

COPING IN CONSTRUCTION: FEMALE STUDENTS' PERSPECTIVES

A. Powell¹, A.R.J. Dainty¹, B.M. Bagilhole¹ and R.H. Neale²

¹ Loughborough University, Leicestershire, LE11 3TU, UK

² University of Glamorgan, Pontypridd, Wales, CF37 1DL, UK

All parts of the construction industry are quantitatively and hierarchically male-dominated. In response to widespread calls for greater diversity within the sector, a number of government initiatives have been introduced to encourage women to pursue engineering degree courses, including construction programmes. Women represent the most significant group of untapped potential for the UK construction sector and so their recruitment and retention in the industry is vital for its future prosperity. This paper reports on part of an ESRC funded study exploring the impact of women construction students' workplace experiences on their career intentions. Workplace experiences are examined in the form of the year long industrial placement, as this is usually women's first major contact with the construction industry. The industrial placement also represents a key transitional stage in each student's process of becoming a construction professional (or not). Specifically, the research presented uses qualitative interviews with female construction students on industrial placement to analyse how women manage their integration into the industry, and the coping strategies women adopt. The paper concludes by explaining how the findings will be built upon in future stages of the research, in which a practical guidance document identifying initiatives to improve women's careers in construction will be developed for industry employers.

Keywords: construction career, coping strategies, culture, women.

INTRODUCTION

The UK construction industry is quantitatively and hierarchically male dominated. This is highly significant given the impact of the built environment on society. In the UK several government initiatives have been introduced to encourage women to pursue careers in the engineering professions. While such programmes have succeeded in increasing the proportion of women studying engineering, there has not been an equivalent increase in engineering and construction professionals. This indicates that although women are attracted to a career in construction, the culture and structure of the workplace may deter them from pursuing their chosen profession. Accordingly, this paper focuses on women's first experiences in the industry in order to explore how women manage their integration into the construction sector and the coping strategies they adopt. Workplace experiences are specifically examined in the form of the year long industrial placement, as this is usually women's first major contact with the industry, as well as being a key transitional stage in the students' careers.

WOMEN IN CONSTRUCTION

Nancy Lane (1997), co-author of 'The Rising Tide' report on women in science, engineering and technology (SET), commented, '*Engineering ... is a subject where*

women are currently catastrophically underrepresented'. Studies have shown, however, that women are not driven away from technology because of lack of ability, but rather because of 'an atmosphere of dominant masculinity' (Sagebiel, 2003). This is despite research by the SHEFC (1997) advising that female engineers are generally perceived as better qualified and more highly motivated than their male counterparts. Bagilhole (1997) presented a business case for increasing the number of women in industry. She explained that by failing to increase the number of women, industry is under-utilising the full range of skills and talents in the population. In addition, more gender-balanced construction organisations should be able to increase their efficiency and effectiveness by projecting a more pluralistic self-image.

As a result of such arguments numerous initiatives have been employed to increase the numbers of women entering engineering education and employment. In 1984, for example, the Women into Science and Engineering (WISE) campaign was established, with the support of the Equal Opportunities Commission and Engineering Council. The publication of the Construction Industry Board (CIB, 1996) report also raised equal opportunities to the top of the industry's performance improvement agenda, particularly in the light of the skills shortfalls forecast for the sector in the millennium (Dainty *et al.*, 1999). Such initiatives have also had some success in increasing the number of women studying engineering. Glover (2000) reported that in 1973 only 3% of engineering and technology students were women. This is compared to 15% in 2003/04 (HESA, 2005). While the figure for civil engineering is above average (19%) it is still significantly below the average across all subjects (57%) (Ibid.). However, the increase in women engineering students has failed to translate into an equivalent increase in female engineering professionals, with suggestions that less than 10% of professional engineers are women (Fielding and Glover, 1997). More recent estimates suggest that women only account for 6% of engineers and technologists in professional or associate professional and technical occupations (ONS, 2000).

As Rossiter (1982) states then, educational progress for girls, does not automatically mean occupational progress for girls. It is important, as Evetts (1997) has claimed, to examine what happens to women once they enter the engineering professions, in order to plug the so-called 'leaky pipeline'. This paper therefore examines the difficulties that students face in making the transition from higher education (HE) to the workplace, and the role the industrial placement plays in this, before exploring the coping strategies women adopt to ease their integration into the often male dominated environment of the construction industry.

