

SKILL ACQUISITION AND MENTORING DURING EARLY CAREER STAGES

The project, supported by the 1999 Athena Development Programme, led by Nottingham University, and joined by Loughborough, was to develop a support programme for postdoctoral scientists in science, engineering and technology (SET) to provide them with a mentoring framework, and the skills and confidence to embark on a long term career in SET. The rationale for the programme was that:

- whereas men frequently benefit from the advice / support of senior colleagues, women often do not have that support
- women may be working in an environment with few senior women role models
- lack of self-confidence and lack of adequate mentoring are barriers to advancement
- women tend to hold back when opportunities arise / wait too long before applying for promotion
- being opportunistic is crucial to succeeding - 'luck is the crossroads where the paths of opportunity and preparedness meet.'- participant

The programme was developed to:

- encourage participants to progress in their research/academic career
- help create an environment where women will fulfil their potential by raising the awareness of the problems faced by women in SET
- address the issues of:
 - research staff and their progression
 - personal and career issues for individuals
 - and indirectly culture, attitudes and behaviour

The programme had three main strands:

- personal and professional career development
- a self-help network for women during and after the development programme
- a mentoring scheme

NOTTINGHAM AND LOUGHBOROUGH UNIVERSITIES

The University of Nottingham has a strong research profile. All its SET schools were rated grade 4 or 5 in the last RAE. The University is strongly committed to the delivery of high quality teaching, and this is reflected in the high scores achieved by most schools in the QAA. Of a total of 6,495 students in SET 2,192 are women. There are 359 academic staff in SET of whom 47 are women.

Loughborough University is campus-based with good links to industry, commerce and the professions. It has a strong and growing research profile and has achieved high ratings in the QAA external reviews of teaching quality. Graduate employment is buoyant which has resulted in difficulties in retaining research students in SET. Of a total of 5,078 students in SET 1,120 are women. There are 331 academic staff in SET of whom 33 are women.

In both universities the number of senior women in SET is low. Loughborough has 4 women Professors and 4 Readers, and Nottingham has exactly the same numbers at those grades.

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The website for the project is www.nottingham.ac.uk/tsd/athena with details of the courses, how the participants gained from the programme and links to other websites and is also accessible via www.athena.ic.ac.uk



BACKGROUND

The programme built on an earlier University of Nottingham scheme targeted at women lecturers and equivalent at Lecturer B level, from which it was evident that in SET:

- there were fewer women than in other disciplines
- very few rose to senior grades
- the greatest loss of women was at post-doc level.

THE PROJECT

Personal and professional development

The five-day course for 25 participants was held off-campus, with 2 two-day sessions in January and April and a final day in September 2000. The aim was that at the end of the course participants would have:

- clarified their personal and professional goals
- prepared themselves to create / take advantage of opportunities for career enhancement
- identified their strengths, abilities and opportunities for professional and personal growth
- enriched their performance in their present job

The sessions included small group work, videotaping participants, role playing and, importantly, after dinner talks by women achievers in SET. The topics included:

writing grant proposals - in SET, Research Councils place an increasing emphasis on inter-disciplinary, large-scale programmes. To play in this game women have to learn to be prime movers in developing teams to make applications, not only writing the proposal but also in showing leadership.

managing a research team - successful scientists and engineers build and manage teams, which interface with other teams in different departments. Getting the best out of research staff / facilitating the interface with other groups requires a raft of skills.

applying for jobs - developing a strong application, making a presentation (now often required as part of the selection process), performing effectively at interview.

being effective on committees - something women tend not to be good at, probably through lack of confidence. As with the skills outlined above, this is something that can be acquired through practice.

Feed back from participants was positive:

- *'I want to re-evaluate my outlook and try and set some realistic goals.... I felt a little unnerved being so honest with myself'*
- *'thinking about personal/ professional goals was hard but well worthwhile'*
- *'talks from senior female staff were very inspiring'*
- *'for the first time in a long while I am seriously taking on board that I should have a strategy for developing my career'*
- *'it was very inspiring to come into contact with fellow female academics. Tips and techniques have already been applied which have led to very positive outcomes'*
- *'the course has made me re-evaluate the way I work and to examine my working practices and general approach to life'*

The self-help network for women during and after the programme

The self-help network was set up in September 1999, with two email bulletin boards, one for mentors and one for mentees. Nottingham had successful experience of this in its previous programme for women lecturers. However little use was made of these discussion forums.

