FINAL REPORT

EuroWistdom
European Women in Science TV Drama on Message

Contract Number: SAS6-036673

Content

Berlin, December 2007

1. Introduction

1.1. Objectives and Project Participants

The project EuroWistdom (European Women in Science and Technology on Message) was started in October 2006 with funds provided by the EU and was successfully completed in October 2007.

Regarding the importance of Science and Technology (SET) for the social and economic development and the under-representation of women in SET professions observed throughout Europe, there is a growing awareness that television – and here especially the popular entertainment formats – can play an important role in promoting public understanding of sciences and technology and have a positive influence of the image of such professions.

In this context, it was the project's target to initialise an intensive awareness raising process and to promote the information exchange between writers, producers, and TV executives on the one hand and scientists, researchers and engineers on the other hand. At the centre of this project was selecting and rewarding scripts with SET contents and female role models, followed by scientific advice and support for the authors and marketing for the production companies and broadcasters.

Five partner organisations with specific expertise from all over Europe co-operated in this project. The various expertises and the contact networks complimented each other perfectly. The organisations were:

Germany: Femtec. GmbH

www.femtec.org

Femtec is a university-based career centre for women in the natural and engineering sciences. It was established in 2000 by the Technische Universität Berlin and the Europäische Akademie für Frauen in
Politik und Wirtschaft Berlin e.V, and is a public-private partnership between leading technical universities and manufacturers. Its aim is to encourage interest in the natural sciences among girls at an early age, provide improved career prospects for ambitious female engineers and scientists, and develop new forms of training cooperation between universities and industry.

In 2003, Femtec set up Femtec.Network, Germany's only national network of leading technical universities. The first international partner university to join, in 2006, was the Eidgenössische Technische Hochschule Zurich.

Great Britain: OMNI Communications Ltd.

www.europaws.org

Omni has played a pioneering role in forging new connections between science and television at a European level. It was established in 1994 by two experienced BBC Producers, and has since carried out more than 50 successful projects. These include support for new TV drama focusing on science and technology, and the production of science-based TV documentaries and videos.

In 2001, Omni joined forces with a number of European partner organisa-tions to form EuroPAWS (Public Awareness of Science), with a view to developing science-based content for European television, in particular TV drama, through a variety of activities.

France: Euroscience

www.euroscience.org

Euroscience is a non-profit grassroots organisation which seeks to encourage public debate on the ways in which science and technology affect Europeans' everyday lives, from the perspective of European scientists. It also acts as a voice for people interested in the effects of science and technology on our everyday lives, and was founded in 1997.

Belgium: EuroMEI

www.unionnetwork.org/mei

EuroMEI is the European federation of film, television and culture. It represents seventy European national trade unions in the media, arts and entertainment sectors, and its members are technicians, scriptwriters, directors and others working in film and cinema production, the theatre, exhibitions and the visual arts.

One of EuroMEI's main roles is to create stronger ties between workers and unions, and it also represents its members in dealings with European institutions.

Slovenia: Ad Futura

www.ad-futura.si

The Ad Futura foundation was established by the Slovenian government in 2001. It promotes international cooperation and the exchange of Slovenian scientists and students by providing information and financial support.

Ad Futura is also helping to give Slovenia a greater role in the international training and science system. Its mission includes support for the development of a science-based society

in Slovenian and through this contributing to scientific, technological and economic reform there.

The Main Project Objectives were:

- To build on the proven success of the UKPAWS (Public Awareness of Science and Engineering) project, conducted over the last two years, that has launched this process in the UK and to use the existing EuroPAWS model of promoting public understanding of science in society to create new TV drama material that concentrates specifically on presenting encouraging female role models in science, engineering and technology (SET)
- Recognising that in Germany female representation in SET is particularly low, to conduct activities there so as to "kick start" engagement with the issue amongst TV writers, producers and broadcasters and to start to establish a SET/TV dialogue on the issue
- Also to conduct activities across a European axis that involves other countries varying in culture and size so as to establish the basis of a pan European dialogue and the basis for a critical mass of TV drama production that is on message.
- To spread information, interest and dialogue across Europe about the opportunities in TV drama and the role it can play in promoting an enhanced role for women in SET via an existing Europe wide network of members of consortium partner organisations Euroscience (scientists interested in public understanding of science) and EuroMEI (international union of writers and producers guilds).

