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Differing perceptions of graduates from undergraduate and postgraduate courses

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Acknowledgements

The authors gratefully acknowledge their CEBE funding for this project and the assistance provided by RICS Education for the contact details of recent real estate graduates. They also gratefully acknowledge the insightful comments made by the two anonymous reviewers that have enabled them to improve the clarity of this paper.

Abstract

**Purpose** – Employability is likely to be at the forefront of any degree applicant's mind in England and Wales due to an impending large increase in the cost of tuition. The purpose of this paper is to report the findings of a Centre for Education in the Built Environment-funded project which has investigated real estate graduate competencies and employability. The paper concentrates on significant differences in emphasis by graduates from undergraduate (UG) and postgraduate (PG) courses.

**Design/methodology/approach** – Following an extensive literature review, 72 competencies have been identified and the Confederation of British Industry classification of knowledge, skills and attributes has been adopted. An online survey of 639 graduates (half UG and half PG) asked respondents to complete five-point Likert attitude scales to rate how their course enabled development of the 72 competencies. Themes developed from the results of the questionnaire study have been explored in greater detail with five real estate education providers and the human resource managers of four large London employers.

**Findings** – Rather surprisingly, UGs rated their gaining of the vast majority of the competencies more highly than PGs. This finding seems to be at odds with the impression given by the educators and employers, both of whom perceive a preference for the greater maturity and commercial awareness of graduates from PG courses.

**Originality/value** – Real estate course providers can use the results of this study to ensure that their programmes of study adequately address what is likely to become the crucial factor in the choice of any future programme of study – employability.

**Keyword(s):** United Kingdom; Universities; Undergraduates; Postgraduates; Real estate; Competencies; Employability.

1 Introduction

Many commentators predict that the changes in funding for higher education in England and Wales (Browne, 2010) will place a greater emphasis on employability. Applicants for university courses are unlikely to commit to paying up to £9,000 per year to study a course for which there are no career prospects. The Confederation of British Industry (CBI, 2010) defines employability as:

[…] a set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace – to the benefit of themselves, their employer and the wider economy.
Real estate and indeed all surveying education in the UK has undergone quite dramatic restructuring over the last ten to 15 years. Whereas an undergraduate (UG) degree was the traditional route into the surveying profession ten years ago, today there are more students studying postgraduate (PG) conversion courses in real estate than study UG courses. The number of “general practice” graduates from Royal Institution of Chartered Surveyors (RICS, 2010)-accredited courses in 2008 accounted for a total of 1,787 graduates and 2,293 student starters, while 892 and 1,162, respectively, were PG students. The total “general practice” graduate and student starters constituted 35 and 24 per cent, respectively, across the 14 major RICS (2010) professional groups. A systematic review of real estate education throughout Europe, by D'Arcy and Taltavull (2009), found that there has been an increase in the number of students and education providers in this area, and attributed this expansion in real estate education, mostly at the PG level, to the growing and changing European real estate market. They also suggested that this growth and change has transformed what is needed in a typical real estate skill set, increasing the need for economics, finance and investment skills.

RICS (2010)-accredited PG courses have now become the major supplier of future surveyors in the UK. The number of new students on this type of course was 5,156 in 2008 as compared to 419 in 2000. The number of PG students studying RICS (2010)-accredited PG degree courses, as a percentage of the whole population of new students, increased from 13 per cent in 2000 to 55 per cent in 2008. In addition, since 2004 the number of UK RICS (2010)-accredited PG courses has increased beyond the number of RICS-accredited UG courses. In 2009, there were 235 PG courses as compared with only 127 UG courses in the UK, while there were 335 PG courses as compared to 214 UG courses worldwide (RICS, 2010). This has followed the national trend of an increase in PG education generally. The past ten years or so has seen a spectacular growth in PG education in the UK higher education institutions with a 36 per cent jump in the number of students studying for higher degrees (Connor et al., 2010). This is a dramatic switch in emphasis which makes now a good time for evaluation of the education system and to see whether there are any significant differences between UG and PG real estate programmes. The focus of the research outlined in this paper is whether the two different types of courses are creating graduates with the appropriate skills and knowledge that employers require.

