study in college the “exact” science – mechanics (Berryman, 1985).

Though women have started participating in scientific society in the beginning of 20 century, they still are the minority in the academic society of the

world and there exists vertical (the higher on the ladder of hierarchy of academic qualification, the lower is the number of women) and horizontal (women gather in “feminine” sectors of science – humanities and social sciences) gender segregation (Novelskaite, 2001). In general, four types of discrimination can be distinguished in practice of female career (Kanopiene, 2001): 1) salary discrimination, 2) employment discrimination, 3) occupational discrimination, 4) human capital discrimination. The above-mentioned difficulties are a significant obstacle for women to achieve professional heights, though it is attempted to envisage the lack of skills and interest (Culbertson, 1997).

Marriage and children negatively affect women’s careers in academic science at three key times: having a child during graduate school, marriage at the point of seeking a job, and pregnancy prior to tenure. Women, but not men, are sometimes thought to be less than serious about their science if they do not stay single while in graduate school.

Currently the stereotypes on differences of genders and professions as well as women’s duties to society and family are less influential in Western Europe and USA. The changing society accepts a businesswoman, woman scientist, woman politician, etc., but does not consider her psychological state: she has to overcome the stereotypical opinion and pursue a career in some field, while men dominate in scientific fields. After literature overview, programmes supporting women scientists in Lithuania and foreign countries were identified and analysed.

Research problem: Unemployed potential and limits to apply skills for women in science.

Research aim: To define the ways and means to support women in science .

Research methods: Systematic analysis of literature and databases.

1. State of affairs in Lithuania

A steady increase of number of women pursuing careers is currently observed in Lithuania. In years 1996–2006, the number of girls studying in higher education establishments has increased 3.6 times and in 2006 amounted to 27 percent of all girls, while the number of boys increased 3.1 times and in 2006 amounted to 19 percent of all boys. The major part (around 60 percent) of students in Lithuanian higher schools is girls. Girls dominate in the following studies programmes: 69 percent of girls in business and administration, 78 percent in pedagogy, 80 percent in social services and servicing people, 84 percent in health care. In transport and security services the boys amounted to 90 percent of all students, in engineering – 83 percent and in computing – 80 percent. Notably less women specialists were trained in further

and higher studies of natural, technology and applied sciences: 14 women specialists and 24 men specialists for 1000 of residents aged 20-29.

Girls successfully studied at all levels of studies: 60 percent of Bachelor students and 63 percent of Master degree students were girls. The number of doctoral students has also increased: in 1996-2006, the number of girls increased by 35 percent and the number of boys by 57 percent. The number of boys in doctoral studies was higher than girls only in 1996 and 1997 and in later years, doctoral studies were more actively chosen by girls. In 2006, there were 3.9 girls in doctoral studies for 1000 of girls and respectively 3 boys for 1000 of boys. More women (58 percent) than men (42 percent) were awarded Doctor’s degree. Women are also more active than men in various training and qualification raising programmes – in 2005, 7.6 percent of women aged 25-64 and 4.9 percent of men improved their knowledge at various courses, workshops and seminars.

According to the data of Lithuanian Statistics Department, among the researchers participating in scientific research women amount to 50 percent; they amount to 38 percent of Lithuanian scientists and only 14 percent of Doctors Habilitus. The number of women researchers in Europe is also significantly lower than of men, especially in scientific areas. Women researchers amount there to less than 50 percent of all people engaged in scientific research. However, for at least thirty years more women than men are awarded diplomas (European Parliament, 2004), but women encounter various obstacles and have to constantly struggle to be better represented in scientific layers and decision-making governing bodies.

According to the data of World Economic Forum, Lithuania is in the 12 place out of 58 world countries by equal opportunities of men and women in participating in economical and political life as well as pursuing education, health care and wellbeing. Comparing the conditions for women to get the same work payment as men, Lithuania is in the 10th place among other countries, assessing women’s opportunities to have equal work position – in the 11th place and according to participation of women in decision-making political structures – in the 13th place. Due to low participation of women in political decision-making structures, Italy and Greece are the last among EU countries. The smallest “gender gap” was recorded in Scandinavian countries (Statistics Department of Lithuania, 2007).