1.2. Outline of the Report

In the following report, we will first outline the general situation regarding the impact of TV and entertainment formats for the image of SET and the decision making process involved in choosing a career. In this context, the focus will be on the situation in Germany, as it was a declared objective of the project to make the experience gathered in the EuroPAWS-Project transferable and to initiate a similar process in Germany.

This will be followed by a summary of the most important activities and the results of the project.

The second chapter provides a detailed account of the activities that took place within the project's duration, following the adjusted work packages in a chronological sequence and highlights the respective contributions made by the partner organisations. That section is followed by explanations regarding the financial plan.

The main results are presented in the third chapter and compared to the mutually agreed objectives.

The fourth chapter is dedicated to the impact of the project on the policies of the European Commission and provides recommendations for further research and project activities based

on the experience gathered in the context of this project. Here again, the particular focus is on the German experience.

The final fifth chapter draws essential conclusions.

The report was written by Tom Elsworth, Financial Director of Omni, Frau Dr. Marion Esch, research director at Femtec (Technische Universität Berlin) as well as Frau Dr. Helga Lukoschat, managing director of Femtec and is based on the reports provided by the partner organisations.

1.3. The Role of TV-Drama and the Situation in Germany

In Germany, the percentage of women working and enrolled in scientific and technological careers and courses is particularly low (only 20 percent of the students enrolled in engineering are women, the percentage of women in industrial research and development is 12 percent). Not only is there a great remoteness to the professions in the technology field to be observed among female teenagers and young women, but a significant remoteness to the (professional) environment of sciences and technology is characteristic of the fictional programmes in the media.

In the light of the influence that fictional programmes have on young people regarding their choice of university courses, as it has been shown to exist in other countries, it should be a central objective not only regarding equal opportunity policies but also educational and labour market policies to increase the representation of scientific and technological topics and attractive female professional role models covered by fictional programmes on TV. Using the media's potential to popularise careers in science and technology and to create respective female role models is all the more important as the professional world surrounding science and especially technology does not belong to the primary experience neither of pupils, nor of the overwhelming majority of teachers, parents and grandparents and usually is even beyond the horizon of occupational guidance counsellors.

A study conducted by the Institute for Employment Research, which has examined the representation of jobs in fictional programmes on German TV, arrived at extraordinarily sobering conclusions regarding the representation of SET careers and the gender distribution in different job roles.

In Prime-Time-programmes shown on TV, the percentage of technical professions featured is 1.7 % (cf. Dostal/Troll 2005, 161). In soap operas which are much coveted by young women, they are only represented by 0.7 %. Service jobs on the other hand are vastly over-represented with 91.6 % (cf. Dostal/Troll 2005, 163). Roles with women working in professional jobs are overall underrepresented (cf. Dostal/Troll 2005, 117). Traditional role models continue to have an impact: Working women are now seen as a matter-of-fact, however, they are not defined by their work. The most common professions for women are to be found in TV, media, the cultural sector and humanities. Sciences/technology and sciences and research are hardly ever represented and, to an overwhelming degree, are occupied by men. Not only is the process which adolescents undergo when making a decision about their careers characterised by narrowness, gender specific structures and with a great

remoteness to technical careers. This applies all the more strongly to the depiction of job reality in the media. Much can be said about the symbolic non-existence or marginalisation with which SET careers are presented and the way gender stereotypes are reproduced contributing to the circumstance that the young women are more likely to decide upon professions for which they are able to find interesting and diverse gender and career role models in the media while reacting disinterested and distanced regarding technical jobs.