The mentoring scheme

The mentoring scheme started in December 1999. The mentees were the 25 participants on the development course. There were 27 potential female mentors. Matching was achieved by providing the participants with information

on the mentors. All mentors attended a half-day mentoring skills workshop (a secondary objective was the development of interpersonal skills by the mentors). Overall the mentoring was a success as the following comments from mentees show:

- *'my mentor was very supportive (over applying for research fellowships) and gave me helpful suggestions about how to tackle the process. She had valuable insight on how the system works that I found really useful'*
- *'the ability to listen and share with another female academic in what is effectively protected time'*
- *'the phenomenally positive attitude and encouragement I get'*
- *'difference in personalities means that I get a refreshing new view on my approach and she gets novel suggestions for her situation'*
- *'it allows both of us to discuss the problems of balancing our work life and our personal lives'*
- *'she provides living proof that women can be successful in science and that you can have a career without being aggressively single minded'*

There were two events for mentors and mentees. The first introduced the programme and allowed participants to meet each other and potential mentors. The second was at the end of the programme and provided feedback and a celebration of the success of the programme.

LEARNING/TRANSFERABLE MESSAGES

- difficulties were experienced in recruiting women onto the programme at both universities, due perhaps to problems of perceptions by male colleagues
- a significant number of men in SET may need a wider appreciation of the particular problems which women in SET encounter and which may lead them to drop out, eg:
 - the lack of role models
 - balancing family and professional commitments

- a lack of understanding of equal opportunities policies – still viewed by many as political correctness rather than being important in their own right
- shared experience and mutual support is important for women in male dominated environments
- career development courses specifically for women are particularly successful
- lack of adequate childcare facilities / support from colleagues is a major problem for women at the post doc stage
- HEIs need to provide active support for part time working and job sharing
- role models are particularly important
- mentoring care in matching pairings is necessary for the experience to be rewarding

OUTCOMES

The networking among participants was valuable. It provided women with advice on developing and achieving goals. There was also the potential for developing research collaborations, but this was difficult to quantify at this early a stage.

In the short term many of the participants have indicated that the course has made them feel empowered by providing them with confidence and the ability to focus on goals - two important factors in retaining women in SET.

In the longer term the project team expects:

- more job applications by women
- more promotion applications by women
- more women members of University Committees
- more grant applications with women either as Principal Investigator or joint Principal Investigator
- fewer women leaving a research/academic career
- gradual change in the culture of laboratories and research groups as women become more effective at exerting their influence

THE FUTURE

The five-day training and development programme will be offered on a regular basis through the Training and Staff Development Unit at each University. Monitoring and evaluation will ensure that the programme evolves to meet the needs of women following a career in SET.

The project team anticipates that over a period of 5-10 years they should begin to see indications of the success of the programme. The careers of programme participants will be tracked:

- applications for internal promotion will be monitored
- participants will be expected to notify, in confidence, details of positions applied for/grant applications made
- one year after the programme end participants will be surveyed in relation to the impact of the programme on their career
- the email discussion group usage will be monitored
- the mentoring scheme will be evaluated annually by mentees and mentors.

The dissemination of the results of the project will raise awareness and on the basis that organisations only measure that which is important to them, the results of the monitoring and evaluation programme will be fed back to the institutions at senior management level.

Most Heads of Departments in SET are men. The task now to be tackled by both universities is to gain the support of Heads of Departments and other senior academics for programmes aimed at career development for women and to give them a wider appreciation of the difficulties for young women in balancing their career aspirations with child rearing.

A participant speaking at the final event summed it up *'we do not have to bang on tables, we do not have to be powerful, we must believe in ourselves, we have nothing to prove, we are not competing (for their jobs) we are not guests in academia, we are talented, skilled professionals who just want to do a good job'*

At the same event, the Vice-Chancellor of Loughborough made clear his commitment *'this kind of thing is hugely important to us, universities need to get their act together on gender.....I am very pleased that with Athena East Midlands Local Academic Women's Network based here in Loughborough we are going to continue our contribution to the Athena Project's aims and that I can sign off one of my objectives for the year – a follow up to the Athena Project'*