In Lithuania, there is no special programme supporting women scientists, but scientific projects are implemented and non-governmental organisations are established, and this indicates that there is an interest in discussed problems in Lithuania like in the rest of Europe.

On 6th March 2001 in Lithuania a Coalition of Non-Governmental Organisations for Protection of Women's Human Rights was established. The aim of the Coalition is to unite Lithuanian non-governmental organisations in order to have equal rights of genders de facto. The Coalition is:

- a non-formal union of NGOs in Lithuania, organizing public movement in Lithuania to ensure gender equality;
- a joining bridge between ordinary women and social partners of the Coalition to transfer the current and realistic information from grass root level, to raise problems of gender equality and suggest the ways of solving them;
- a mechanism that influences public policy, governmental and parliamentary decisions while implementing the Law of Equal Rights for Men and Women, and UN Convention for elimination of all kinds of discrimination of women;
- an open discussion forum on the Internet on the topics of equal rights, opportunities and results.

Social partners of the Coalition are: Office of the Ombudsman of Equal Opportunities; Commission of Equal Opportunities for Women and Men; Women's Parliamentarians group; The adviser for Prime Minister on gender issues and NGOs.

The decree of the Government of the Republic of Lithuania "On approving the programme of equal opportunities for men and women 2005-2009" emphasizes the issues of number of men and women in the highest levels of science. In order to solve this problem it is scheduled to prepare a strategy "Women and Science" in 2007 (Valstybes ziniuos, 2005, No. 116-4202). It is likely that having implemented this programme women will have better opportunities to pursue education, career and improve professional skills.

In order to achieve European Union Lisbon strategic aims – to become the most competitive and dynamic knowledge economy in the world until 2010, it is necessary to develop scientific research. It was estimated that in order to achieve this aim European Union will need 700 000 additional scientists and therefore, apart from other means, more attention has to be paid to teaching sciences, technologies and mathematics at school and special attention has to be paid to girls as usually too few of them participate in these areas (Official Journal 120, 2005).

During formation of the 7th Common Programme, scientific research in Europe was allocated a lot of funds. Activity field "Science in Society" is intended for encouragement and support of cooperation of scientists, institutions forming scientific policy and society members (330 million Euros allocated). One of activity fields of "Science in Society" is strengthening the role of women in scientific research.

In Lithuania, the problems of equal rights of men and women are analysed in various projects: project "All Together" (www.all-together.org), project PROMETEA ("Empowering Women Engineers Careers in Industrial and Academic Research", www.prometea.info), project BASNET: Women in science and high technology (<http://www.ff.vu.lt/basnet/>). The goal of the last project is the establishment of the inter-regional Baltic States Network "Women in Sciences and HT" among women working groups, professional organizations and corresponding departments of the governmental institutions for creation of the common Baltic States strategy to increase women's participation in Sciences (S) and High Technology (HT). In 2007, BASNET network became a true member of European Platform of Women Scientists (EPWS) and opened wider horizons for the scientists of Baltic States to influence European science policy.

Structural support granted by the European Union for 2007–2013 is looking to finance the Program for Women in Science and Engineering: Linking Girls, Young Women and Their Technological Futures through Educational System. Fulfilling work-life balance issues at university as a learning innovative organization is ongoing testing at Šiauliai University, where social services are provided to all women doctoral students (<http://family-university.su.lt/>). The research on women research relevant issues in the work-family reconciliation is ongoing in the project. Another project: European Universities Association and Socrates program project The Quality Culture Project Round III – Network 5 "**Women in Universities: Research, Teaching and Leadership Participants**". **Other projects were also implemented in Lithuania: EQUAL programme "Family Planet: Family-Friendly Organisation"** (EQ/2004/1130-24/500). ESF project according to GPD measure 2.3 "Prevention of Social Exclusion and Social Integration", "Stereotypes of Gender Roles in Employment: System of Wide Monitoring and Education".