This paper reports part of the findings of a Centre for Education in the Built Environment (CEBE) funded study into real estate programmes of study in the UK. The larger study aimed to examine the critical factors and essential elements that are necessary for real estate courses in the UK to produce graduates valued by employers.

The key research questions of the project included:

*RQ1.* What is the required breadth and depth of content of real estate courses?

*RQ2.* What knowledge, skills and competencies do real estate professionals need in order to deliver high-quality service to their clients?

*RQ3.* Do the knowledge, skills and competencies of real estate graduates match real estate consultancy expectations?

*RQ4.* How, if at all, should real estate courses be modified?

The objectives of the research were to investigate:

1. Whether the course content of RICS-accredited real estate courses are sufficient to equip real estate graduates for careers in real estate consultancy.
2. Whether any changes are required to relevant real estate courses.
3. The expectations of real estate graduates from the real estate consultancy companies.
4. The breadth and depth of technical knowledge required by real estate professionals.
5. The breadth and depth of business and professional skills required by real estate professionals.

This paper concentrates on comparing the differences between UG and PG programmes of study. Clearly, the largest difference between these two types of course is their length. Whereas the duration of an UG programme is three years full time or four years including a placement, a PG conversion course is typically of 12 months duration by full-time study or 24 months if studied part time. Course designers have to make difficult decisions about what to leave out of a PG programme and to some extent they are constrained by RICS requirements.
which require the course to be “end-loaded” when compared with a typical UG course so that there is little space to include the fundamentals of the subjects in the curricular.

The remainder of this paper explains how real estate competencies have been identified, how data were collected by questionnaire and interviews and the findings of the research are the presented, concentrating on the essential differences between UGs and PGs.

2 Identifying real estate competencies

2.1 Built environment literature

There have been several research studies aimed at investigating industry's expectation of built environment graduates and essential reform of built environment courses across the world. Davies et al. (1999) and Wong et al. (2007) conducted research to investigate employers' expectations of construction and surveying UGs in Hong Kong. The results of these two studies were used to inform the revision of the RICS-accredited UG surveying courses at Hong Kong Polytechnic University. The research method of these two studies was of a quantitative nature and focused on gathering responses from graduates and employers. The researchers used a mixture of open and closed question surveys to collect data.

Massyn et al. (2009) conducted research to investigate whether construction management graduates in South Africa have the competencies that the industry need. As with Davies et al. (1999) and Wong et al. (2007)'s research, it was also a quantitative-based study. Data were collected through a questionnaire survey which was sent out to contractors registered at level 9 on the Construction Industry Development Board register in South Africa.

Hoxley and Wilkinson conducted RICS Education Trust funded research investigating the impact of the 2001 RICS education reform on building surveying. The targeted respondents for their research were the course leaders for the building surveying UG courses in the UK. The responses were gathered through a questionnaire survey and a focus group meeting with the large national, mainly London based, employers of building surveyors. Their research findings have been presented in Wilkinson and Hoxley (2005) and Hoxley and Wilkinson (2006), respectively.

2.2 Real estate literature

Tu et al. (2009) researched the essential elements for a highly successful graduate of a real estate programme. They collected the data through sending questionnaires to 1,000 individuals working in the real estate sector in the Clemson area of the USA.

Poon et al. (2010) conducted an extensive literature review of research on real estate graduate competencies. They identified that there has been some research looking at required real estate skills and knowledge as well as the status of current courses, but conclude that little has taken place specifically in the UK.

Gibler et al. (2002) analysed the results from a survey of corporate real estate managers from Australia, Hong Kong, the UK and the USA. In this survey, managers responded to a number of questions in addition to rating 38 knowledge and skill areas on their importance to corporate real estate management. Respondents rated “strategic planning, real estate portfolio management, the organization's business, and negotiation and deal making” as most important, and “foreign language, international finance/economics and tax management as least important”, emphasising strategic and management skills over technical and financial skills.

