Pathways to Success: Positive Steps into Built
Environment Higher Education for Women

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Abstract

Widening participation strategies vary widely between higher education institutions. What is meant by widening participation can also be interpreted in many ways. This research draws on a widening participation approach taken in one institution aimed at girls and women from non-traditional backgrounds (for entry to higher education) to a range of built environment related subject areas. The research was undertaken as part of a professional doctorate in education, with an action research approach involving students and lecturers. Bourdieu's concept of habitus (1990) is drawn on to explain the life aspects that can limit access to academic success for girls and women students from an early age. Entry to built environment subject areas provides another challenge as a minority. The research draws on the views of diverse women students and examines the approaches taken by the institution and academics to challenge 'habitus'. Some recommendations are made for other institutions to consider in their approaches to widen access to built environment courses for girls and women from non-traditional backgrounds.

Keywords: widening participation, gender, higher education, built environment, diversity
1. The Context of widening participation and higher education

1.1 Widening participation

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 of 14% in 1985 (Universities UK, 2001) to 43% in 2008 (DCSF, 2010) and with a target of “increasing participation towards 50% of those aged 18-30 by the end of the decade” (HEPI, 2003, p2) primarily focused on widening the socio-economic background of university students (Denham, 2008). By the late 1990s higher education students overall were more likely to be female (53% in UK); be older (59% over 21 in UK); and an increasing number coming from an ethnic minority background (10% Black or Asian in UK) according to Becher and Trowler (2001). However, behind these potentially positive statistics for widening participation, there is a different story. At the same time that higher education opened up to a mass audience, the elite universities are still dominated by advantaged groups (Reay, 1998) and there has been little reduction in relative social class inequality (Reay, Davies, David and Ball, 2001). Retention indicators released in 2009 (Denham, 2009) show the lowest ever figure (13.4%) for the proportion of students not expected to obtain an award or transfer to another institution but the statistics also reveal increasing numbers of drop out by young and mature students after their first year. The aggregated figures for ethnic minority attendance at university hides the divide between old and new university sectors where students of Caribbean origin are overrepresented (Mirza, 1998) in relation to their respective population sizes within the UK. Archer (2002, p373) proposed that widening participation policies need to move “away from raising aspirations” and to move “towards challenging inequalities such as racism”. Acland and Azmi (1998, p83) prepared a checklist of policy actions that should be considered by universities who wish to support minority groups. The list includes a number of aspects: curricula that incorporate equal opportunity and ethnic minority issues, taking care to prevent discrimination in work placement allocation, awareness raising training for staff and access for students to facilities such as prayer rooms. So, whilst access to higher education by lower socio-economic groups is well established in the United Kingdom (Hutchings and Archer, 2001) the barriers to access and progression continue to be considerable and complex along all of these axes for different groups (Mirza, 2005).

1.2 Built environment higher education

By the early twentieth century both architecture and civil engineering were accepted academic disciplines in universities whilst building and surveying had developed as applied vocational education alongside part time study (Burke, 2003). When Colleges of Advanced Technology upgraded to university status in the sixties and polytechnics were established, the academic status of building and surveying courses were also boosted (Burke, 2003) but as many of these courses were located outside the elite institutions, they were not given the same regard as architecture and civil engineering. The role of all of the professional institutions in higher education is longstanding, with interventions to control the quality of entry, to maintain standards and to preserve distinct bodies of
knowledge. Indeed, the measures introduced by the RICS within Agenda for Change (following on from the Engineering Professional Institutions to try and raise entry qualifications) have restricted access to non-traditional students (Wilkinson and Hoxley, 2005) without A levels, and was seen by a number of academics, at the time, as a backward step. The statistics for women's participation in Architecture, Building and Planning degrees has steadied at around 29% (HESA, 2009), but breaking these statistics down further shows a variance in individual subject areas with architecture at 35%, planning at 45% and building at 16%. The reality of the situation for all women studying built environment subjects is that they remain a minority. However, women, who are not part of the traditional student population, experience additional barriers that can hinder progression.

