



Meta-analysis of gender and science research

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Country report Switzerland

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1. Introduction

Switzerland has a two-track higher education system: On the one hand there are ten cantonal universities (German-speaking: Basel, Bern, Lucerne, St. Gallen, Zurich; French-speaking: Geneva, Lausanne, Neuchâtel; bilingual: Fribourg; Italian-speaking: Lugano) and two federal institutes of technology (Lausanne and Zurich) focusing on basic research. On the other hand there are seven universities of applied sciences (Bern, Central Switzerland, Eastern Switzerland, Northwestern Switzerland, Southern Switzerland, Western Switzerland, Zurich) focusing on applied research and development. In addition, there are four research institutes affiliated to the federal institutes of technology, the universities for teacher education and some university-level institutions.

Concerning research and development (R&D), the private sector is quite dominant in Switzerland. Private companies finance almost three-quarters of R&D, one-quarter is financed by the public sector, mainly going to the universities, and only a few percent come from the private non-profit sector or from abroad. Whereas the universities do most of the basic research, the domain of the private sector is applied R&D.

According to the data of the Swiss Federal Statistical Office, in Switzerland in 2008, there were 121'009 students at universities and institutes of technology, thereof 50.1% female and 63'747 students at universities of applied sciences (UAS), thereof 49.9% female. The percentage of women professors, however, is still low (universities: 14.8%, UAS: 30.5%).

Among the seven topics to be analysed in the following the topic "Policies towards gender equality in science" (2.7) is the most important in Switzerland. In 1992, the first policy measures towards gender equality were introduced and have been extended and enlarged since then. This situation has effects on the analysis of the other topics, because the policy measures have been successful and, therefore, changed the situation of women researchers and gender subjects in academia.

2. Analysis by topics

2.1. Horizontal and vertical segregation

Research questions

In the early years, research literature is limited to the compilation of the existing statistical data, whereas some of the newer publications analyse the following questions as well, concerning

- horizontal gender segregation: Why is the interest of women in natural sciences and technology lower than men's? What are the objective reasons and the subjective attitudes that influence the choice of the study fields? Which motives do women and men have to start their studies in natural sciences, technology or engineering and how do these motives differ? Which measures could be taken to change the still existing horizontal segregation?
- vertical gender segregation: On which level of the different stages of an academic career – students, doctoral students, teaching and academic staff, post-docs, assistant professors – do women leave and for what reasons? Why is the drop out rate of women higher and how does it differ in the different scientific fields? Which factors, e.g. social class, networks, publications, do influence the drop out rate?

Other forms of gender segregation, e.g. statistical, social or contractual segregation are mentioned and defined.

Research approaches

Most of the research literature refers to the data of the Swiss Federal Statistical Office making visible the existing gender segregation. Earlier publications are more limited to the compilation of data, whereas some of the newer ones ask for the reasons for horizontal and vertical gender segregation, doing empirical studies to get better insights in the factors which influence the

gender-specific choice of studies on the one hand and the higher drop out rates of women on the other. On this basis measures to avoid both forms of segregation are formulated.

More analytical research is often combined with other topics, especially with gender stereotypes and identity (see 2.3) or science as a labour activity (see 2.4).

Findings

In Switzerland, horizontal and vertical segregation of women in higher education is well documented. The Swiss Federal Statistical Office (FSO) has provided sex-disaggregated data for the different fields of studies and for the research staff in the different sectors since the early 1990s. These FSO-data are the source for the following specifications.

Students: Today the proportions of male and female students are equal, but the choice of the study field is still very much gender-related. In 2008, the highest percentage of women at the universities was in the humanities and social sciences (65.3%), the lowest in technical sciences (26.7%) and the highest percentage of women at the universities of applied sciences (UAS) was in health (85.8%), the lowest in technology and IT (6.4%).