FROM EDUCATION TO WORK

Adamson (1997) suggests that the transition from university to work is, for some, a turbulent one, with individuals experiencing a sense of reality shock. The transition encompasses what Arnold and MacKenzie Davey (1992) called 'unmet expectations' and what Herriot *et al.* (1993) termed 'dashed hopes'. For many this phase is also about adjustment, and the individual's key task seems to be one of orientation to the demands of work. Nicholson and Arnold (1989) argue that most companies, after they have secured their human resources, leave their graduates to adjust and find their own level without the benefit of support and guidance. Informal social processes fill this vacuum, though with uneven consequences. This is not to say that organisations are unconcerned about the effective use and development of their graduates, as much is invested and expected of them. Research indicates that graduates' negative

reactions to their first real career are common. Nicholson and Arnold (1989) suggest this is mainly a result of inflated expectations prior to joining and the misallocation/mismanagement of early tasks and roles.

Nicholson and Arnold (1989) also asked graduates which skills they found most transferable from HE. Transferable skills were found to be most important, while technical skills although also important, were much less so. One graduate said: *'I've not used much of my chemistry degree, but it taught me to think in a particular way ... taught me how to learn.'* They suggest this raises the issue of whether HE is adequately equipping students for the realities of employment. On the one hand, graduates are not being schooled in the qualities that recruitment interviewers are looking for: social skills, knowledge of business and industry, and a spirit that couples independence with responsibility. On the other hand, it would seem that HE institutions can be valued for their capacity to create strong and flexible minds, with the associated skills of being able to absorb, analyse and transform information between media (e.g. from numerical to verbal). Nicholson and Arnold discovered that although graduates were aware of having to make up for deficits in interpersonal and technical skills, they often placed less emphasis on acquiring them than on learning how to apply them in business contexts. Indeed, they suggest this often entails unlearning some of the norms and habits of scholarly work.

Arnold (1990) considers that prior to entering employment graduates typically have high expectations of working life and of their prospective jobs and organisations. In order to eliminate the conflicting thought that they might have made the wrong choice, graduates exaggerate the attractive features of their chosen job at the expense of those they have rejected. There is also evidence that graduate recruitment takes place in a 'climate of mutual selling' (Schein, 1978), where both sides understandably but damagingly highlight what they consider to be their best points and attempt to hide the rest. Exactly how damaging this phenomenon is to graduates' experiences and attitudes after starting work is less clear, but much research implies negative consequences for job satisfaction, commitment to the employer and voluntary turnover (Arnold *et al.*, 2002). However, it has been argued that unmet expectations have a relatively short-term effect on outcomes. Nicholson and Arnold (1989) noted how graduates adjust their expectations in light of reality over the first 2 or 3 years of their careers.

Nicholson and Arnold (1989) maintain that, from the new entrant's point of view, being in touch with people like yourself, who are currently or have recently been going through similar adjustments, is a great source of reassurance about the validity of your own experience, creating a sense of safety as well as providing informal insights about custom and practice. This was underlined by more direct questioning about the people or events that had helped graduates settle in to their present jobs. New entrants and internal job changers alike placed a strong emphasis on interpersonal agents. Colleagues, superiors and other new graduates were identified as particular key actors. Given the male dominated nature of the construction industry, as well as the difficulties involved in making the transition from education to work, women engineering students may face something of a double whammy, as they are far more unlikely than their male counterparts to be in touch with people like themselves. Furthermore, McIllwee and Robinson (1992) concluded, from their study of women entering male dominated workplaces, that the transition from education to work is a difficult one for women due to the appreciation of masculine strengths in the latter as opposed to academic strengths in education. Evetts (1996) found that

engineering students' first experiences clarified and confirmed the career direction they would subsequently take, whether into engineering or elsewhere. Women may be equipped for becoming academic engineers by the education system, but not for actually being engineers in the workplace.

THE INDUSTRIAL PLACEMENT

The preceding discussion emphasises the importance of the industrial placement as a potential ground for easing students into the construction professions. The various definitions of the aims of sandwich courses each express an underlying motive to promote benefits principally to the student which could not be gained on a full-time academic course alone or by undertaking work experience either before or after an academic course. Smithers (1976) advises sandwich courses help students prepare for, and make up their minds about, possible future careers as well as contributing to students' personal development, while Butler (1987) claims that one of the greatest benefits to industry from sandwich education is that students are more likely to be industrially competent and professionally capable.