Even though the parental home and school belong to the most important socialisation agents, their influence on career choices and university enrolment has been little researched[1]. That the media, particularly through their fictional programmes, can have a strong impact on popularising career and gender roles and therefore have a lasting effect on the decision of choosing a course at university, has been shown in studies conducted in Belgium, Great Britain and the USA (cf. Sector Skills Council for Science, Engineering and Manufacturing 2004; Women & Work Commission 2006; Holliman, Whitelegg, Allgaier, Hodgson, Scanlon 2006, Steinke 1998/2005).

So. e.g., CSI, the popular series featuring forensic personnel with a high number of attractive female role models in natural science and medical professions, has caused a flood of applications for forensic courses at universities in Britain. In Germany, too, this series has aroused the interest of young women in seeking training in forensic professions. Comparable effects have been established for docu-soaps in Belgium (cf. Beullens 2005) and for the LA Law series in the USA, which led to a rapid increase in the number of female students at law school. (Wasburn 2005). O'Bryant and Corder-Bolz have been able to demonstrate that professions that were traditionally dominated by men were rated as more interesting by women after they had watched women on TV working in those jobs. (cf. O'Bryant & Corder-Bolz, 1994, 85-97). Griffin and his colleagues noted this effect with girls from socio-economically deprived backgrounds. (cf. Griffin et al (1978, 233-244). It has been clearly pointed out in this context in various countries that the media gains particularly strong influence on the development of career concepts when "real" role models are missing from the daily reality in the life of adolescents. (Steinke 1998, 2005) Women at Work Commission 2006; Congressional Commission on the Advancement of Women and Minorities in Engineering and Technology Development 2000; Wasburn 2005/2007; Holliman et al. 2006, Kitzinger et al. 2007). Which conditions, however, have to be provided for individual series to have such an lasting effect on the career choices as was proven e.g. for LA Law in the USA or CSI in Great Britain, remains to be researched (cf. Wasburn 2005; Holliman et al. 2006).

Normative-strategic objectives for fictional programmes and plot development respectively are still rarely in place in German TV stations. Accordingly, the inclusion of socially relevant issues is not part of the agenda nor is it systematically pursued on the part of TV stations in Germany. If at all, they are usually suggested by writers and producers and additionally tend

[1] On the one hand, there are numerous research results in Germany that the compatibility of career and life concepts and self-efficacy beliefs are crucial for choosing university courses and careers. However, little research has so far been conducted regarding the process of how career concepts are developed and which information sources support them and what makes careers attractive.

to be, e.g. in comparison to the USA, underfinanced (low investment volume). There are no standards for dealing either with science and technology topics and careers or for the respective female role models in fictionalised accounts. This leads to a high degree of insecurity about whether the audience will tolerate and accept them. This lack of role models promotes an approach in which competition and financial pressure leads to adherence to tried and tested patterns. Furthermore, there is not much room for creative flexibility. This applies all the more, as attractive slots for feature films and series are limited.

The experience gained through the EuroWistdom project has demonstrated that the high level of sophistication expected from the treatments developed in the field of sciences and technology pose an additional obstacle for an improved representation: there is the need to acquire knowledge concerning complex scientific issues which need to be evaluated in their relevance as well as their chances and risks, and which often are the subject of controversial discussions within that particular scientific field. To a great extend, writers will find themselves confronted with the circumstance that there is no proven scientific basis for a specific piece of knowledge, so a suitable way for communicating scientific lack of knowledge as well as uncertainty concerning the future and chances and risks will have to be found.

Therefore it comes as no surprise that under these circumstances writers are likely to avoid topics involving science and technology as there are sufficient other interesting stories and plot which are more easily accessible, for which there are patterns and standards and that will attract an audience and be accepted by the stations. All this underlines the fact there is a need to create incentives in order to minimise the risks for writers and to supply the TV stations with appropriate encouragement to carry out programme innovations.