Staff: In 2008, the universities employed a staff of 50'002 people, corresponding to roughly 32'751 full-time equivalents and the universities of applied sciences 37'236 people corresponding to 12'036 full-time equivalents. On the one hand the percentage of women depends on the category of staff, with the highest proportion for administrative and technical personnel (universities: 53.8%, UAS: 57.6%) and the lowest for professors (universities: 14.8%, UAS: 30.5%). On the other hand it depends on the scientific field, e.g. 41% of the teaching staff at the universities were women, with 52% in social sciences and humanities, but only 27% in technical sciences. Furthermore, there are gender-related differences concerning the working hours, with more men working full-time and more women working part-time.

Sectors: The percentage of women researchers is the highest in the university sector (30% in 2004), followed by the government sector (26% in 2004) and the lowest in the private sector (21% in 2004), with women researchers above the average in the areas of nutrition, research laboratories, pharmacy and chemistry and women researchers below the average in the branches electrical and mechanical engineering, mechanical and metal industry and IT.

Scientific boards: The Swiss National Science Foundation (SNSF) is concerned to increase the representation of women especially within its National Research Council (NSR), which is responsible for the allocation of the research grants and fellowship awards. The National Research Council has 100 members as a maximum, mostly university professors elected for a period of four years and serving on a voluntary basis. The new electoral regulations for the Research Council give priority to the applications of women with equivalent qualification.

The analytical research on this topic shows,

- that and how the attitudes towards science and technology differ between men and women,
- which objective and subjective factors influence the students' choices of their fields of study and the differences of these factors between female and male students,
- how the probability of women to start a doctoral programme depends on their social background, especially the education of their parents, and
- that the probability to start a doctoral programme is better in study fields where women are under-represented.

To increase the proportion of women in technology and engineering, the following measures are discussed:

- reform of curricula,
- interdisciplinary study and course programmes,
- promotion of female teaching staff and professors.

Gaps

- only little sex-disaggregated data about researchers in the private sector and no analytical studies about women researchers in this sector
- only little information about the participation of women in programme management and implementation processes, on scientific boards and other decision-making research bodies
- no information about self-employed researchers and the percentage of women thereof
- no studies of the under-representation of men in humanities and of the phenomenon of the "glass elevator", e.g. in health services

2.2. Pay and funding**Research questions**

There is no literature on the gender pay gap in different research sectors and only a few publications on the gender gap in research funding. Most of these publications were commissioned by the Swiss National Science Foundation (SNSF), which is the main institution responsible for promoting basic research in Switzerland. The focus of these publications was on the gender bias in research funding and the search for measures to avoid them in the future.

Research approaches

In 2000, the SNSF commissioned an expert group – the so-called reflection group "GRIPS Gender" – to analyse the gender-related problems of its research promotion and to formulate recommendations for the promotion of women within the boundaries of its instruments. The Pilot Study "Gender as a Factor of Unequal Access to Research Funding" (2005) examined the success rates of women and men in SNSF research funding in three disciplines – political sciences, psychology and chemistry. In doing field research, improving the SNSF-database, analysing these data and some case studies, questions for a follow-up study were developed and formulated. This follow-up study on "Gender and Research Funding" (GEFO) was conducted from October 2006 until June 2008. The GEFO study examined the role of research funding for junior female researchers, their access to research funding, their application success rates and the effect of research funding on careers.

In 1991, the SNSF introduced the Marie Heim-Vögtlin-Programme (MHV-programme), named after the first Swiss female doctor in Medical Sciences, Marie Heim-Vögtlin (1845-1916). This programme offers grants for women resuming their studies after some years of family work and childcare. On the basis of questionnaires filled out by the former grant recipients of the years 1991-2002, this programme was evaluated to get information about the effectiveness of the programme and possible improvements.

Findings

The GRIPS gender-report (2001) examined the different instruments of the SNSF – grants, professorships, project funding, MHV-programme – and suggested a list of recommendations to improve them. They range from measures to increase the number of women's applications, e.g. the flexibilisation of conditions to apply, to the revision of the evaluation criteria and an analysis of refused applications.