Epley (2004) also attempted to identify the skills and knowledge needed by corporate real estate professionals. Corporate real estate executives completed a survey in which they ranked the areas of real estate decision making in relation to importance to their area of responsibility. The areas ranked most important were: management, leasing, development, real estate finance, acquisition and sales. Executives also identified a number of concepts and skills of importance, in the areas of market interpretation, general (as opposed to specific) analysis, and people skills (Epley, 2004).

Callanan and McCarthy (2003) surveyed valuation and property management employers in New Zealand and discovered that they felt graduates lacked practical skills and knowledge and the ability to relate theory to
practice, as well as lack of knowledge in building construction and property development. Employers were, however, positive about graduates' analytical, computer, and communication skills. They also surveyed students/graduates and found that graduates felt more practical experience should be included in valuation and property management courses. They were concerned about a lack of land economics, planning studies and practical commercial content (Callanan and McCarthy, 2003).

Galuppo and Worzala (2004) reviewed academic literature, held discussions with focus groups of company representatives, and surveyed real estate professionals and alumni from the University of Wisconsin-Madison real estate programme. In their literature review, they reported that there was some agreement on what courses were offered in typical UG real estate programmes – real estate principles, finance, and appraisal or valuation – and found in their review of university web sites, that there were not many in the existing graduate real estate programmes in the USA. They found that employers desired that new graduates experienced a project-based curriculum, while professionals and graduates wanted a diversified curriculum, though they felt that existing core courses/modules were all important, and rated financial and communication skills as most important, and statistics and technology skills as least important. These findings were used to develop a graduate studies real estate programme at the University of San Diego. Galuppo and Worzala (2004) recommended that programmes encourage the development of all kinds of skills (technical, social and technological) and that they go beyond traditional business skills and incorporate a multidisciplinary approach.

Weinstein and Worzala (2008) completed a similar study, building on Galuppo and Worzala (2004) work, in which they interviewed educators, administrators and practitioners from top real estate programmes in the USA about what elements were needed in these graduate programmes to create successful graduates. They looked at newer graduate programmes, and found that there were 11 themes that should be included within programmes to enhance real estate practice, and that graduate programmes were said to be designed to produce graduates with the following key skills: decision making, risk analysis, social and ethical responsibility, negotiation, critical thinking and problem solving, oral and written communication skills, leadership, use of technology, and lifelong learning.

Manning and Epley (2006) investigated whether real estate faculties in the USA were teaching the skills and competencies required by corporate real estate professionals. They used existing real estate management literature (Epley, 2004; Gibler et al., 2002) that identified required skills, and investigated whether real estate faculties were preparing graduates adequately (Manning and Epley, 2006). They found that results were mixed; some of the skills identified as required, or important, were being taught in graduate and UG programmes, while others were not. In particular, there seemed to be inadequacies in the teaching of general business skills (Manning and Epley, 2006).

Again from the literature there is evidence of dissatisfaction with the preparation of real estate graduates, with the following areas needing improvement or a greater focus: specific real estate skills (strategic planning, real estate portfolio management, leasing, building construction, development, real estate finance, negotiation, deal making, acquisition and sales), and practical skills and knowledge (relating theory to practice) (Callanan and McCarthy, 2003; Epley, 2004; Gibler et al., 2002).

Many of the studies discussed above concluded (Callanan and McCarthy, 2003; Massyn et al., 2009) that there should be a re-evaluation of course curricula, and suggested that programmes become more aware of stakeholder concerns and needs, and incorporate these to better equip graduates for industry. Many authors have also made suggestions on ways to improve education in real estate and built environment programmes, to better meet the needs of employers and students. These include: increasing practical skills training for graduates, through the use of sandwich programmes, work experience, case studies, “on-site” training, site and “buddy” visits and the inclusion of a business paper (Callanan and McCarthy, 2003; Wong et al., 2007), and improving the quality of interactions between students and academics, linking learning to industry, supporting the development of emotional intelligence, incorporating problem-based workshops, and including online learning components (Boyd, 2005).

