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# COBRA 2010

## The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors

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The RICS COBRA Conference is held annually. The aim of COBRA is to provide a platform for the dissemination of original research and new developments within the specific disciplines, sub-disciplines or field of study of:

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## Peer review process

All papers submitted to COBRA were subjected to a double-blind (peer review) refereeing process. Referees were drawn from an expert panel, representing respected academics from the construction and building research community. The conference organisers wish to extend their appreciation to the following members of the panel for their work, which is invaluable to the success of COBRA.

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**In addition to this, the following specialist panel of peer-review experts assessed papers for the COBRA session arranged by CIB W113**

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# Real estate education: a comparative study of employer requirements and graduate self perceptions

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## Abstract

This paper reports the initial findings of a Centre for Education in the Built Environment (CEBE) funded study into real estate programmes of study in UK universities. A literature review identifies 72 characteristics that real estate graduates could possess – these are divided into knowledge, skills and attributes. On-line questionnaires have been completed by 639 recent graduates of real estate courses and 62 employers. The questionnaires used 5-point Likert scales asking respondents to indicate their level of agreement to the importance of each of the characteristics (by the employers) and whether their courses facilitated the gaining of these (by the graduates). Profile analyses have been used to display both the ranking of the means of variables and the differences in emphasis by the two samples and significance testing has been carried out. In addition, employers and graduates were both asked to identify any other issues that they considered important to real estate education. The findings should provide some comfort to such education providers since the top employer rated knowledge and skills are by and large found in most programmes of study. Universities would argue that they cannot actually do much about the personal attributes that graduates possess. There are significant differences in the views of employers and graduates and the only area of knowledge in which graduates currently exceed the requirements of employers is ‘research methods’. The comments made by both groups suggest that practical experience is considered to be missing from courses but most universities would not see that their principal is to provide this. Of course by including a placement year and by encouraging students to seek work experience during their studies, course providers can help to alleviate these concerns. The paper concludes with a discussion of the future direction of the research.

*Keywords:* Attributes, Education, Employers, Graduates, Knowledge, Real estate, Skills, Universities

## 1. Introduction

Professions world-wide have reacted to scandals such as WorldCom and Enron by recognising the need to tighten the regulation and control of their members. The global economic crisis is leading to the tightening of financial control in all the major economies and real estate practitioners will be impacted by these changes. Providers of real estate education should to be aware of what employers are looking for in the graduates they need to help them cope with the demands of clients in this ever-changing economic environment.



The number of 'general practice' graduates from RICS accredited courses has increased in recent years, and in 2008 accounted for a total of 1787 graduates and 2293 student starters, while 892 and 1162 respectively were postgraduate students (RICS, 2010). The total 'general practice' graduates and student starters constituted 35% and 24%, respectively, across the fourteen major RICS professional groups (RICS, 2010). 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 postgraduate level, to the growing and changing European real estate market (D'Arcy and Taltavull, 2009). They also proposed that this growth and change has transformed what is needed in a typical real estate skill set, increasing the need for economics, finance and business skills.

Royal Institution of Chartered Surveyors (RICS) accredited postgraduate courses have now become the major supplier of future surveyors in the UK. The number of new students on this type of course was 5156 in 2008 as compared to 419 in 2000 (RICS, 2010). The number of postgraduate students studying RICS accredited postgraduate degree courses, as a percentage of the whole population of new students, increased from 13% in 2000 to 55% in 2008 (RICS, 2010). In addition, since 2004 the number of UK RICS accredited postgraduate courses has increased beyond the number of RICS accredited undergraduate courses (RICS, 2010). In 2009, there were 235 postgraduate courses as compared with only 127 undergraduate courses in the UK, while there were 335 postgraduate courses as compared to 214 undergraduate courses worldwide (RICS, 2010). This is a dramatic switch in emphasis which makes now a good time for an evaluation of the education system and an investigation into whether or not real estate programmes are creating graduates with the appropriate skills and knowledge that employers require.

The global recession has hit the world economy hard, and although the real estate market has shown some resilience, it has also suffered, affecting the labour market for real estate professionals. Many real estate professionals have been made redundant or have taken on extra or different responsibilities in order to keep their employment. In these circumstances, it may be that only sufficiently skilled real estate staff remain in full-time employment. In addition, because the number of graduates from the RICS accredited postgraduate conversion courses has increased in the last decade, there are more graduates entering the surveying profession, leading to an over abundance of real estate professionals. There is a need to know if these graduates are in fact adequately qualified and whether universities are preparing graduates for the workplace and the current economic climate. The authors perceived a need to ascertain the views of employers on what they require and the opinions of graduates on their experience of the education they received.