One of the major espoused benefits of the sandwich course is the ability to integrate theory and practice. However, a number of studies have shown that students on sandwich courses across a variety of subject areas do not perceive a close relationship between the work they do during their placements and the work done at college (Auburn *et al.*, 1993). Further studies which have evaluated placement outcomes suggest that benefits are more likely to be attributed to an increased exposure to the everyday practicalities of industry and business rather than to an ability to relate educational and work experiences. Auburn *et al.* (1993) also discovered that the placement experience facilitates transition from final year to employment. On measures rating the experience of work and the importance of different abilities to the performance of work, results suggested that there were differences in the type and quality of work undertaken by placement and non-placement students after graduation. Placement students entered work in which they reported greater satisfaction, and also possession of skills relevant to work, especially interpersonal skills. However, whilst the experience of an industrial placement may ease the transition to work after graduation, the transition from the second year of HE to work in the sandwich placement year may still be turbulent for many students.

COPING STRATEGIES

Previous research (e.g. Evetts, 1996; Bennett *et al.*, 1999) has identified strategies women have developed for coping in male dominated environments such as engineering. Sheppard (1989) described coping as a strategy of 'blending in and claiming a rightful place'. Such a 'blending' depended on very careful management of being feminine enough in terms of appearance, self-presentation, acceptance of different expectations and of motherhood responsibilities, while at the same time being business-like enough (competent, desiring promotion to a point and in particular directions), in order to claim a rightful place in the organisation. The strategies of the women engineers in Evetts' (1998) study also demonstrated a similar balancing of the cultural expectations of being a woman and being an engineer. The management of gender was seen to lie in their own hands, and was perceived as being related to personality. The women's accounts illustrated three techniques. The first can be termed 'fronting it out'; the second was 'playing the little woman' and the third was 'building a reputation'. These responses were perceived not so much as a choice for

individual women but more as reactions and responses determined by the woman's personality and type of character:

- The response 'fronting it out' involved confronting the problem as a challenge and having the personality to do it. 'You do it back to them and they soon give it up, but you've got to have the strength of personality to do it'. However, a woman who does not appear to be or to act 'feminine' enough may find herself perceived as too masculine. Such a definition is negative and may result in the use of assumed derogatory labels, such as 'lesbian' (Sheppard, 1989). Women who fronted it out could also be perceived as confrontational, or as too aggressive for the cooperative teamwork that was required in the organisation.
- The second response, 'playing the little woman', involved tolerance, even acceptance of gender challenges and not provoking confrontation. It might also include the use of 'feminine' tactics such as tears and 'getting upset', either real or imputed, as a perceived response. Again such a response entailed serious difficulties. The male-dominant culture of the organisation could not entertain elements of perceived female weakness and submissiveness. Doing engineering involved working in teams and being able to argue a viewpoint forcefully and emphatically. To play the little woman risked being assessed by management as too passive, lacking in promotion potential and judged as unsuitable for career progress and development.
- The third resolution was generally preferred. Most women in Evetts' (1998) study argued that it was necessary to be a good engineer. By building a reputation and earning respect, the contradictory expectations could be avoided. However, problems and difficulties remain, particularly in relation to career and promotion in the organisation. To build a reputation and be a good engineer was extremely difficult when career and promotion were competitive and where there were numerous highly motivated, achievement-oriented individuals in competition for every promotion post.

All of the solutions identified by Evetts (1998) individualise and personalise the issues. Women themselves had to resolve the dilemmas, cope with the contradictions and work extra hard to achieve that elusive reputation. Such solutions continued to focus attention on the women themselves: they could choose appropriate behaviours, work extra hard, walk the tight rope and balance their gender and professional identities. Furthermore, these individualistic coping strategies are just that – 'coping mechanisms', rather than solutions to the problems women face. Such strategies therefore fail to challenge the existing culture and structures in engineering, which may be the only genuine (if difficult to achieve) way of improving women's experience and role in engineering.