Most of the research discussed above used a single data collection strategy. As mentioned in Fellows and Liu (2008), a triangulation research method has its advantages. The use of both quantitative and qualitative research methods mean that the use of different data collection strategies can enhance the results as they can complement each other. Fellows and Liu (2008) stated that triangulation achieves high levels of authenticity and generalization, and most importantly objectivity. Therefore, a triangulation methodology was proposed for this
research in the belief that the deeper, richer data collected from the interview phase would shed further light on the findings of the more quantitative data collected from graduates of real estate programmes.

3 Data collection

A mixed method approach has been adopted for this study. Data collection included questionnaire surveys, interviews with RICS-accredited courses providers and interviews with human resources managers of major surveying firms.

3.1 Questionnaire survey

After the initial competencies had been identified by the literature review, the CBI (2010) classification was adopted to distinguish between knowledge, skills, and attributes. See Table I for the list of literature consulted. Additional competencies were drawn from reviewing module listings for real estate university courses offered in the UK, and teasing out the most common themes. Lastly, a review of the RICS competencies for the eight real estate-related assessment of professional competencies (APC) pathways resulted in additional knowledge areas being added to our original list. This original list consisted of 356 characteristics although of course many of these overlapped or were similar. In order to reduce this list to a manageable size the three authors brainstormed for several hours before arriving at the provisional list. Other real estate academic colleagues of the authors were consulted and provisional list was further reduced to 31 knowledge areas, 20 skills and 21 attributes to be used in the questionnaire, 72 characteristics in total. This phase of the research was considered to be extremely important as the authors wished to avoid the omission of any relevant characteristics.

The questionnaire was constructed using SurveyMonkey (www.surveymonkey.com/), an online survey tool that allows for easy online survey distribution. For each of the 72 characteristics, graduates were asked to agree/disagree with the statement “During my real estate studies I acquired (knowledge of/the following skills/the following attributes) […]” by indicating their agreement on a five-point Likert scale (1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree and 5 – strongly agree). Free text comment boxes were also included, and participants were asked to list any additional knowledge, skills or attributes that they felt were important for graduates. The questionnaire can be seen in the Appendix to this paper. A similar questionnaire was sent to employers but that part of the research is not reported in this paper.

3.1.1 Questionnaire administration and data analysis

A database of graduate (RICS members qualified in last five years and APC candidates) contact information was generously provided by the RICS Education and Qualification Standards Division. These individuals were targeted as it was hoped that their university experience would have been fairly recent, allowing them to provide valuable information about their experience. In total, 3,936 invitations to participate in the survey were sent out, though 344 were undelivered, and 66 auto-replies informing that the individual had left the company were received. Of the delivered invitations (3,526), the response rate was 18 per cent (639).

3.2 Interviews

The second stage of data collection was achieved by interviewing five RICS-accredited real estate courses providers and four human resource managers of large surveying firms. The five course directors of RICS-accredited courses were selected as these universities have long-standing reputations of delivering successful RICS-accredited courses in real estate, both at PG and UG levels. They consist of both pre-92 and post-92 universities. They are located in different geographical regions in the UK and some of them have a high proportion of international students on their courses. Human resource managers were interviewed because they are heavily involved in recruitment and development of graduates through the APC training. Therefore, it is believed that they are in position to comment on employers' expectations of graduates. The four human resource managers are all London based but they are working in different types of surveying firm. One of them is based in an international firm which has offices across the world, two of them work for surveying firms which have offices in the UK and across Europe and the last human resource manager works in a national estate agency firm. The format of the interviews consisted of presenting the findings of the questionnaire study and asking for comment. The interviews were taped, transcribed and coded by searching for similar themes. Only those responses relevant to the UG/PG nexus are considered here. Although the number of interviews involved was
relatively small, it was hoped that they would serve as an important interpretative context for the questionnaire survey results.