The pilot study found out, that women were under-represented especially in the category "principal investigators" and at all levels of the decision-making bodies and that in two of the three disciplines, the applications of women researchers had lesser chances to be approved. But as the main problem the study pointed out that fewer women did apply for grants. The results of the empirical analysis made three problems visible: the less intensive networking of women, the selection procedure and mainly the low participation rate of women in the responsible institutions, the whole process of information and coaching. Measures to avoid the gender-related discrimination should start at these points.

The GEFO study did not find any gender-specific discrimination in the SNSF's research funding process. Women submit applications for individual and project funding from the SNSF and other research funding institutions with the same frequency as men. Women submitted no fewer applications for project funding or SNSF-professorships, and they requested similar amounts of funding and had the same chances of success. Nevertheless gender-specific loss rates were recorded. In this regard, the study reveals

- lower quotas of female doctorates in all disciplines,
- less career-specific support from other scientists after women have completed their doctorate,
- the bigger burden of balancing science and family for women, since they are still more involved in childcare and family work.

According to the evaluation of the MHV-programme conducted for the period 1991-2002, this programme is achieving its objectives. Only little changes concerning the establishing of the programme at universities and research institutions as well as optimisation of the programme's flexibility were recommended.

Gaps

- no studies on the gender-related differences in pay in academia
- no statistics or studies on gender related differences of pay and funding in the private R&D-sectors
- no gender budgeting of Swiss universities and universities of applied sciences (with the exception of a short analysis of the University of Basel as part of the gender budgeting of the canton Basel-city)

2.3. Stereotypes and identity

Research questions

Most of the publications on this topic are done in an international context. There are only a few publications related to Switzerland, often in combination with the analysis of horizontal and sometimes vertical segregation. The main research subjects are the following:

- different abilities of boys and girls, women and men, their social construction and relevance up to higher levels of education,
- search for explanation of the lower interest of women in natural sciences, technology and engineering,
- related to medical studies: differences of speciality choices between male and female medical school graduates.

Research approaches

On the subject of the different abilities between the sexes and their social construction the international research is compiled and discussed with a special focus on the abilities of boys and girls in mathematics and natural sciences, some motivated through the results of the two international comparative studies, TIMSS in 1995 and PISA in 2000, which showed lower results for girls in mathematics and natural sciences, but also their lower self-esteem in these fields.

Concerning the interest of women in natural sciences, technology and engineering, the research literature looks for reasons why women seem to be less interested in these scientific fields and for measures which could be taken to make them more attractive to women. On the basis of two empirical studies – a general telephone survey by the Observatoire EPFL in 2000 and the Eurobarometer 55.2 for Switzerland in 2001/02 – the differences between the attitudes of men and women toward science and technology are examined.

In 2001 a still ongoing longitudinal survey of a cohort of Swiss medical school graduates was started to examine the development of their speciality choice since their graduation from

medical school and to learn what factors influenced this choice, e.g. gender, personality, career motivation, life goals.

Findings

To avoid the social construction of differences, all kinds of measures are searched for and discussed, which start in the early childhood up to higher education.

Explaining the low attractiveness of mathematics, natural sciences, technology and engineering, especially for women, mainly the following reasons are discussed:

- stereotyping of these scientific fields as male domains,
- courses, which do not stimulate to understand and to solve problems independently,
- lack of information about occupational possibilities.

Two empirical surveys support the hypothesis tested in Anglo-American countries that women hold more negative attitudes toward science, but including socio-demographic variables gender differences are not significant anymore.

First results of the longitudinal survey on speciality choices at Swiss medical schools show that female graduates have decided earlier which speciality they will choose, that women preferred fields with intensive patient contact, men tended to specialise more in instrumentally oriented and high-technology medicine and that, in their residents' years, men more often chose surgical specialities, whereas women decided on paediatrics, gynaecology & obstetrics or anaesthesiology.