Etzkowitz *et al.* (2000) have also argued that women face a series of gender related barriers to success in scientific careers, despite recent advances. Indeed, while some of their male contemporaries view female scientists as 'honorary men', others see them as 'flawed women' for attempting to participate in a traditionally male realm. Although Etzkowitz *et al.*'s research is concerned with scientists, it is equally applicable to engineering, as a traditionally male dominated sphere of work. Similarly, Evetts (1997) writes that if the woman is an efficient, competent manager, she is likely to be judged unfeminine, but if she demonstrates the supposedly female qualities of care and sensitivity she is likely to be assessed either as an inappropriate and inefficient manager, or as a good *female* manager. Numerous other research

studies also indicate that women who seek entry into male-dominated cultures either have to act like men in order to be successful, or leave if they are not adaptable to the culture, or they can remain in the industry without behaving like men but maintaining unimportant positions (see Bennett *et al.*, 1999).

METHODOLOGY

The research presented in this paper is part of an ESRC funded, research project investigating the influence of women engineers' workplace experiences on their future career intentions. The research centres on women engineering students' industrial placements, as in most cases this will be women's first major contact with their chosen engineering profession. The wider study is longitudinal and investigates students' experiences and expectations before, during and after their yearlong placement. The study explores the experiences of students from a range of engineering disciplines, recognising that engineering is not a single, homogenous sector, as it has often been treated in previous research (e.g. Evetts, 1996).

The research presented here is based on the second phase of the larger study. The principal research method was in-depth, semi-structured interviews with 28 female students on their industrial placement. Qualitative interviews were used to gain an understanding of students' transition to the construction industry, rather than to provide a taxonomical or quantitative account. The use of a semi-structured interview schedule meant that key issues identified by the researchers could be explored, while at the same time interviewees could define issues according to their own experiences and understandings. All of the data collected were tape-recorded and transcribed verbatim, before being analysed in NVivo. NVivo allowed the conceptual labelling and analysis of the data through a series of networks of nodes and links. This tool helped develop a comprehensive insight into the students' perspectives of the industry.

KEY FINDINGS

The analysis of interview data revealed several key themes relating to women students' transition into the construction industry, and the strategies women adopt to cope in the male dominated environment.

Transition to Industry

The first set of themes that emerged from the data are the issues women have to face when making the transition from HE to industry. Many students, when asked how they had found the transition to work, commented on getting used to the practicalities and routines of work, for example, commuting to work, being tired after working long days and having evenings and weekends free. Students also had to adjust to the context of their work, or work environment, including issues such as bureaucracy and office politics. Specifically students mentioned working on projects for a limited time, rather than seeing them through from start to finish, as in university; dealing with commercially sensitive information and the need for confidentiality; and coping with highs and lows in the workload:

"The worst bits are probably in the lulls when there isn't that much to do ... I try and find things to do, but sometimes it can be a bit slow."

A similar theme was that of students' attitudes to the actual nature of the work they were given to do and, for instance, whether or not they felt they had an appropriate level of responsibility. Most students seemed satisfied with the work they were given:

"I've ended up doing a lot of design work myself ...and being responsible for a lot of it."

However, not all students felt this way:

"The worst thing ...I just wish my company would rely on me a bit more and treat me like I can do stuff."

Levels of satisfaction and feelings about responsibility were clearly linked to the next theme, key actors, as well as having an impact on women's strategies for coping in industry, which will be discussed shortly.

The careers literature suggests that the transition from HE to industry is likely to be eased if individuals are surrounded by like-minded people. The data analysed here found mixed responses from students. Students with a good relationship with their manager were usually happy with the work they were given, and vice-versa, although it is impossible to show if this is a causal relationship, and if so, in which direction. Having other students on the same placement was generally seen as positive, providing the students with a ready-made support network. However, in some instances having another student on placement only served to highlight differences in the way placement students were treated:

"Compared to ... the other placement student – he has a lot more [responsibility] than me."

Coping Strategies

This set of themes concerns the strategies women develop for coping with the transition from HE to work. The data from this set of interviews identified two key issues that students have to cope with. The first is being a student in the workplace, and the second is being a woman in the workplace.

The students in the interviews did not overtly identify coping strategies they had developed either for coping in industry as a woman or as a student. One student suggested that it was actually a case of *"everyone else getting used to you"* rather than adjusting your own behaviour. However, this student did imply that to act 'too feminine' might affect how colleagues treat you:

"As long as you don't go out there thinking that you're going to get special treatment, it's all fine."

This finding resonates with Sheppard's (1989) idea of 'blending in'.