4 Research findings and discussion

4.1 Questionnaire survey results

Figure 1 shows the type of course studied by the graduates. As will be seen, half of the respondents had studied an UG degree and another 46 per cent had studied a PG course. Although the authors have been unable to discover any data on the actual distribution of graduate recruitment cohorts, it is believed that this distribution is fairly typical within the sector at present. Two of the human resource managers interviewed said that they have no set preferences for the types of course they recruit from but said that over the last few years they have recruited approximately equal numbers from UG and PG programmes.

As discussed in the previous section, the questionnaires used five-point Likert scales asking graduates to indicate whether their courses facilitated the gaining of each of the 72 competencies. Figures 2-4 are profile analyses used to display both the ranking of the means of variables and the differences in emphasis by the two samples (UG and PG) and significance testing has been carried out (using the non-parametric Mann-Whitney U-test) to compare our two independent samples. The Mann-Whitney U-test is appropriate since clearly the variables are unlikely to be normally distributed as they have all been selected on the basis of their importance to real estate employability. There was a significant difference ($p<0.01$) between the aggregate views of UGs and PGs in 13 of the knowledge areas, seven of the skills and 14 of the attributes. Thus, of the 72 competencies, nearly half (34) had statistically significant differences at the 1 per cent level. These competencies are denoted with an asterisk in Figures 2-4.

In compiling the charts in Figures 2-4, the competencies have been ranked (from left to right) in order of the aggregate response (all graduates). As will be seen the UG and PG responses are broadly similar in that the lines are approximately parallel. However, the most striking feature of all charts is that the PG response is by and large below the UG response (for all but nine of the competencies). This suggests that UGs are more confident that their programmes of study enabled them to acquire these areas of knowledge, skills and attributes than are graduates from PG courses. One possible explanation for this result is linked to the period that has elapsed since graduation; the mean of this figure is 6.1 years for UGs as opposed to 3.7 years for PGs. It is possible that the longer a respondent has spent working in a profession, the more confident they are likely to be and they may sub-consciously (but possibly incorrectly) associate this confidence with their education. The only way to discount this factor would be to repeat the data collection in a few years time when there will be more graduates from PG courses working in the profession.

4.2 Discussion

The following discussion focuses on those characteristics where there are statistically significant differences at the 1 per cent level between the aggregates views of PGs and UGs.

4.2.1 Knowledge differences

The mean scores by PGs are marginally above those for UGs in quantitative techniques, corporate structures and international real estate but none of these difference are statistically significant. Data manipulation and corporate structures may have been part of some of the PGs' original degrees and it is likely that international real estate is taught on more PG than UG courses. At a 1 per cent probability level, the knowledge areas where UGs are more confident than PGs are in property law, landlord and tenant law, planning, urban regeneration, sustainability, construction technology, basic accounting, project management, real estate agency, environmental impact assessment, health and safety, real estate marketing, taxation and business marketing. These are all areas where maybe the longer duration of an UG programme enables the knowledge to be assimilated better. Certainly, several of these subjects are those that build upon material delivered in previous years of courses. For example, the law subjects will build upon level 1 legal studies and it is likely that the UGs are able to more easily assimilate these legal topics if they have studied law previously.

4.2.2 Skill differences
It is surprising that the reading, oral communication, verbal presentation and listening skills of UGs seem to be so much better than those of PGs since these are generic skills that one would expect to be developed on any UG degree programme. Of course it is entirely possible that the PG sample believed that they had already acquired these skills on their original UG degree and did not expect to acquire them on their real estate conversion programme. Less surprising are the subject specific-skills of graphical communication, IT and negotiation skills that appear to be better developed in UGs than PGs. Again it is likely that these skills are developed “year-on-year” on UG programmes.