Gaps

On the topic of stereotypes and identity it is even more important than on others that research is done in an international context. Especially more research on the social construction of humanities, health sciences and other scientific fields, in which men are heavily under-represented would be important.

2.4. Science as a labour activity

Research questions

The rather diverse research questions in this context are mainly focused on the following four subjects:

- history of women in science,
- situation of young women researchers,
- reconciliation of academic career and care work,
- measures to improve the situation of young women researchers.

Against this background, the specific culture in science and research, the norms and values inside the scientific community and the different cultures of different scientific fields are part of studies on other topics, but barely directly and empirically inquired.

Research approaches

History of women in science: Switzerland has a long standing tradition of women at universities. As early as 1867 the first women were admitted to the University of Zurich, followed shortly after by the Universities of Bern and Geneva. The search for and the analysis of biographies of women researchers from the early beginnings, especially after the First World War is the common approach in this field.

Situation of young women researchers: In the 1990s, several studies examine the situation of young researchers showing the differences between men and women on this research level. Two studies at the Universities of St. Gallen (1999) and Zurich (2000) look separately at the

situation of young women researchers at the university as a whole (St. Gallen) or parts of it (Zurich).

Reconciliation of academic career and care work: The special difficulties of women researchers because of their greater responsibility for care work are discussed, but also the possibly positive effects of family work on scientific creativity.

Measures to improve the situation of young women researchers: The improvement of the situation of young women researchers is part of the Federal Equal Opportunity Programmes (see 2.7), of which three measures are especially important in this context: creating of networks for women researchers, improvement of childcare facilities at universities and meeting the special needs of dual career couples.

Findings

History of women in science: Despite often great difficulties, there were Swiss women researchers and professors quite early, e.g. Emilie Kempin-Spyri (1853-1901) in law, Laure Dupraz (1896-1967) in education and Lucie Dikenmann-Balmer (1902-1980) in music studies. But still much later even promising doctorates and habilitation procedures of women could fail, as some well documented cases of the 1980s verify.

Situation of young women researchers: Some of the studies of the 1990s examined the working conditions of male and female young researchers pointing out the common part-time occupation with nevertheless long working hours, often too much teaching and administration with not enough time for own research, sometimes great dependency on the professors and no transparency in advancement conditions. Although these working conditions were more or less the same for women and men, these studies started to look at the situation of women researchers separately. The conclusion was, that there is (almost) no direct discrimination any more, but often indirect discrimination, e.g. less esteem, less support and encouragement.

Reconciliation of academic career and care work: The findings stay on a more general level, because statistical data on the distribution of care work are not detailed enough to give deeper insights about its effects on scientific careers. More detailed information is only available for faculty members of Swiss medical schools showing e.g. that female members are significantly less likely to be married, live with a partner or have children.

Measures to improve the situation of young women researchers: The findings are presented below (see 2.7).

Gaps

- only little research on the culture in science and research, the norms and values inside the scientific community or on the scientific cultures in the different disciplines and fields of studies, e.g. competitive versus cooperative organisational cultures,
- no studies about the scientific culture in the private or governmental research sectors,
- no empirical studies about the situation of women in the different sectors of research,
- no data and empirical studies about the organisation of scientific work, the distribution of time between paid work, care work and leisure ("work work life-balance") and the distribution of care work of researchers.

2.5. Scientific excellence

Research questions

In Switzerland, there are almost no publications which focus on the topic of gender and scientific excellence with these exceptions: the published contributions to the conference "Who are the best?" at the University of Lucerne in 2006 and a synthesis report of this conference, an issue of the journal "universelle", published at the University of Zurich, which aims at gender

and excellence in promoting young scientists and the latest bulletin of the Swiss Society of Sociology on scientific excellence in general with two short articles on gender and excellence.

Moreover, some questions concerning gender and scientific excellence are raised in publications on other topics, for example in the context of vertical segregation the differences in scientific productivity and the homosocial practices in selection procedures.