The majority of students felt that they were treated equally to permanent members of staff and were not aware that their gender had ever influenced people's reactions to them or the outcome of particular events. However, there was still evidence of some of the coping strategies identified by Evetts (1998). For example, 'playing the little woman', particularly in terms of accepting gender challenges:

"I just found out [the male placement student] got a bonus in his pay packet for helping round the office ... I don't think I'll get that ... he is an exceptionally good student."

The predominant coping mechanism, though, was 'building a reputation':

"I thought it was very male dominated, but I thought I could handle it. It's got me down a few times, but I'll just prove that I'm good enough for it."

"I think I'm definitely out there to prove myself."

Other women faced particular issues as a result of being a student. For example, not being eligible for certain training or job roles (such as first aider) because they were only seen as temporary, as well as a more extreme issues such as not being given any work:

“I don’t think it was because I was female, I think it was because I’m a student and they thought I wouldn’t know anything ... As soon as I said I haven’t used a programme before they said, ‘Don’t worry about it’ straightaway, rather than ‘okay, sit down and I’ll talk you through it’ ... they were very much aware that I’m only here twelve months”

This student chose to resolve this situation by discussing it with her line manager’s superior, although the fact it took three months to do this, suggests she was concerned about getting a bad name, or making enemies within the company. It is also interesting to note that this student, and others who experienced problems on placement, chose not to discuss their experiences with their university placement supervisors.

DISCUSSION

Findings relating to the transition to work from HE resonate well with the literature. It is clear from the analysis that this transition is a time of adjustment for all individuals making this move. Many of the issues raised by the students, especially in terms of the practicalities of work and the working environment, are not experienced within the classroom environment. The placement is therefore likely, as Auburn *et al.* (1993) suggested, to facilitate the transition to employment after graduation, as students will have some familiarity with the workplace. However, in future research it may be worth investigating whether any of these aspects of work could be emulated within the university environment, in order that some familiarity with the work environment exists prior to entering the workplace. In addition, any disillusion with the nature of the work undertaken by students could be resolved by ensuring that companies set this out when students are applying for placement positions. The difficulty here, however, is that organisations may not have this information if much of their work is project based.

The women in this study were reluctant to acknowledge the need for coping strategies in the workplace, although at least some did have such mechanisms in place, even if this was at a subconscious level. Particularly evident were what Evetts (1998) called ‘playing the little woman’ and ‘building a reputation’. ‘Playing the little woman’ was less visible in terms of using ‘feminine tactics’, but more so in the acceptance of gender challenges. Women were seen to raise an issue, but then find an excuse as to why it had occurred. For example, ‘but *he is an exceptionally good student*’ implies ‘I don’t deserve to be treated the same’. As Evetts found, coping strategies tended to focus attention on the women themselves, rather than on the gender processes implicit in the organisations. However, in this particular study, students were unlikely to be critical of the industry in which they are embarking on their careers. It can be expected that their attitudes will be positive; they are unlikely to have chosen this career path otherwise.

Whether there are particular issues occurring for women in the transition from HE to industry is unclear, as no comparison has been made to male students. However, it is also difficult because the women in the current research are students rather than permanent staff members, and this may also impact on how they are perceived by the

company and their colleagues. For example, while the student who was not given any work to do felt this was because she was a placement student, it could have been because she was female, although this cannot be proved. Future research may therefore look at women's early industrial experiences after graduation, where it may also be interesting to compare the experiences of those women who have completed an industrial placement and those who have not and, to compare men's and women's early industrial experiences.

CONCLUSIONS

This paper has explored female construction students' transition from HE to the, often male dominated, construction industry. The findings indicate that the transition is a process of adjustment for students, although the experience of an industrial placement is likely to facilitate the transition to industry after graduation. This process, however, is likely to occur for all students, regardless of gender. The research also indicates that women start to develop strategies for coping within a male dominated workforce, although these coping mechanisms do not challenge the existing culture and structure of the construction sector. However, this finding was not widespread possibly as a result of two factors. Firstly, women also have to cope with being a student in the workplace, and it is not always clear whether individuals are treated in a certain way as a result of their gender or student status. Secondly, women embarking on a career in construction will have positive, uncritical, perceptions of the industry; otherwise they are unlikely to have chosen this career path. However, these views may change with time. These factors suggest that further research is required to investigate students' experiences in the industry after graduation, in order to explore whether women's coping strategies become more explicit with time, and whether the culture of the industry deters them from pursuing their careers.