Research investigating employer expectations of built environment graduates has been conducted in various countries over the last two decades. Previous research has focused on the expectations of surveying graduates in Hong Kong, South Africa and the USA, but there has been little research studying competencies of surveying graduates in the UK. There has been some research conducted in the UK with a building surveying focus, but the skills, knowledge and competency requirements of UK real estate graduates has not yet been investigated.

This project, funded by the Centre for Education in Built Environment, aims to fill the gap in previous research and examine the critical factors and essential elements that are necessary for real estate courses in the UK to produce successful graduates.

The key research questions of this project included:

- What is the required breadth and depth of content of real estate courses?
- What knowledge, skills and competencies do real estate professionals need in order to deliver high quality service to their clients?
- Do the knowledge, skills and competencies of real estate graduates match real estate consultancy expectations?
- How, if at all, should real estate courses be modified?

The objectives of the research were to investigate:

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

This paper presents the research findings, to date, that have come from a questionnaire study, looking at employers' expectations of graduates and graduates' perceptions of what they attained during their studies.

## **2. Literature Review**

Davies, Csete and Poon (1999) note that employers and academics with a connection to professional studies programmes often have competing interests. Employers expect graduates to be immediately effective, instant fee-earners, while academics focus on teaching broad educational aims and higher

level intellectual skills (Davies et al, 1999; Harvey et. al., 1997). Eraut (1994) delves further into this issue, describing this conflict as one relating to a difference in engagement in scientific versus professional knowledge. Eraut states that:

*professional educators cannot easily engage both in [...] scientific research and in extending their own professional knowledge base. The norms of higher education tend to favour scientific knowledge rather than professional knowledge, and to encourage different research priorities from those likely to be espoused by the professions, thus helping to widen the gap between professional educators and their erstwhile professional colleagues (Eraut, 1994, p.9).*

Davies et al. (1999) also describe how current qualification procedures (a degree programme, followed by practical experience, leading to some test of professional competence) further separate technical from practical knowledge. Though employers see the benefit of university education, they typically feel that it does not prepare graduates for the work they will actually do (Harvey et al., 1997), however, what Love, Haynes and Irani (2001) say employers fail to see, is that they themselves need to help graduates connect what they have learned at university with what is required on the job. The competing interests of employers and academics may not easily be resolved, and it is likely some combination of both higher level theory and practical knowledge and skills is required for graduates to be successful. Nonetheless, a further examination of the defining knowledge and skills employers expect from real estate graduates, as well as the current status of real estate education will be valuable to this discussion.

In order to identify the knowledge and skill sets required for general graduates to be successful in the working environment, Harvey et al. (1997) collected the views of employers from various fields. They found that employers desired people that were *adaptive* and could rapidly integrate into the workplace, *adaptable* and willing to learn and evolve in a changing environment, and *transformative*, able to use higher order thinking and advanced communication skills. Several other studies have investigated industry expectations of built environment graduates more specifically (e.g. in the areas of general property and construction, surveying, construction management, and corporate real estate) and in different countries (e.g. the UK, Hong Kong, South Africa, Australia, and the US).

## **2.1 Built Environment literature**

The College of Estate Management (1992) undertook a study to investigate the skill set needed within the property and construction industry in the UK. Interviews were completed with key representatives from the industry, and course directors and administrators. The CEM's 1992 report described a mismatch between the skills required by employers and the skills graduates in property-related

subjects actually possessed. Graduates were reported as lacking financial expertise, and business management, strategic planning, operational management, and communication skills (College of Estate Management, 1992).

Davies et al. (1999) and Wong, Wong and Hui (2007) conducted studies in Hong Kong investigating employer expectations of construction and surveying undergraduates, respectively. Davies et al. surveyed new graduates and their employers using a paired survey methodology and found that there was general agreement between employers and graduates on a common set of skills they felt graduates required, and on the level of achievement of these skills by these graduates. Additionally, both employers and graduates described a need for further training of construction graduates in areas of general intellectual and analytical skills, specialist technical skills, and practical knowledge (Davies et al., 1999). Wong et al. (2007) alternatively, surveyed undergraduates, employers and alumni using three sets of structured questionnaires, and found that graduates' performance had declined in recent years, and that graduates now needed practical knowledge, practical training, and social, language, presentation, computer, and IT skills. The results from these two studies (Davies et al., 1999 and Wong et al., 2007) were used to inform the revision of the RICS accredited undergraduate surveying courses at the Hong Kong Polytechnic University.