4.2.3 Attribute differences

Whereas in the knowledge and skills section of the questionnaire there were at least some PG mean responses that were equal to or exceeded the mean UK response, in the attributes section all of the PG mean responses are lower than those for UGs. Indeed as will be seen from Figure 4, two-thirds of these mean attribute responses are significantly different at a 1 per cent level. Again some of these findings are quite surprising given that one would expect most of these attributes to be developed by other degree courses. Clearly, however there is much less time for a PG student to gain practical experience than there is for an UG who may well have undertaken a 12-month placement as part of their course. As indicated previously, it is possible that the PG graduates believe that the attributes they possess were developed during their previous studies rather than on their PG real estate programme. Another possible explanation lies in the period expired since graduation. As this was longer for the UG students, they may have greater confidence in their possession of these qualities since many are developed and honed in the workplace. In order to explore some of these issues further they were the subject of the interviews conducted with the course providers and human resource managers.

4.3 Interview results

One of the interviewees was the course director of a leading PG real estate programme but he also teaches on his university's UG programme. He spoke about the tensions between the UG and PG students and described “a level of despondency among UG students because the PGs are getting all the jobs”. He said “you have to be hungry to get a job in today's market and because PGs have paid a lot of money to study their course they are that much hungrier”. He also said that UGs are often focusing on taking a gap year as they are about to graduate and because of that may not be sufficiently motivated when applying for jobs. All of the human resource managers interviewed said that they do not have any set policy on employing UGs or PGs and that the decision is made at interview when the best candidates are selected. One interviewee did make the point however that in terms of commercial awareness PGs seem to be more “savvy” and that they generally come across as more mature “not necessarily because they are older but because they have done more”. Another manager made the point that PGs have generally made a conscious decision to chose and pay for a programme in real estate whereas UGs may have just drifted onto their course without a full appreciation of what real estate involved.

The balance between the three graduate competencies adopted by this study (knowledge skills and attributes) in terms of employability was mentioned by several interviewees. One university respondent said:

[…] if employers can afford it they will go for attributes because they know they can't really teach leadership and they can't really produce enthusiasm but you can teach valuation at a later stage. So if they can afford it, they take a long-term view and appoint on the basis of attributes.

If, as indicated by several interviewees, employers appoint principally on the basis of the attributes or personal qualities that an applicant possesses, then it really does not matter what type of course (PG or UG) that a real estate graduate studies since as all of the course providers acknowledge, their programmes of study can do little to enhance the innate personal qualities of their graduates.

5 Conclusions

After an extensive literature review of graduate competencies, 72 real estate areas of knowledge, skills and attributes have been identified. An online survey of recent graduates has been completed by 639 respondents (almost equally divided between those graduating from UG and PG courses). The average time since graduation for UGs was 6.1 years compared with 3.7 years for PGs. The respondents have used a five-point Likert scale to rate how their degree courses developed these 72 competencies. The overall finding is that the UGs appear more confident but this finding is at odds with the overall theme of interviews with course providers and real estate
human resource managers both of whom seem to suggest that employers prefer the greater maturity of conversion course students. All of the human resource managers said that they had no set preference for either group but that they always appointed the best candidate to the post. It seems that the innate personal qualities of graduates are what secure them employment and these qualities are clearly developed much earlier in life than in tertiary education. However, real estate course providers at UG and PG levels can use the results of this study to benchmark their own provision in the areas that they can influence (principally in the acquisition of knowledge and skills) to ensure that future graduates find employment in the profession – something that applicants to any degree programme are likely to place above all other concerns when they are required to pay up to £9,000 per annum in tuition fees.

The authors acknowledge that a limitation of their study was the failure to collect data on the type of UG courses studied by the PG respondents. Such data would have enabled a much more detailed look at how the earlier courses had influenced their acquisition of knowledge, skills and attributes.

Figure 1 Type of course graduated from
Figure 2: Knowledge gained on programme of study

Note: Significant difference: *$p < 0.01$

Figure 3: Skills developed during course

Note: Significant difference: *$p < 0.01$
**Figure 4** Attributes gained

**Note:** Significant at: $^*p < 0.01$

<table>
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<tr>
<th>Authors (year)</th>
<th>Title</th>
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*Table 1.* Literature consulted to compile initial list of knowledge, skills and attributes

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