It could be motivating for TV stations to increase the number of programmes dealing with topics of job reality and female role models from the realm of sciences and technology as it would enable them on the one hand to boost their public value and on the other hand improve their opportunities to reach a juvenile audience. This assumption is supported among others by the fact that the world of sciences and technology in non-fiction programme areas is indeed popular and very much present in the media. A great number and broad spectrum of knowledge/science shows has made it into Prime-Time-TV and their rating especially among young people equals only those otherwise reached by the news, sports programmes or entertainment programmes such as feature films and series. Even if the adolescents with increasing age display a greater distance to school lessons involving sciences, maths and the professions connected to those subjects, this obviously does not apply to their interest in reports and documentary programmes in the media. This assumption is also supported by the fact that topics in the field of sciences are enjoying growing popularity in the non-fiction programme areas, in new inter-active media and in the web 2.0, particularly among adolescents. In addition, American series such as CSI which focus around multi-disciplinary career fields involving sciences such as forensic science, represented by attractive female leading roles, belong to the shows with the best ratings. These developments could also encourage the readiness of private TV stations to open up towards the world of sciences and technology and female role models.

1.4. Summary of Activities and Results

The EuroWistdom project was exceedingly successful as it managed to initiate, based on the experience gained in the UK with the PAWS (Public Awareness of Science) and EuroPAWS project, throughout Europe and particularly in Germany, an intensive exchange process between authors, producers and TV executives on the one hand and scientists, researchers and engineers on the other hand. The project focused on selecting and rewarding scripts with technical-scientific contents and female role models, the authors then were able to consult experts on science issues while the production companies and TV stations were supported in their marketing efforts. The project was accompanied with intensive PR work: this included an international conference with top experts at the launch of the project in Berlin. Here, for the first time in Germany, the issue concerning the under-representation of women in SET professions was successfully carried beyond science and politics into the media and it was thoroughly discussed which role TV, and in particular the entertainment formats, could have in creating a positive professional image and role models.

Indeed, it is possible for fictional programmes to address complex topics from the realm of sciences in a thrilling, entertaining and emotionally moving manner and to have them presented by personalised (female) career models. At the same time, they offer the chance of having realistic insight into the inventiveness of engineers and the fascinating world of sciences and technology. In this manner, they could provide a significant contribution for the fundamental change in the image of engineers something which has been necessary for years.

Following the initial conference, two more events took place based on the format of *Science Evenings* developed in the EuroPAWS project, held in the countries of partner organisations (Ljubljana and Paris). Those events were also very well received and attended. In the relatively short time span of only three months, writers all over Europe were informed through a combination of the project's website and the conference's website as well as PR work, and encouraged to participate in the project and hand in script treatments for the competition. The unexpectedly high number (87 registrations from nine countries) was accomplished and one of the most significant reasons for this being that the contacts of the participating partner organisations complimented each other perfectly. Here, the co-operation with script writers organised throughout Europe in EuroMEI as well as the very constructive co-operation with the Verband der Deutchen Drehbuchautoren (VDD, Union of German script writers) deserves to be mentioned.

The format of the science evenings was carried further in Germany in that a workshop format was developed which combined basic information about the situation of women in science and technology with the depiction and discussion of current science topics. Interested writers were invited to enter upon a direct and intensive dialogue with scientists. These contacts turned out to be very productive in furthering the process and demonstrated how big the need is, especially in Germany, to supply writers with information and provide new ways of doing research. In order to successfully develop plots, the scientific field as a professional

environment needs to be explored and the cultural subjects in the specific line of work should be researched, typical conflict situation, gender issues and work conditions etc., for which it is difficult to obtain information in trade literature. For these issues, structures to support and professionalise writers are not available. One of the most important results of the projects therefore is another project that will be dedicated to the setting up of the respective structures at the Berlin Technical University, funded for several years with the help of the Federal Ministry for Education and Research.

Another success factor of the EuroWistdom project is to have attracted well-known and experienced personalities for the international jury. The jury was made up of a balanced mixture of representatives from science organisations, production firms and TV stations respectively. In the process of selecting the scripts, attention was paid to the criteria that the scripts should qualify as „good drama“ as well as „good science“. Another selection criterion was the depiction of women in the roles of scientists and/or researcher as well as the experience and contacts of the respective writers to production companies and TV stations, thereby increasing the chance of having the scripts realised in the future. In this light, it was also possible to participate as a writer/producer team in the competition. Many members of the jury also got involved in the on-going process of the script development and supported writers with their expertise and set up further important contacts. Another important factor – particularly in Germany – was the successful co-operation with well-known science and research institutions as among others the Fraunhofer Gesellschaft.

