

# MENTORING IN BUILT ENVIRONMENT HIGHER EDUCATION COURSES

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The paper considers the potential benefits of mentoring to built environment students. UK higher education has faced and continues to face significant change in the way it operates, having moved from a service to a relatively small elite to mass higher education. With increased competition, scarce resources, unpredictable fluctuations in enrolments and income, a move towards greater accountability and an emphasis on economy have led to a managerialist approach to decision making in HE. The emphasis on efficiency has encouraged a move to the delivery of programmes and common modules for the various disciplines, so that individual course identity may not be emphasized until the latter stages of the course. Academics and industry have also called for commonality in the name of interdisciplinary working as well as a need to lower staffing requirements. The widening participation of students outside the eighteen and nineteen year old school leaver provides an additional challenge to the culture of higher education. In this changing world of higher education the needs of the diverse student population can be lost. Mentoring is a means of providing support in learning situations where individuals would benefit from some independent advice or coaching. This study originally focused on the mentoring needs of women students on built environment courses in one university. The results from a survey of male and female students indicated that mentoring would provide a useful and positive added value to many students, not just those who are feeling isolated or unsupported, and could aid in transition to employment.

Keywords: diversity, education, mentoring, student support, widening participation.

## INTRODUCTION

UK higher education has changed beyond recognition since 1985 when an elite 14% of the population went to university (Universities UK, 2001). The constant changing face of higher education in management terms and in the student population will influence the learning experience as well as retention and progression. The growth of concern for diversity in the built environment population has raised the focus on the experience of minority students (Morton 2006; Dainty and Edwards 2003; Gale and Davidson 2006). Mentoring can provide individuals with support and coaching wherever it is deemed there will be a benefit (UKRC, 2007). The UK Resource Centre for Women in Science, Engineering and Technology (UKRC) have promoted mentoring as a means of strengthening the support networks for women on higher education courses where they are in a minority. The research topic began as a dissertation topic exploring the experiences of mentoring for women students within the university as well as schemes elsewhere. This paper considers whether mentoring could make a contribution to provide added value to the student experience of built environment higher education in an era of diverse student needs and a managerialist culture.

## **HIGHER EDUCATION AND BUILT ENVIRONMENT HIGHER EDUCATION**

The UK government focus on expanding higher education is now well established with its broad themes of “Attainment, Aspiration, Application and Admissions” (DfES, 2006) whilst also introducing tuition fees (but with safeguards for low income students). According to Knight and Trowler (2000, p71) many aspects of the new face of higher education do not support improved practice in learning and teaching; indeed, they work against it. The following issues contribute to the difficulties:

- Intensification with longer hours, pressure to publish, larger teaching groups and more marking, reduced time and energy to improve teaching and learning practice.
- Hard managerialism that results in faculty being less trusted, more accountable and less professional with greater administrative procedures to follow and the delivery of curriculum in ‘bite size chunks’.
- Loss of collegiality because there is no time for general social interaction and discussion of practice.
- Greedy institutions that continue to demand more with less resource and channel staff into unrewarding roles that are service based.
- ‘Ageing, malaise and marginality’ - working on the periphery and not in an environment that encourages the confidence to take risks and innovate.

Academics are not entirely downtrodden however. Knight and Trowler also found that staff do continue to make choices and innovate autonomously, even in the face of structural change. Undergraduate student recruitment in built environment has been a subject of concern (Dainty and Edwards 2003; Wilkinson and Hoxley 2005) but as tuition fees have served to focus student interest on employability there may be potential for optimism (HESA 2006). Yet even if numbers are increasing, built environment courses still fail to attract significant numbers of women and ethnic minorities (Gale 2006; Morton 2006). Dainty and Edwards (2003) support the move towards rationalization of construction education courses. Industry also demands more interdisciplinary teaching (Construction Industry Council 2005). Whilst rationalization can provide economy of resources, raised awareness of other disciplines and provision for team working, courses need to retain a sense of identity if students are to feel they belong. With all these various pressures there needs to be a safeguard to all students experiencing the courses in order to minimize non completion. It is still necessary to prevent situations as Greed described (1991) where women built environment students would put up with anything for a few years just to get their qualification.