1.3 Habitus

Bourdieu (1990) studied French students in higher education and found that working class students were less successful because the curriculum was biased in favour of that which the middle classes were familiar. He developed the term 'habitus' to refer to a set of dispositions that influence and limit life choices and reality that can change over time. They are more than norms and values, because they become embedded and they come from significant influences on those at a young age - family and education, becoming part of the whole person. Hodkinson (1996, p 127) draws on the concept of habitus from Bourdieu (1990) to explain the ways that life choices are influenced by experience and thus how the life experience of an individual can broaden or limit career choice. He gives the example of a young woman who chose a career in a male dominated area (car-body repairs) because her experience with her father had gradually introduced the idea to her consciousness. He goes on to show that challenges to habitus can occur by routine or by transformation that is when teachers or other influencers challenge limiting views (p128). As new experiences are gained, while we do not change the past, we can change the way we know and understand it.

Thomas (2002) drew on Bourdieu in her study of working class students in higher education in the UK and the issues of retention. She describes students from non-traditional backgrounds being like “fish out of water” (p431) and feeling a need to return to their familiar habitus. She argues that new universities may give a higher status to teaching and learning than some traditional universities and this benefits non-traditional students, so that “students who feel respected (and valued) feel more able to take problems to staff and thus sort them out” (p432). Thomas (2002) also found the importance of social networks to help overcome the feeling of social exclusion whilst in higher education. She produced a list of characteristics that would contribute to non-traditional student success that include the following:

- Staff attitudes which minimize the social and academic difference between them and students that enable students to feel valued and seek guidance when it is needed.
- Inclusive teaching which does not assume a traditional habitus for students. This includes awareness of different educational experiences and learning styles.
1.4 The built environment learning experience

Clara Greed’s study of surveying in 1991 is still the most significant study of women in education and practice of the built environment professions. As part of her study she undertook a survey of the majority of institutions delivering surveying education; she also talked to course leaders and visited colleges and polytechnics to speak to lecturers and ex-students. Her findings on education were mixed, with academic results showing very little difference but some feedback indicating that the experience was not enjoyed (p103). She highlighted the variance in experience depending on class and individual characteristics as well as gender. The territories she describes in the late eighties are generally male dominated, with little space for women The more recent major study of architecture supported by the RIBA (de Graft-Johnson et al, 2003) found a number of negative aspects of the working culture of architecture being exhibited within architectural education namely, the „crit” system, the male dominated environment, a long hours work ethic and a lack of female role models were all present. Reports continue to raise serious concern about equality and diversity issues within the built environment (CABE, 2005; CIC, 2009).

1.5 The university and the WiSET team

Our institution is a post 1992 new university in a northern city. Student population at 2007 was 29,400 students with 75% as undergraduates, 68% studying full time and 89% UK / EU students. The ratio of male to female students in 2007 was close to national average of 49:51 (SHU, 2007). As a new university there is a strong focus on widening participation at entry, included as part of its Mission since it became a university in 1992. The university has consistently met or exceeded Higher Education Funding Council (HEFC) targets for widening participation (SHU, 2005). The need for such a focus is partly reflected by the need to recruit from the region within which it is situated which has had education participation and attainment levels below the national average for a number of years (SHU, 2005). The publication of statistics in 2009 (HESA, 2009) details 17% of the student population coming from low entry categories and 7% above the benchmark participation level set by HEFCE. The retention statistics also show a „drop-out” rate of 6.9% which is below the benchmark set by HEFCE of 8.3%.