REFERENCES

- Adamson, S J (1997) Career as Vehicle for the Realisation of Self. *Career Development International*, 2(5), 245-53.
- Arnold, J (1990) From Education to Job Markets. In: S Fisher and C L Cooper (Eds.) *On the Move: The psychology of change and transition*. Chichester: John Wiley and Sons
- Arnold, J and Mackenzie Davey, K (1992) Beyond Unmet Expectations: A detailed analysis of graduate experiences at work during the first three years of their careers. *Personnel Review*, 21(2).
- Arnold, J, Schalk, R, Bosley, S and Van Overbeek, S (2002) Graduates' Experiences of Work in Small Organisations in the UK and the Netherlands. *International Small Business Journal*, 20(4), 488-97.
- Auburn, T C, Ley, A and Arnold, J (1993) Psychology Undergraduates' Experience of Placements: A role-transition perspective. *Studies in Higher Education*, 18(3), 265-85.
- Bagillhole, B (1997) *Equal Opportunities and Social Policy: Issues of gender, race and disability*. London: Longman.
- Bennett, J F, Davidson, M J and Gale, A W (1999) Women in Construction: A comparative investigation into the expectations and experiences of female and male construction undergraduates and employees. *Women in Management Review*, 14(7), 273-91.
- Butler, C (1987) The Case of Engineering. In: Linklater, P (Ed.) *Education and the World of Work: Positive partnerships*. Milton Keynes: Open University Press.

- CIB (1996) *Tomorrow's Team: Women and men in construction*. London: Thomas Telford.
- Dainty, A, Neale, R and Bagilhole, B (1999) Women's Careers in Large Construction Companies: Expectations unfulfilled? *Career Development International*, **4**(7), 353-8.
- Etzkowitz, H, Kemelgor, C and Uzi, B (2000) *Athena Unbound: The advancement of women in science and technology*. Cambridge: Cambridge University Press.
- Evetts, J (1996) *Gender and Career in Science and Engineering*. London: Taylor and Francis.
- Evetts, J (1997) Women and careers in engineering: management changes in the work organization. *Women in Management Review*, **12**(6), 228.
- Evetts, J (1998) Managing the Technology but not the Organisation: Women and career in engineering. *Women in Management Review*, **13**(8), 283-90.
- Fielding, J and Glover, J (1997) *Gender, Science, Engineering and Technology*. Research Summary. Roehampton Institute and University of Surrey.
- Glover, J (2000) *Women and Scientific Employment*. Basingstoke: Macmillan.
- Herriot, P et al. (1993) Dashed Hopes: Organisational determinants and personal perceptions of managerial careers. *Journal of Occupational and Organisational Psychology*, **66**(2), 115-23.
- HESA (2005) Table 2e: *All HE students by subject of study, domicile and gender 2003/04*. Available at: <http://www.hesa.ac.uk/holisdocs/pubinfo/student/subject0304.htm> [Accessed 02.06.05].
- Lane, N (1997) Women in Science, Engineering and Technology: The Rising Tide report and beyond. In: M Maynard (Ed.) *Science and the Construction of Women*. London: UCL Press.
- Nicholson, N and Arnold, J (1989) Graduate Entry and Adjustment to Corporate Life. *Personnel Review*, **18**(3), 23-35.
- McIllwee, JS and Robinson, JG (1992) *Women in Engineering: Gender, power and workplace culture*. Albany: State University of New York Press.
- Office for National Statistics (2000) *Labour Force Survey Spring 2000*. London: HMSO.
- Rossiter, M., 1982. *Women Scientists in America: Struggles and strategies to 1940*. Baltimore: Johns Hopkins University Press.
- Sagebiel, F (2003) New Initiatives in Science Technology and Mathematics Education at the Formal Level: Masculinity cultures in engineering departments in institutions of higher education and perspectives for social change. *GASAT 11 Conference Proceedings*. July 6-11 2003
- Schein, E H (1978) *Career Dynamics: Matching Individual and Organisational Needs*. Reading, MA: Addison-Wesley.
- Scottish Higher Education Funding Council (1997) *Winning Women: Access guide*. Edinburgh: SHEFC.
- Sheppard, D (1989) Organisations, Power and Sexuality: The image and self-image of women managers. In Hearn, J, Sheppard, D, Tancred-Sheriff, P and Burrell, G (Eds.) *The Sexuality of Organisation*. London: Sage.
- Smithers, AG (1976) *Sandwich Courses: An integrated education?* Windsor: NFER.