## **DIVERSE STUDENT POPULATIONS**

Universities are expected to recruit students from a wide range of backgrounds and are encouraged to nurture and support disadvantaged groups into and through higher education. Waterman-Roberts (1998) suggests that higher education does not have a culture that responds easily to change and, as the traditional market for degrees (18 and 19 year old) declines, the structure of higher education has not adapted commensurately. The numbers of mature and part time students have increased, and with the impetus on increased economies of scale and accessibility for non traditional students, the structures and processes to meet diverse student needs are lagging

behind. Waterman-Roberts suggest that strategies work as ‘add-on’ mechanisms and do not aim to change organizational culture. What this means for non traditional students is that their experience of higher education can be problematic unless they develop suitable coping strategies to fit in or to endure. Her research focused on the student experience. As she suggests (p4) “what is important is not so much what the culture is, but how it is experienced. What for some students may be a supportive culture, may well be for others an alienating one.”

Women continue to be a minority within built environment higher education and recent research suggests that students need to feel they belong (Morton 2006). The type of support and encouragement from academics they meet has a significant impact on their experience as students.

Table 1 shows part of the breakdown of the proportion of women entering built environment degrees showing architecture, building and planning. Small subject areas like combined studies are excluded. It can be seen that architecture has increased in numbers year on year since 2001, while building numbers decreased in 2002/3 and since then have increased slightly, although they are still behind 2001/2 levels. The percentages of women students in building remain consistently very low; these are similar rates of participation to the engineering subject areas.

**Table 1:** HESA Course Statistics 2001-2005 (HESA, 2006)

Subject area	females % 2001/2	females % 2002/3	females % 2003/4	females % 2004/5
architecture	30%	31%	37%	33%
building	14%	13%	14%	14%
planning	47%	47%	45%	45%

## MENTORING

Mentoring is an increasingly popular concept adopted in many situations where the professional or education development needs of an individual are supported in a relationship (Terrion and Leonard 2007). The development of a one to one or group relationship offers support and / or coaching in a learning or working environment in order to have a positive outcome (Mentoring and Befriending Foundation, 2007). In simple terms the process involves a mentor to provide support, listen to the mentee and offer advice and guidance when appropriate. Mentoring focuses on developing the capabilities of the mentees and helping them realize their potential (UKRC). The traditional mentoring model requires an older, more experienced person to serve one of two main functions: a task / career related function or a psycho-social function giving emotional support for someone in need (Terrion and Leonard 2007). The need for emotional support is associated with a weakness or failing in the mentee. This perception can contribute to a negative perception of mentoring (UKRC 2005). Peer mentoring and group mentoring have grown out of the traditional models, but the split between the two main strands remains. The characteristics for successful mentoring schemes include management support, recruitment process, training, matching, ongoing support and review and evaluation (UKRC 2007). Terrion and Leonard (2007) identified a number of prerequisites to consider in student mentoring schemes (p 154) including ability and willingness to commit time, consideration of gender and race, awareness of university environment, consideration of academic achievement and prior mentoring experience. Terrion and Leonard further identified a list of

attributes that would contribute to success in a student mentor (p 155) including communication skills, trustworthiness and empathy. The UKRC as the government funded body set up to support women across Science Engineering and Technology (SET) have developed and supported a number of mentoring schemes.

The JIVE project was a European Social Funded project working to tackle occupational segregation in construction, science, engineering and technology – and the project funded Mentoring Co-ordinators in different parts of the UK. There was a mentoring scheme in the researcher’s university that offered mentoring from industry mentors to undergraduates and also invited undergraduates to act as mentors to schoolgirls interested in studying built environment in the future. The scheme ran up to 2005 when funding finished. The university also offers a limited mentoring scheme for a small number of mature students and ethnic minority students which is run by Student Services.

In 2005 the Department for Education and Skills provided funding for the UKRC to manage a number of mentoring schemes for women students:

- to support retention in SET subject areas in universities
- to support progression into SET employment and
- to strengthen the framework of support to encourage female SET undergraduates to embark on higher study and research careers.