The WiSET (women in science, engineering and technology) team grew from the participation of individual built environment academics’ participation in of a number of European funded initiatives in the late nineties to encourage and support girls and women into engineering and the built environment (Phipps, 2008). One major project, Women in the Built Environment (WITBE) has had a range of interventions with employers and schoolgirls, but has also developed a number of bridging courses for women which lead to mainstream built environment higher education courses (Formby and Yeandle, 2005) that have had a lasting impact. Involvement in these externally funded initiatives led to the establishment of a stand alone team that now specializes in support and widening participation of girls and women in Science, Engineering, Technology and the Built Environment within and outside the university. The teaching styles and activities developed for short courses have been designed to be inclusive (CUWAT, 1998; Lets TWIST, 1998). The team has been involved at a central level of the university working closely with the Widening Participation team, winning funding
for its initiatives and courses and supporting university wide events such as Diversity Week 2009, delivering presentations at university teaching and learning conferences and sharing the success of our courses to promote transition to higher education (Higher Futures, 2008). The team has links into built environment department to course teams and lecturers who have an interest in our work in outreach to schools and / or transition and access of women mature students. Examples of cooperation include mention of the team in validation documents and lecturers involved in delivery on our women only short courses. The team has built close links with voluntary and community sector partners that in turn have strong links to groups without easy access to university. As an example we received funding in 2009 from the Department of Business and Innovation within their Transformation Fund to run built environment short courses for a local Asian Women's Group. Finally the team has links to individual students and graduates in built environment as informal and formal mentors and they continue their involvement in employment as role models in our outreach work with schools.

2. Student views of built environment

2.1 Research approach

The contributions of eight women students over the period of their different mainstream built environment courses between 2005 and 2009 were collected as part of a professional doctorate in education. The research design adopted for the project was to work with two sets of actors, a group of students and a group of lecturers adopting participatory research according to Reason and Rowan's 'new paradigm' (1981). The data collection took place over four years and evolved in stages, responding to findings and the life occurrences of the women as the project proceeded. The courses covered included Architectural Technology, Construction Management, Quantity Surveying, Building Surveying and Higher National Certificate in Building Studies with full time, sandwich and part time modes of study included. The women came from different backgrounds and were of different ages and ethnicity. They completed reflective diaries and took part in interviews at different stages of their educational experience. Lecturers were involved in discussions and interviews through the life of the project. In addition to the women involved in the doctorate the paper draws on the experiences of girls and women who have links with the WiSET (Women in Science, engineering and Technology) team in the university through informal mentoring and participation on short courses. Names have been changed to ensure anonymity.

2.2 Arrivals and first days

Many of the negative aspects of higher education environments described by Greed (1991) were absent and unfamiliar to the current students.
I think it’s quite fun actually I enjoy it… I like coming in Uni and being part of it ’cos I’ve never experienced it before at all… I like the University because it’s nice surroundings; it isn’t dirty or nasty it isn’t …or anything like that (Sue)

A route into built environment higher education for women is not a routine career choice, according to the Equal Opportunities Commission (now EHRC) (2006) almost 75% women choose the 5 C”s (clerical, catering, caring, cashiering and cleaning). A number of women had family connections in built environment and in this case their choices were perceived as more natural by families. Bel had a number of family members already in the built environment sector, as she said “she had lived on a building site for most of my life” and then a cousin told her about his Building Surveying course. According to Bel

My family were all very pleased with my choice and really encouraged me, and they still do…At college my tutors told me that I had made a wrong decision, that it wasn’t worth while and that I should be choosing something that required higher entrance grades…I just ignored them, I don’t think that my college gave very good career advice.

The challenge to Bel’s choices came from education where a stereotypical view of a built environment course and career may well have been as a vocational or less academic and lower status career for a bright young woman (Burke, 2003).

The value of female role models alone as an influence for change is questionable (Byrne, 1993) yet it is recognised that the visibility of women working in the sector can reinforce a positive viewpoint. Lynn had been inspired to change her career from dressmaking to building surveying because of a passion for historic buildings. Seeing Marianne Suhr (Building Surveyor) on television inspired her to explore her options. Lynn said:

I felt at home the first time I visited the university, everyone was friendly and down to earth. It wasn’t what I had expected. I thought it might be snobby, not for the likes of me, a working class girl…I decided to apply but prepared myself that I might be rejected.

Lynn was taking a risk in her choice but she was reassured by the environment of the university and the people within it. There were still significant challenges to whether she would fit in the environment she had chosen. Her previous experiences and her influencers suggested that university study was “not for the likes of her” (Hutchings and Archer, 2001). Parveen as a mature Asian woman had also made risky choices in her career starting built environment study in further education.