Research approaches

The published contributions to the conference "Who are the best?" analyse the gender-related aspects in recruitment procedures in general and at different universities in Switzerland and Germany in more particular. Like the synthesis report, these contributions focus on the definition and measurement of scientific excellence.

Findings

First results on this topic are

- the definition of scientific excellence as a social construction and the effects on recruitment procedures,
- the compilation of criteria of excellence, especially in recruitment procedures, and the examination of their gender relevance.

In summarising the conference contributions, the synthesis report points out that the best person in a recruitment procedure is relative to the needs of the recruiting academic institution.

The importance of the discussion about scientific excellence in promoting young scientists is acknowledged, but has to be continued and deepened.

One of the tasks of the Swiss National Science Foundation (SNSF) is the implementation of National Centres of Competence in Research (NCCR). Besides international recognition, knowledge transfer and the promotion of women, excellent quality is named as the main characteristic of NCCR projects. The attempt to establish a NCCR Gender was not (yet) successful: In the three level procedure, the National Research Council decided in 2002, not to recommend the realisation of the NCCR Gender.

Gaps

In Switzerland, the discussion of gender and scientific excellence has just started. Especially a gender-related analysis of the selection procedures in research commissions, assessment and appointment committees, expert and evaluation panels as well as their often homosocial practices is missing.

2.6 Gender in research contents

Research questions

As in other countries, there can be distinguished two main phases of the gender and science-debate in Switzerland:

- an early *informal phase* with working groups, often grey literature and first conferences on the subject "women and science",
- a subsequent *institutionalised phase* of gender issues in science with the establishing of gender studies centres and professorships, study programmes and degrees, with National Research Programmes (NRP) on gender and post-graduate programmes in gender studies.

There is research literature on gender issues in most of the scientific fields, but the focus here is on publications on gender and science in general and on the institutionalising process of gender issues in science.

Research approaches

The informal phase of introducing the woman question into science was characterised by individually motivated actions of women researchers, e.g. working groups, self-organised lectures and conferences. Depending on discipline and university, these actions started in different years, some as early as the 1970s, others much later, for example the discussion group "women and science" at the University of St. Gallen as an aftermath of the national women's strike day in Switzerland on June 14, 1991. In these informal groups and meetings, the international contributions to feminist theory were presented and discussed as well as own projects, e.g. dissertations, other publications or conference contributions, and the concrete situation of women in science. Some of these early initiatives, e.g. the Association Feminist Science Switzerland (founded in 1983) and the Swiss Congress of Gender History (previously: Swiss Congress of Women Historians, founded in the early 1980s) do exist until today.

In the early 1990s, the institutionalisation of these offers was increasingly demanded by many groups and people inside and outside the universities. Since 2000 this process has been heavily supported by the Federal Equal Opportunity Programmes (see 2.7). Today there exist gender studies centres (Universities of Basel, Bern, Geneva, Lausanne and Zurich), professorships in gender studies (Basel: Andrea Maihofer, Geneva: Margaret Maruani, Lausanne: Patricia Roux, Zurich: Bettina Dennerlein) as well as study programmes and degrees in gender studies (Universities of Basel, Bern/ Fribourg/ Neuchâtel, Geneva/ Lausanne, Zurich). Two other instruments, which have been important in this institutionalisation process, are the National Research Programme(s) on gender and the post-graduate programmes in gender studies.

Findings

Starting in the informal phase, there are contributions to the topic of women/ gender and science from most of the scientific disciplines, especially from history, philosophy, theology, social and political sciences, but some also from economics and the natural sciences. For the years 1995-1997, there exists a complete database of courses, publications, conferences etc. The often interdisciplinary contributions, which do have in common the inclusion of gender as a scientific category, reflect the comprehensive international debates, e.g. on the categories of sex and gender, equality versus difference, doing and undoing gender, the importance of care or unpaid work, men's studies and masculinities, intersectionality – to mention only some of the very essential.

With the National Research Programme(s) on gender and the post-graduate programmes in gender studies the research on gender and science has been bundled and focused on special subjects.