Massyn, Mosime and Smallwood (2009) conducted research investigating whether construction management graduates in South Africa had the competencies that industry needed. Like Davies et al. (1999) and Wong et al. (2007), Massyn et al.'s (2009) research was based on questionnaire data. A questionnaire survey was sent to contractors registered at Level 9 on the Construction Industry Development Board (CIDB) register in South Africa. Respondents indicated that along with technical and behavioural skills, characteristics such as enthusiasm, personal values, and commitment to work were also important (Massyn et al., 2009). Knowledge areas such as managing construction projects, and leading internal teams were also considered significant by respondents. Though respondents reported that graduates did demonstrate an average to good understanding in such areas, their level of knowledge was not rated as exceptional in any area, demonstrating that the depth of understanding could be improved (Massyn et al., 2009). Drawing from their research, Massyn et al. (2009) concluded that the industry focus was on human skills, such as teamwork, problem solving and adaptability, rather than on technical skills.

Love et al. (2001) investigated whether construction management graduates in Australia were meeting the expectations of contractors. Findings showed that graduates were generally meeting industry expectations, though there were still some skills in which graduates were below par (Love et al., 2001). These included practical building knowledge, professional judgement and interpersonal and time management skills. Zou (2008) also explored industry expectations in Australia by collecting

information from a one day focus group workshop that included academics, industry leaders, and students. This focus group concentrated on the concept of graduate attributes, and agreed upon a list of needed knowledge and skills. There were, however, some attributes that students did not initially identify as important. These included respect for diversity, ethical practice, social responsibility and internationalisation (Zou, 2008). Students did note the importance and necessity of the inclusion of assignments and coursework with real life relevance (Zou, 2008). Of course not everything employers expect can be delivered on a university course but it is not unreasonable to assume that graduates will enter the work-place with a reasonable level of core knowledge and some confidence.

Lee and Hogg (2009) looked at early career training for quantity surveying professionals, and found that there were differing levels of training and support provided to new graduates, dependent on employer type, and also that there was a positive correlation between graduates' self-perception of competence and the frequency with which they carried out given activities. In general they found that there were low levels of confidence in professionals in their early career years. Clearly, QS education is not quite delivering what employers require.

In the Agenda for Change education reforms of the 1990s (see Lay, 1998) certain technical disciplines of surveying were initially disadvantaged by the increase in the required entry qualifications. Hoxley and Wilkinson conducted RICS Education Trust funded research investigating the impact of the 2001 education reform on building surveying. The targeted respondents for their research were course leaders for building surveying undergraduate courses (as reported in Wilkinson & Hoxley, 2005) and large national, mainly London-based, employers of building surveyors (as reported in Hoxley & Wilkinson, 2006). They found that recruitment was static, that course leaders had very strong views about the adverse affects of the reforms, and that employer concerns existed about the adequacy of core courses.

Clearly there is some dissatisfaction with the current level of skills and knowledge graduates in the built environment are attaining. Though the skills and knowledge in question vary, there is some evidence for additional training for Built Environment students in the following areas: business skills (finance, business management, strategic planning, operational management), people/communication skills (interpersonal, social, language, cooperation and presentation skills), computer and IT skills, general intellectual and analytical, and practical knowledge and skills, as well as specific attributes (professional judgement, enthusiasm, personal values, commitment to work, respect for diversity, ethical practice, and social responsibility) (see College of Estate Management, 1992; Davies et al., 1999; Love et al., 2001; Massyn et al., 2009; Wong et al., 2007 and Zou, 2008). Having looked at built environment graduate attributes, the authors moved on to look at what the literature said about real estate graduates more specifically.

## 2.2 *Real estate literature*

There has been some research looking at required real estate skills and knowledge as well as the status of current courses, but little has taken place specifically in the UK.

Gibler, Black and Moon (2002) analysed the results from a survey of corporate real estate managers from Australia, Hong Kong, the UK and the US. 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 (Gibler et al., 2002, p254).

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 (Epley, 2004). 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 a lack of knowledge in building construction and property development. Employers were, however, positive about graduates’ analytical, computer, and communication skills. Callanan and McCarthy (2003) 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.