I was the only Asian girl in a class full of builders and I got everything there, yes I did. None of them were racist, none of them were abusive or anything – but they tried it on all ,hey look at these photos” trying to intimidate me. And I’m like okay, yeah, whatever. I didn’t let it faze me and I soon became one of the boys…By the time I got to university I wasn’t going to be intimidated by anyone...
Parveen was encouraged to progress her career by Building Control Surveyors in the local authority office where she had been an administrator. For Parveen, her habitus had been challenged by transformation in personal experience and from influencers in her employment challenging the limiting view (Hodkinson, 1996). Parveen, and Lynn were coming from situations where their career decisions were not the norm, but their gendered experiences also differed because of their individual background and differences in class, age and race and experience.

Madalyn had taken part in one of the WiSET short courses when looking for a change in her career in the caring profession. She had support for the choice she had made but she also had challenges.

Early on it was very negative. Why is a black female who's in a successful career wanting to leave all them trappings behind. I've got a good pension so I thought why do I want to leave that? The background I come from, women don't go into construction. I know there aren't loads of women in construction. But as a black female, it's 'why? Why are you doing this?'

Support came from her brother “who drives her hard” and her husband and two children who make her feel “anything is possible.” This was still a very risky decision to make and contrary to social norms and traditional feminine roles (Risman, 2004) she had experienced to date. A challenge to Madalyn’s habitus had come about via her participation in a course showing that women can work and be successful in built environment (Hodkinson, 1996).

Even for Bel who had come straight from sixth form it was important not to feel out of her depth in her transition to university.

The best thing for me was that the building surveying course was very small. I’m very confident in a small group of people, however, no(t) so in a very large group. Having a small friendly community of building surveying with tutors such as yourself and S that you knew were dedicated to you was very reassuring and welcoming.

The pathways that these different women followed into built environment higher education illustrate the range of influences and unfortunately also the restrictions on career choices and pathways that still exist for girls and women. The importance of habitus (Bourdieu, 1990) challengers e.g. Bel's family, Parveen's work colleagues, Marian Suhr on television for Lynn and the WiSET team for Madalyn should not be ignored when trying to challenge long standing gender stereotypes. They can be found at different stages of adulthood as well as in childhood and help to break down limiting life choices.

The first days and weeks at university are very influential on a student’s ability to fit in and become part of the community (Yorke and Longden, 2008). The environment of the university, the induction process and the attitudes of tutors are all important. The attitudes and backgrounds of other students and the ability to make new friends all impact on a new student. When a woman makes a non traditional choice and finds herself in a minority it can be a shock (Greenfield, 2002; Greed, 2000),
but other aspects of her identity such as class, age and ethnicity also impact on her experience giving multiple complexities (Andersen, 2005).

New male students may also experience nervousness on arrival, but they do not have to experience the „difference” that women feel in this situation (Greenfield, 2002). They can hide in the mass. Women tend to stand out and be visible as Jill explained.

> It were a bit nerve-wracking. When I came to the open day it were, like, we all went into this big room and there were quite a lot of women in the room and then it’s like, right, we’re going to branch off into your courses and I were the only one there, all the other girls went off onto different courses and it were, like, just me and this other girl, so it were quite daunting. I thought, “I’m not going to fit in, what are they going to feel about me?” I did feel a bit nervous about it but...

The majority of students highlighted the initial contact through open days and induction as being of real importance to them and their generally positive interaction with the lecturers involved made a strong impression. The lecturers confirmed the need for enthusiastic staff at open days, with time to talk to course teams as well as a range of practical activities in induction to help students get to know each other.

Having the confidence to assert themselves and their place on a built environment course was raised by a number of the women. Getting early and good quality feedback was seen as vitally important to all the women. Parveen explained why she thought feedback on performance was more important to women on her course.