Support and advice extended also beyond those writers whose treatment had been selected, to those who had made it onto the jury's shortlist in the course of the selection process (a total of 18). In the face of the high number of applications and the quality of the treatments, it seemed to make sense to use the motivational boost once it had been initialised. Currently (November 2007) two of the selected writers have signed development agreements for their scripts with a national TV station (Polona Sepe with the TV-Drama „Ink Tips“ in Slovenia and Doris and Daniel Danzer with the children's series „Zoes Tagefilm“). More writers have entered promising negotiations. The successful marketing of scripts may in the future contribute considerably to make the topic a standard fixture with production companies and TV stations, as successful formats are most likely to find copy-cats and decrease reservations regarding topics from sciences and technology. A prerequisite for this is that these topics are depicted in a gripping, entertaining and moving way.

In general, the reaction to the project in the TV stations of the participating countries was positive, though some of those in charge of the programmes were heard to utter reservations whether and to what extend the entertainment media could effectively be used to create new role models for women and whether this might be the right way to set social changes in motion. And even if experienced editors occasionally criticised some of the scripts selected by the EuroWistdom project for being too obviously written with “good pedagogical intensions” in mind.

Another critical point, especially in Germany, was whether commercial industrial companies should be allowed to participate in the development of treatments at all, and if so, to what extend. To summarise the experience gathered in the course of the project, it is strongly recommended to handle this issue very carefully and in a differentiated manner, as there should not be cause for the impression that someone is trying to gain influence on the policies of TV stations nor should there be even the slightest suspicion of product placement. At the same time, writers are interested in talking to engineers and researchers working for the industry or in visiting the production sites or laboratories as it might be necessary for the development of interesting and exciting plots, as described above, to get to know the work cultures and gather impressions on site.

Conclusions (see also Chapter 5)

The EuroWistdom Model seems to work well in its main objectives; namely to encourage new TV drama treatments involving science and technology and women in SET roles, to encourage new enthusiasm by accomplished professional writers and producers for this genre and to create a new dialogue with broadcasters.

There is a clear correlation between the holding of cross-cultural events and the response of writers leading to the creation of new TV drama ideas in this genre. Other key players like Writers and Producers Guilds or Associations become involved as part of the process – another Ripple Effect.

A conclusion is that the EuroWistdom model embracing the three key elements – Writers Grants, Cross-Cultural events and Science and Contacts advice – could be applied to include other countries not hosting events on this occasion. The scale of the EuroWistdom project is also seen as important, giving standing to the effort and attracting broadcasters and other professionals accordingly. For smaller countries, the accolade of a writer winning a European level support package is seen as prestigious and attractive to broadcasters. Equally a cross-cultural event can spur new dialogue and creative outputs.

For larger countries the process of creating dialogue between writers, scientists and broadcasters can be built on harnessing the new involvement of Writers Guilds and networks created in EuroWistdom.

As most writers, TV drama people and particularly drama broadcasters are Arts educated, the challenge of adding confidence in the appeal of science based TV drama ideas and in the content must involve long term processes. EuroWistdom has demonstrated that progress can be made and measured by various yardsticks. What is required now is to translate these gains into a medium term agenda for action, drawing on all processes that have been seen to work in encouraging new TV drama with science and engineering content and women scientist and engineers in key roles.

Another process which may help attract TV Drama executives is to show that audiences really respond to science and engineering scenarios. TV executives base their judgements largely on proven formats, for the obvious reason that drama is an expensive medium and

they are more comfortable with known content. There is much anecdotal evidence that general audiences like science on television, if well presented. This indicates that if research were commissioned that put such evidence into a formal context this could carry much weight, and help significantly to transform attitudes.