National Research Programmes (NRP), which are implemented by the SNSF, are concerned with questions of national importance. Two of them are focused on gender issues:

NRP 35 "Women, Law and Society: the paths to equality" (1993-1997) consisted of 23 research projects on a broad range of gender issues, mainly in the social sciences and humanities. The goal of the programme was the preparation of scientifically-based strategies for the promotion of the equal rights for women and men.

NRP 60 "Gender Equality" (2010-2013) aiming at perspectives of a sustainable gender equality policy in Switzerland called for pre-proposals in summer 2009 and for full proposals in spring 2010.

Post-graduate programmes in gender studies: The post-graduate programmes in gender studies are organised as three-year interdisciplinary networks providing tutorial support for post-graduate students, whose research deals with the analytical category of gender. The pilot post-graduate programme in gender studies, supported by the SNSF, was "Knowledge – Gender – Professionalisation: Gender Relations and Social Order" (Universities of Basel, Bern, Geneva and Zurich, 1998-2002). Up to now there have been three more rounds of post-graduate programmes at different universities or cooperation of universities supported by the Swiss University Conference (CUS) and the participating universities with a wide range of topics, e.g., Science – Gender – Symbolical Order (University of Basel, 2002-2005), Gender: Scripts and

Prescripts (Universities of Bern/ Fribourg, 2005-2008), Representation, Materiality and Gender: Present and historical restatements of gender relations (University of Basel, 2009-2011), Gender: Prescripts and Transcripts (Universities of Bern/ Fribourg, 2009-2012).

Gaps

- The international discussions of gender issues in science have not yet got through all scientific fields, e.g. economics, natural and technical sciences. All too often these issues are still put into a niche.
- Gender as analytical category has not yet reached all scientific fields; contributions are missing especially in technical sciences and engineering.
- Gender issues in science are not yet subject in the private research sector.

2.7 Policies towards gender equality in science

Research questions

In Switzerland, the following policy measures towards gender equality in science have been taken since the early 1990s:

- establishment of equal opportunity offices at every university and university of applied sciences,
- federal special measures to promote young scientists with a women's quota,
- federal equal opportunity programmes in higher education, including measures to improve the situation of young women researchers,
- institutionalisation of gender studies (see 2.6).

Publications on this topic are often evaluation reports of the different programmes.

Research approaches

Establishment of equal opportunity offices: In 1990, the Department of Equal Opportunities for Women and Men was established at the University of Bern, especially to promote young women researchers. Only little later, equal opportunity offices at other universities followed and the Conference of Equal Opportunity Officers at Swiss Universities (KOFRAH/ CODEFUHES) was founded.

Federal special measures to promote young scientists (1992-1995; 1996-1999; 2000-2004): In 1992, the programme to promote junior academic staff was launched, which run in three phases till 2004. Its five objectives were the promotion of junior academic staff, the promotion of women, the promotion of mobility, the improvement of supervision and coaching, the improvement of the coordination and cooperation between the same scientific fields at different universities. The women's quota of the newly created 170-200 positions for young researchers at all Swiss universities was at first 33% and in the third phase 40%.

Federal Equal Opportunity Programmes

- *at universities (2000-2003; 2004-2007; 2008-2011):* The main objective of the Federal Equal Opportunity Programme is to raise the percentage of women professors from 7% in 1999 to 14% in 2006 and to 25% in 2012. In the third round, the objective to increase the percentage of women in decision-making bodies is added. All three rounds consist of three modules:

Module 1 – incentive system: The universities are paid a bonus per newly appointed full or associate women professor.

Module 2 – mentoring: The organisation of projects to promote female junior scientists, e.g. mentoring programmes, workshops, information events and databases, is supported with a special focus on gender-related trainings in the third round.

Module 3 – childcare/ reconciliation of academic career: Starting with the creation of new childcare facilities or the improvement of existing ones the focus in the third round shifted to the reconciliation of academic career and family as a whole, including childcare and dual career couples.