The scheme is called SET for Work (UKRC 2005). Universities were invited to submit proposals to the UKRC and a panel evaluated the proposals allocating funds to 13 universities covering a range of subject areas in the sciences, engineering, technologies and the built environment. Two schemes included the participation of built environment students. The aims of the two schemes are shown in Table 2.

**Table 2: Built Environment Mentoring Projects within SET for Work Scheme (UKRC, 2005).**

Project	Details
Employer mentoring of female students in the Department for Built environment and Design and Technology	Aim: to improve the proportion of female students moving into relevant employment and to improve the proportion of female students in the Departments. Objectives: To recruit 10-15 female students across departments and to recruit the same number of female employer mentors, with a website to support and show case studies.
Supporting Female Construction Engineers	Aim: to develop a mentoring scheme between alumni and existing students. Objectives: to enhance the aspirations of female students and engage local industry in supporting female students with CITB as partners.

The schemes experienced a number of broad issues and difficulties: (UKRC 2005, p4):

- Promoting the project in way that students can appreciate and understand. Many students are unaware of any barriers to women working or studying in SET and built environment and do not see the need for additional support. It was difficult to promote the scheme without seeming negative.

- There was a challenge of handling negative comments about gender bias in the scheme and the validity of positive action as a means of addressing under representation.
- Developing the knowledge and expertise within institutions to run and manage a mentoring programme. A number of university departments were new to mentoring and already had significant demands in time management from elsewhere. Department responsibilities are spread and diffuse and a considerable set up period was needed before anything could be achieved.

## **METHOD**

The primary data collection for this research was conducted as part of an undergraduate dissertation, supplemented by literature and linked research being undertaken by the co-authors. The data collection methods included interviews and questionnaires. The research population consisted of the following:

- Interviews with the following:
  - The leader of the team within the university working as part of UKRC to support women in SET and built environment.
  - The Departmental Head of Built Environment in one university.
  - Mentoring Coordinators working in two universities.
- Questionnaires to female students taking part in SET for Work scheme at the two 'new' universities involving built environment students. The mentoring schemes at all universities were small, so the target group for questionnaires was limited. Twelve students at one university and three students at a second university were approached
- Questionnaires were given to 10 female built environment students not involved in mentoring at the researcher's university (a 'new' university and an informal survey of male students in the researcher's cohort.

The questionnaires aimed to find out the student views of mentoring – both benefits and drawbacks and to gain a general perspective of the issues of support for women students, along with the need for role models. The interviews were used to get a broader picture of how the mentoring schemes fitted in the department and institutions and to discover the reasoning behind the set up of the various schemes and initiatives being run.

The response rates were problematic from the two universities involved in SET for Work with a number of delays in getting any feedback. Eventually from the first university 5/12 responses were received and 1/3 from the second university.

At the first university 8/12 students responded. The overall rate of return was 14/27 i.e. just over 50%. The students were studying on a range of courses across the built environment from architecture, building surveying, quantity surveying and civil engineering and were studying in both full time and part time modes and were from a range of year groups.

## SUMMARY OF FINDINGS

The results from the two SET for Work University questionnaires supported the view that it is hard to set up and embed a mentoring scheme. However the benefits are visible once the scheme is in place.

- Only one student was aware of the name of the scheme and none of the others were sure of the scheme they were part of. One student knew that it was a new scheme for women students.
- They had all received information about the scheme from their tutors either by email or in class or by the Mentoring Coordinator.
- Only two students knew that the scheme was being supported by Government funding.
- All students participating felt they had benefited from the experience of being mentored.
- All students found it a positive experience with one calling it a “fantastic opportunity”.
- All students said they would be happy to be mentors in the future if approached.
- Very few students (2) knew of any other initiatives that were in place to support women students in built environment higher education.
- No students were aware of mentoring, or included it as a factor in university choice when applying, with location and reputation being the main influence in choice.
- All students thought that mentoring provision would make a course more attractive to female students if they were aware of it.
- Over 60% of the students thought there is a need for mentoring on traditionally male dominated courses. The various reasons given included inspiration from someone else who has achieved in the area, lack of women studying the subject area, preventing intimidation. However 20% felt that women did not need special treatment and that everyone should have the chance to have a mentor.
- Overall views on mentoring were positive with an emphasis on careful matching and useful advice from someone further down the line on the industry.