Galuppo and Warzola (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 undergraduate real estate programmes –“real estate principles, finance, and appraisal or valuation” – and found in their review of university websites, that there were not many existing graduate real estate programmes in the US (Galuppo and Warzola 2004, p.26). 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 Warzola (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 (Galuppo and Warzola, 2004).

Weinstein and Worzala (2008) completed a similar study, building on Galuppo and Warzola's (2004) work, in which they interviewed educators, administrators and practitioners from top real estate programmes in the US about what elements were needed in these graduate programmes to create successful graduates (Weinstein and Worzala, 2008). 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 life-long learning (see Weinstein and Worzala, 2008, p.392).

Manning and Epley (2006) investigated whether real estate faculties in the US were teaching the skills and competencies required by corporate real estate professionals. They used existing real estate management literature (see Epley 2004 and Gibler, Black and Moon, 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 undergraduate 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 and Gibler et al., 2002).

Stakeholders, described by Boyd (2005) as students, funding bodies, industry employers, academics and the general public, all influence real estate (and other built environment) education programmes with their competing goals and needs, each applying differing pressures. With these pressures comes a demand for more effective teaching and learning, that will enable, despite reduced funding and

reduced staff-student contact time, students to be ‘industry ready’ on the completion of their programmes.

Many of the studies discussed above concluded (see Callanan and McCarthy, 2003; Harvey et al., 1997; Love et al., 2001; 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 and 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).

Our goals, like much of the literature discussed, focus on an increased understanding of the match between graduates’ abilities and employers’ expectations, what skills employers feel graduates need, and if graduates feel their programmes have equipped them with these skills and abilities, focusing on the real estate industry specifically. The overall aim of this research is to recommend ways to improve real estate education so that it meets the demands of the industry.

### **3. Research methodology**

#### **3.1 Questionnaire development**

After reviewing the literature possible knowledge, skills, and attributes, were extracted for use in the questionnaire. See Table 1 for the list of literature consulted. Additional knowledge, skills, and attributes 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 APC qualifications resulted in additional knowledge areas being added to our original list. The research team then analysed this list and reduced it to a manageable size. Other real estate academics were consulted and the list was reduced to 31 knowledge areas, 20 skills, and 21 attributes to be used in the questionnaire, 72 characteristics in total (see Figures 1-3).

The questionnaire was constructed using SurveyMonkey (<http://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 5-point Likert



scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 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.

**Table 1: Sources used to compile initial list of knowledge, skills and attributes**

Authors	Year	Title
Callanan & McCarthy	2003	Property education in New Zealand: Industry requirements and student perceptions.
College of Estate Management	1992	<i>The Skills Mismatch</i> . A Research Report Funded by MEPC Research Award Scheme.
Davies, Csete & Poon	1999	Employer's expectations of the performance of construction graduates.
Epley	2004	New ranking of decision-making subject areas for corporate real estate executives.
Galuppo & Worzala	2004	A study into the important elements of a Masters degree in real estate.
Harvey, Moon, Geall & Bower	1997	<i>Graduates' Work: Organisational change and students' attributes</i> .
Hill	n.d.	The integration of professional competencies into construction management degrees.
Love, Haynes & Irani	2001	Construction managers' expectations and observations of graduates.
Manning & Epley	2006	Do real estate faculty teach the skills and competencies needed by corporate real estate executives?
Massyn, Mosime, & Smallwood	2009	Construction management graduates - do they have the competencies that industry need?
Weinstein & Worzala	2008	Graduate real estate programs: and analysis of the past and present and trends for the future.
Wong, Wong & Hui	2007	A study to improve higher education for surveying professionals in Hong Kong.

The questionnaire that was sent to employers contained the same 72 characteristics, but the survey was made up of two parts. The first part asked them to agree/disagree with the statement “Graduates of real estate courses require (knowledge of/the following skills/the following attributes)...”for each of the 72 characteristics, and the second part asked them to agree/disagree with the statement “Graduates of real estate courses currently demonstrate (knowledge of/the following skills/the following attributes)...” for each of the 72 characteristics. Again, text comment boxes were included, and participants were asked to state any additional knowledge, skills or attributes that they felt were important for graduates.