2. Support programmes in European Union countries

Many EU countries have prepared and are implementing programmes supporting women scientists working in various scientific fields. Austria has a programme Frauen in der/die Technik (FIT) (Women in/into technology). The program embraces a parental leave package, measures for family & women friendly conditions, gender equality and gender mainstreaming strategies, and personnel marketing. FIT is a mentoring program for female staff in technical jobs and a mixed-gender network working on increasing female share of women in the technical jobs. Austrian branch of an international microelectronics company headqu-

artered in Germany was chosen for the good practice case study. The Austrian branch is implementing good practise initiatives independently from the rest of the company. These initiatives are work packages to support especially women. These packages are intended to recruit and integrate more women in technological jobs and to make working conditions for both men and women more family friendly. Everything is run within the framework of a FIT program.

Technikon Research Ltd in Austria is a privately owned company (research, projects in IT/Communication techn.), which hires mainly female engineers, scientists, and economists who work successfully as project leaders/moderators in males dominated industries and give proof that women can be successful in SET.

The work carried out by WiTEC Austria takes place on both the Austrian and the European level. WiTEC – the European Association for Women in Science, Engineering and Technology (SET), established in 1988, is a European-wide network of universities, industries, organizations and individuals working towards the motivation, development and support of women in science, technology, engineering and management. Currently there are 10 WiTEC national network coordinators; they work in the following countries: Austria, Estonia, Germany, Greece, Hungary, Italy, The Netherlands, Spain, Sweden, United Kingdom. WiTEC spreads information and research in subjects concerning women and technology, equality, education, industry, etc by: arranging placements and scholarships for female students, arranging courses and seminars for professionals and employees, developing courses and training material.

WiTEC Austria realizes strong regional cooperation and this enabled implementing projects to encourage girls to become technicians, such as “Girls’ Day” or an Austrian network of women actively working in the field of science, engineering and technology. Furthermore, WiTEC Austria carries out projects in cooperation with the University of Applied Sciences Carinthia and the Austrian Ministry for Transport, Innovation and Technology and companies of the Austria Micro Electronics Cluster to support the equal opportunity for women and men in the field of research as well as science, engineering and technology.

Inova Consultancy in United Kingdom provides consultation services that respond to the needs of organizations and individuals in the area of diversity and equal opportunities. Inova/WiTEC UK provides consultation services that respond to the needs of organisations and individuals in the area of diversity and equal opportunities. Specialist experience within Inova is in the field of gender and SET (Science, Engineering and Information Technology) in appropriate posi-

tive intervention strategies to address diversity issues and in particular, redress the imbalance of women in non-traditional courses and careers. Inova/WiTEC UK works closely with both Higher Education and Industry within the UK and transnationally, has extensive experience in working on projects that aim to promote women entrepreneurs: a working example of women in high decision-making positions.

WiTEC UK has extensive experience in developing initiatives, which work towards assisting organisations in developing projects regarding diversity and equal opportunities and enabling organisations to maximise the potential of their workforce through the development of interventions regarding diversity issues.

The position of Equal Opportunity Contact Person is established in Sweden. The start of this position served two purposes. This contact person is responsible for supplying the division with news concerning gender equality work at the department and at the university. The contact person is also responsible for acting as intermediary in the opposite direction, supplying the project leader of gender equality projects at the department with information about what was going on in the division.

WiTEC Sweden participates in approximately 10 EU projects. WiTEC spreads information and research in subjects concerning women and technology, equality, education, industry, etc. by: arranging placements and scholarships for female students, arranging courses and seminars for professionals and employees, developing courses and training material.

The coordinator of WiTEC Spain is the UPC Women’s Programme (Programa Dona), created by the Technical University of Catalonia (UPC) in order to increase the proportion of girls in their studies.

The UPC started the Programa Dona in 1996. This programme aims to increase the number of women studying technical sciences in order to reach gender balance in the technological and scientific field and in the labour market. Prosecutors work on educational programmes for young women collaborating with many institutions in projects related to women in Science and Technology working towards gender equality in decision-making, development and recruitment of women.