The students from the first university (where there was no longer a mentoring scheme) were asked about their views of mentoring. Overall there was very little knowledge of mentoring and only 35% said that mentoring would have made their course more attractive. There was very little support for mentoring for women students alone (12%) and a negative view of being ‘marked out’ as a special group. The students were asked about whether their university should be doing mentoring. This question was also raised with the researcher’s student cohort. Comments included:

- “Why should females get extra support?”
- “A female should find herself an alternative career if she can’t get through university without a mentor.”

There was a clear consensus that if mentoring is to be provided it should be both for male and female students, so that both benefit. Those who had not experienced mentoring themselves were less sure of the need. When asked about whether support would be useful for problems, 25% said yes, maybe a mentor would help with problems. Over 35% of students were interested in taking part in any mentoring scheme that could be run, with introduction at the beginning of the course or the middle of the course.

The interviews served to add to the broad picture of built environment higher education, to expand on the initiatives in place to support women in the built environment and to understand how the mentoring schemes had been working. The following issues were drawn out:

- External funding has kick started mentoring schemes and it helps university staff who have several demands to meet. The researcher's university had previously had funding from a European project to support mentoring which finished when funding ran out.
- Induction is the key stage to inform students about mentoring and its benefits, but tutors need to be aware of the schemes because they are the primary contact point for students.
- The barriers to mentoring include the perception that you are asking for extra support, which is interpreted as being weak. The term itself can be a barrier. The use of alternative terms such as Networking and chances for meeting others in similar positions can be more attractive. There is a constant need to raise student awareness. Students do not realise they might need help.
- Student schemes with links to employers are particularly helpful in assisting progression beyond the courses into built environment employment.

The findings from this small study indicate that mentoring can be a useful source of support and development to students taking part. However the findings also indicate that the concept of mentoring is not often understood by those who are not involved. Those students who are not involved may see mentoring as a service for the needy rather than as positive career development. The universities that have received external funding have been able to set up mentoring schemes, but they still found it hard to implement. One university where funding has stopped has been unable to sustain a mentoring programme.

## **CONCLUSIONS**

A number of mentoring schemes within built environment higher education have been set up in recent years with funding from a range of sources. The schemes developed by the UKRC have been aimed at improving the retention and progression of women in the industry. Other schemes have focused on other under represented groups. As higher education changes and moves towards a managerialist approach, there is less scope for academics to develop innovative approaches to teaching and learning. As the student population is becoming more diverse it is in need of new approaches in order to ensure 'belonging'. The schemes that were examined within this research had external funding, which is a clear benefit in achieving success. The research found however, that even though funding had enabled development of a scheme, the awareness levels of students about the whys and wherefores of mentoring were limited. One university had lost its funding and consequently the scheme there had

foundered without further institutional support. Mentoring is now established as an approach to encourage individual learning in education particularly mentoring with a task and career focus. However, the alternative psycho-social strand of individual support for problems is also well used in education for those with 'special needs.' Awareness of this use of mentoring can deter students from participating in university schemes. The survey of students in three universities found that while mentoring was valued by those who were involved in it, there was still a perception by a significant number that you only needed mentoring if you were weak. This perception would clearly inhibit students, particularly female students who are already seen as a minority, but this perception could also inhibit any male from joining in such schemes.

The research findings support the proposition that mentoring schemes can benefit a diverse student population in a changing world of built environment higher education. Mentoring can provide a link to a chosen career, the construction industry in general and the world beyond higher education as well as providing real role models with the time to give individual support and information that can make a difference to progression and identity.

The research findings also identify the issues that can prevent mentoring schemes from being developed and embedded in institutions when resources are stretched. A need for correct and clear information at the start of courses and full department support for any scheme can be the difference between success and failure. If the design and resources are in place, according to the student views in this research, there is even a potential for marketing which has not been yet developed. If mentoring was properly explained and available to all then built environment higher education could strengthen its market position and provide added value to its diverse students.

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