### **3.2 Questionnaire administration**

A databases of graduate (RICS members qualified in last 5 years and APC candidates) contact information was generously provided by the RICS Education & 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. 3936 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 (3526), the response rate was 18% (639). Employer contact information was extracted from the RICS ‘Find a

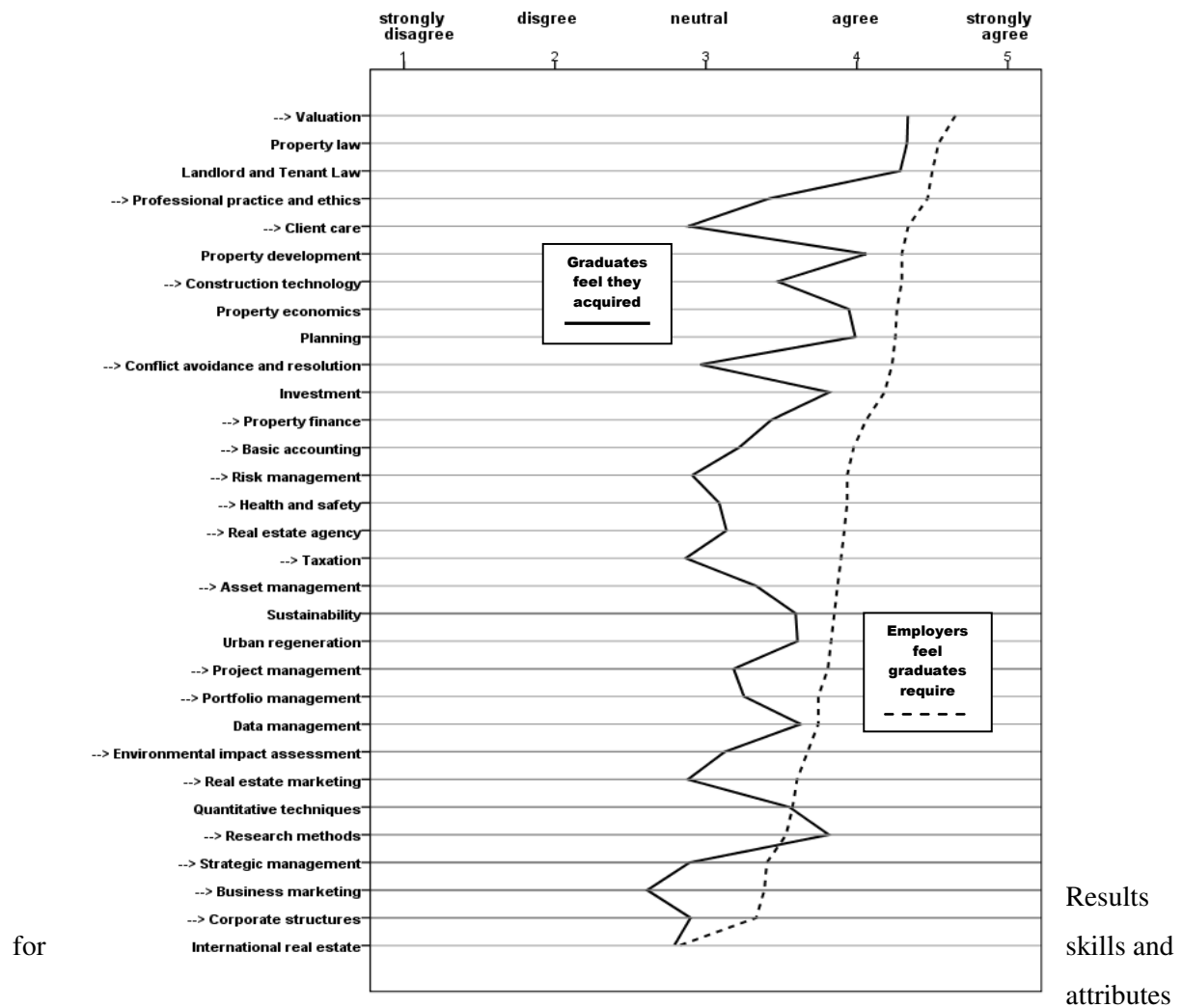
Surveyor' listing for several firm types (Commercial Property, Valuation, Residential Property, Planning & Development and Residential Surveys). 1256 invitations were sent out, though 58 were undeliverable. Of the delivered invitations (1198) the response rate was 6.5% (78), though 16 of these were responses stating that the questionnaire was not applicable (these employers stated they had little experience with recent graduates). This left 62 usable surveys. This low return rate may be attributable to the fact that there was no way to tell the size of firms or the numbers of employees, and many invited participants may have had little or no recent experience with graduates, making them less likely to participate.