WiTEC Netherlands is represented by VHTO – National expert organization on girls/women and science/technology. VHTO makes an effort, in many different ways, to increase the involvement of women and girls in technology and engineering. Being the national coordinator of WiTEC, VHTO is able to set up and test initiatives in the field of women and technology with transnational partners. Participation in this European network offers many possibilities for tran-

slating foreign renewal impulses to the Dutch education and employment market.

Gender-Institut Saxony-Anhalt (G/I/S/A) was founded to implement and support the process of Gender Mainstreaming in the German area Saxony-Anhalt in March 2001. G/I/S/A acts as the host organisation for WiTEC in Germany. The main objective of G/I/S/A is to improve the relationship between women and men in all fields of social life. To realise and coordinate research, education, international relations and project activities in these fields is the main issue.

Budapest University of Technology and Economics (BUTE) is the national coordinator for WiTEC in Hungary. WiTEC Hungary joined the WiTEC network in 2002. The main objective of BUTE is to provide high-quality graduate and postgraduate education in the field of Engineering and Economics. During recent years, BUTE has laid special emphasis on the gender-equality aspects of recruiting.

Greek Women's Engineering Association (EDEM) was established in 1995 by qualified women engineers, members of the Technical Chamber of Greece (TCG). It operates in parallel with the TCG and the professional and collective associations of engineers, complementing and underpinning their actions to solve specific professional problems faced by women engineers. Its socio-vocational aims include the promotion of equality between women and men in employment, education and society in general, as well as encouraging community awareness of employment opportunities for women and mainly of young women in the traditionally male dominated profession of engineering. EDEM offers a membership scheme to eligible female engineers.

Equal Opportunities Plan for the Academy of Finland is for people working on Academy funding, for Academy research post holders and for the Academy's Administration Office personnel. The Equality Plan for the years 2005-2007 is an integral part of the Academy's science policy strategy. When making decisions regarding research posts and research funding, efforts must be taken to establish an open, transparent expert review procedure, in which the qualifications of applicants of either sex are evaluated equally and fairly.

The Anita Borg Institute for Women and Technology (ABI) is an organization that believes women have a different perspective and that this perspective matters. This institute (functioning in USA) was founded in 1997 and its mission is to increase the impact of women on all aspects of technology and to increase the positive impact of technology on women of the world. It accomplishes its mission through programs that build the connection between technology and social impact: The Grace Hopper Celebration of Women

in Computing Conference, The Systems online community, TechLeaders, Women of Vision, and Virtual Development Centre.

National Centre for Women & Information Technology functions in the USA. The aim of the formation of this Centre was to ensure that women's knowledge and skills are fully represented in the creation, development, and consumption of information technology. NCWIT's overarching aim is parity in the professional information technology (IT) workforce, fundamental strategy is to educate, disseminate, and advocate a national, multi-year implementation plan that generates tangible progress within 20 years. Main arguments: 1) IT becomes a commodity in an increasingly global society, so women can, and must, play an important role in IT innovation if the U.S. is to remain competitive; 2) US economy will add 1 million professional IT jobs by 2014 and capitalize on women's value in IT workforce; 3) technology becomes exponentially more pervasive in everybody's live and it is necessary to ensure that it is created by a broad diversity of scientists. Respectively, in order to achieve the aim of European Council – to invest 3 percent of GDP into scientific research, around 700 000 scientists should work in European Community. In order to achieve this aim, it is necessary to employ measures that would interest the youth to choose the career of scientists, encourage women to participate in scientific activity, expand opportunities of studying and mobility for scientific research, etc.

Conclusions

The analysis of Lithuanian and European countries programmes of supporting women scientists allows drawing the following conclusions:

1. The career issues of women scientists are primarily analysed in the context of equal gender opportunities.
2. The situation of women scientists in academic communities of Lithuania and EU is similar.
3. Non-governmental organisations and various programmes provide double support: facilitate the load of family problems and provide opportunity of active participation in scientific activity.
4. Organisations of European Union countries gather into units and create a wide network of organisations, embracing many countries.

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