> Feedback…I think girls take it more personally as a reflection on themselves that they are not good enough – especially on a male dominated course. There’s always something to prove when you’re a female on a male course….It’s just something they think they’re naturally born to…but with girls even though they might be the same, it’s always perceived they’re not… They (boys) feel a bit intimidated (when girls get higher marks)…but then they want something to blame it on like, ‘oh they’re getting extra support and that’s why they’re getting better marks”’. I’ve noticed that.

### 2.3 Learning

> Basically you get some lecturers that interact more with students…some are just going through the motions. I really like xx…you can get to him and he’ll always give you time. When I first met him he was a bit strange at first and he’s so into his subject…but once you get to know him a bit more…I think he really stands out. (Lynn)

The lecturer’s approach to teaching and learning has been a key influencer on how the women experience any subject. Where the subject has been new to the students e.g. in building technology or materials science, an inclusive delivery style and / or a style incorporating feminist pedagogy has
been well received. That said, the positive aspects highlighted have not been specifically placed within a feminist context, but rather they are attached to a style of teaching that is inclusive to all students as individuals (De Graft-Johnson et al, 2003).

Naomi reinforced the enjoyment of practical applications: “I really enjoyed the courses that we did, the workshops, things like playing around with bricks and building bridges... understanding how the forces are going...because you're working on it...” Sue talked about “hands on” being her favourite way of learning; Joanne when asked about favourite subjects said the “ones with some practice” but the students also enjoyed the challenge of something new, even though sometimes they felt at a disadvantage to the men in the class. Jill enjoyed construction technology as a new subject area, but she felt that many other students came with knowledge, particularly the male part timers who had experience. Lynn described her concern that because she did not have a trade background, she needed to ensure she got the best degree possible to help her career, endorsing the perspective that hands on experience somehow provides an advantage in the built environment. This is a view the professions have tried to escape from (Burke, 2003).

Lynn (below) gives a description of economics as a “dry” subject and with a lecturer that does not have a good relationship with his students, yet once she is working on an assignment on her own, she is motivated by the subject, illustrating the importance of staff attitudes to students.

economics... (lecturer) I think the subject is fairly dry and you’ve got to pitch it right to get people enthusiastic in it. I actually found that one of the assignments I did, when I was doing it at home I was really getting into it...but in the actual class...nobody wanted to go to because he was a bit...well, he kept putting people down and didn’t help people understand. They might have been really basic to him but it was horrible and you just didn’t want to go in there.

These lecturers who showed respect and limited the distance between student and academic but also inspired and projected passion for their subject area were the ones Madalyn responded to and who ensured that she could see place for herself within the built environment.

... Such a passionate lecturer... He's made me look at fungus and dry rot in a different way altogether. He's in a league of his own. Absolute league of his own. I'd have never thought he was a principal lecturer - never ever because he was just so laid back. If you needed anything answering, he was there and he made it sound so simple...so simple and straight forward.

The support and close relationship with some lecturers helped to keep Madalyn going when she “felt she couldn’t cut it.”
3. Conclusions

Positive outreach by built environment departments that are committed to an inclusive and supportive learning culture can be critical in ensuring that women can become members of the built environment community. Additional aspects of identity, that include class, age and ethnicity, illustrate the complexity of intersections that impact on non traditional women (and men) in choosing to study built environment at university. Systems that promote built environment to non traditional potential students and tutors that support those students on entry as well as inclusive teaching are all interdependent. Implementing well designed open days, active induction and early feedback to build confidence have been found to contribute to recruitment and retention. The students' descriptions of the enjoyable experience of teaching and learning provided a challenging contrast to the overwhelming negative reporting of masculine subject areas and learning environments found in much of the research on women in built environment. Individual lecturers who are committed to inclusive learning in built environment have been shown to make a significant contribution to the successful transition of women into a male dominated subject area. The findings confirm the factors for success identified by Thomas (2002) in staff attitudes that minimise social and academic difference and inclusive teaching that does not assume a traditional habitus for students. The findings also support the need for consistent, multi-layered interventions and awareness raising for staff on equality and diversity. Not many universities have a dedicated team such as WiSET to support academics. Habitus challengers need to operate at all levels and over time and with sufficient resource.

References


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