- *at universities of applied sciences (2000-2003; 2004-2007; 2008-2011)*: The Federal Equal Opportunity Programme at universities of applied sciences (UAS) supported in the first two rounds the realisation of the action plans to promote equal opportunity at the UAS with binding strategy aims, e.g. to increase the percentage of female students in technology and economics, to increase the percentage of women as lecturers and in leading positions, to apply gender mainstreaming and gender controlling. The third round of the programme aims at the three objectives: a) gender balance of students, assistants, lecturers and administrative and technical staff, b) sensitization of students, lecturers and management to gender questions, c) establishing the gender approach in teaching, research and administration.

Findings

Today all universities, institutes of technology and UAS in Switzerland have equal opportunity institutions or commissions, partially as a result of the Federal Equal Opportunity Programmes. In 2001, the Equal Opportunity Commission of the SNSF, as a consulting body to the National Research Council, and the SNSF position "Equal Opportunity Officer for the Promotion of Research" were created.

All Federal programmes in each round were monitored and evaluated and the evaluation reports are published. So, the objectives which were not reached and the measures which did not have the desirable results after the first phases could be adjusted or changed.

Evaluation of the Federal special measures to promote young scientists: The promotion of women in the frame of the Federal special measures was very successful, therefore, the women's quota was raised up to 40% in the third phase. But as the qualitative evaluation of this programme has shown, women still had to fight against structural barriers and indirect discrimination and a women's quota alone is no guarantee for coaching and support. The special measures were not continued beyond 2004 because of financial reasons.

Evaluation of the Federal Equal Opportunity Programmes

- *at universities*: The aim of the first two rounds to double the percentage of women professors from 7% in 1999 to 14% by 2006 has been achieved. The incentive system which has contributed to the increase in new appointment rates of women professors is not very popular, but it initiated discussions about the over-representation of men in the higher ranks. The evaluation of the diversity of mentoring programmes, which was created to support young women researchers in their academic career, is very positive emphasizing the networking effects and the career advancement of many participants. The objective to offer diverse childcare facilities at universities has been reached.

- *at UAS*: The action plans and their strategy aims resulted in diverse projects at all UAS to create more favourable conditions for women, in networking projects and in new study programmes. These projects pointed especially at study fields at the UAS where the percentage of female students is low, e.g. technology and economics. Most of the strategy aims could be reached in the meantime. For the third round a special focus is now on applied gender research as another kind of gender studies that is more appropriate to the applied research at UAS.

Gaps

- Publications on this topic are often official announcements and evaluation reports.
- The percentage of women in engineering, computer sciences, mathematics, chemistry, physics and economics has not yet significantly increased.
- The programme 2008-2011 was intended to be the last round of the Federal Equal Opportunity Programmes. Therefore, it is not yet clear how the successful political measures will be continued afterwards.

3. Conclusions

Today women account for half of the students at universities and UAS, but their percentage in certain scientific fields and in senior positions is still low.

In Switzerland, the topic "policies towards gender equality in science" is most important. Because of the positive results, the Federal Equal Opportunity Programmes have been continued until 2011. The further continuation of these programmes is under discussion.

The other very important research topic is gender segregation in its different forms, especially horizontal and vertical segregation. The sex-disaggregated data on gender segregation in higher education and research, provided by the Swiss Federal Statistical Office since the 1990s and actualised every year, constitute the starting-point for most of the analytical research.

At the same time, there are topics that have just started to become research subjects in Switzerland, like

- scientific excellence from a gender perspective and
- differences in research funding between women and men.

And the most important gaps can be summarized as follows:

- a complete lack of studies about the payment of researchers and about the gender pay gap in science,
- only little information about the situation of women researchers in the private sector and no research on gender and science in the private sector,
- no studies why men are heavily under-represented in some disciplines, e.g. health and care sciences, but do easily advance in these fields ("glass elevator").
- The gender and science-debate has not yet reached all scientific fields, e.g. the technical sciences and engineering.

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