## **4. Findings and Discussion**

### **4.1 Quantitative data**

SPSS Statistics 17.0 was used to analyse the quantitative data. The non-parametric Mann-Whitney U test was used to compare our two independent samples. There was a significant difference ( $p < 0.01$ ) between what employers felt graduates required and what graduates felt they acquired for 21 of the *knowledge* areas (characteristics marked with '-->' in Figure 1). Only one (research methods) was rated higher by graduates.

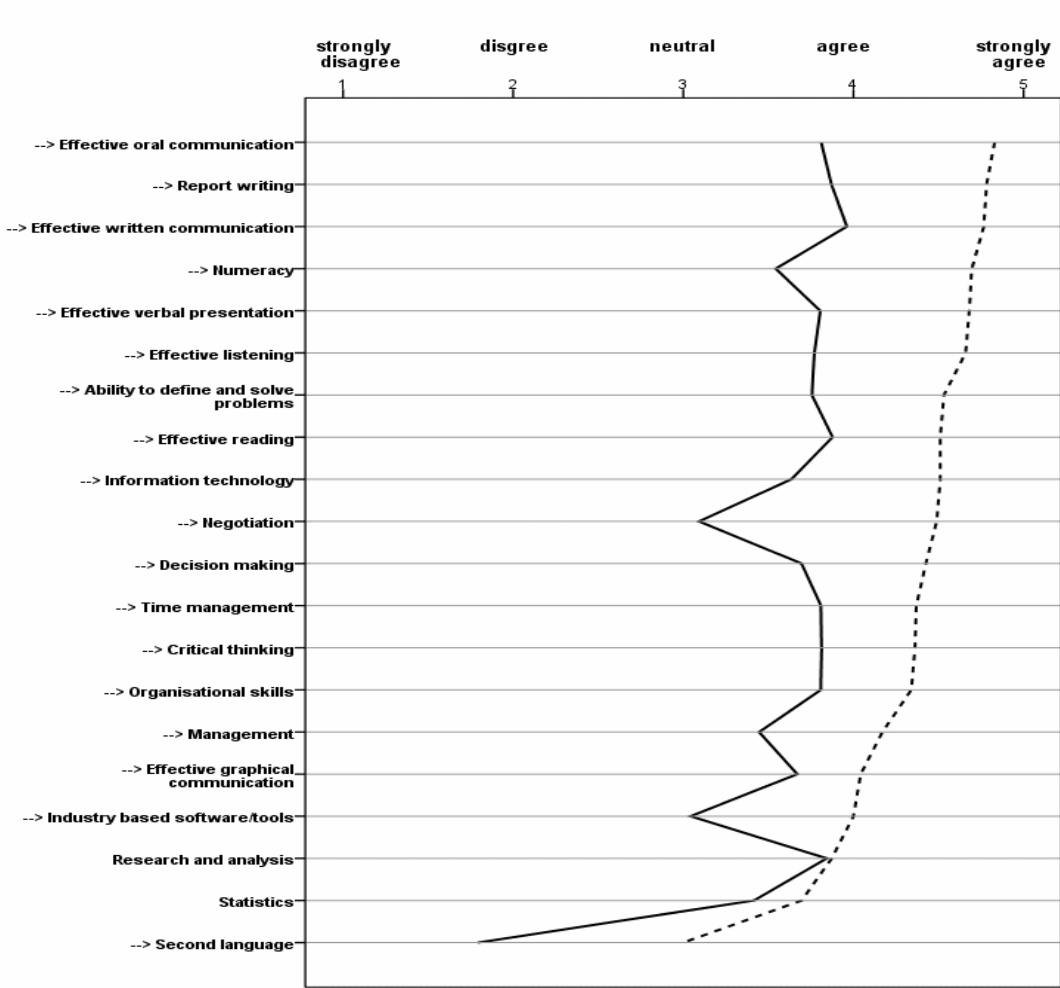
**Figure 1: Knowledge: Comparison of what employers feel graduates require and what graduates feel they acquired during their studies (knowledge areas are ordered from highest rated to lowest rated – Employers response)**



for Results skills and attributes

were similar to those for knowledge. For many skills and attributes there again was a gap between what employers felt graduates required and what graduates felt they acquired from their programme. There was a significant difference ( $p < 0.01$ ) for 18 of the *skills* (marked with '-->' in Figure 2), all rated higher on the Likert scale by employers than by graduates.

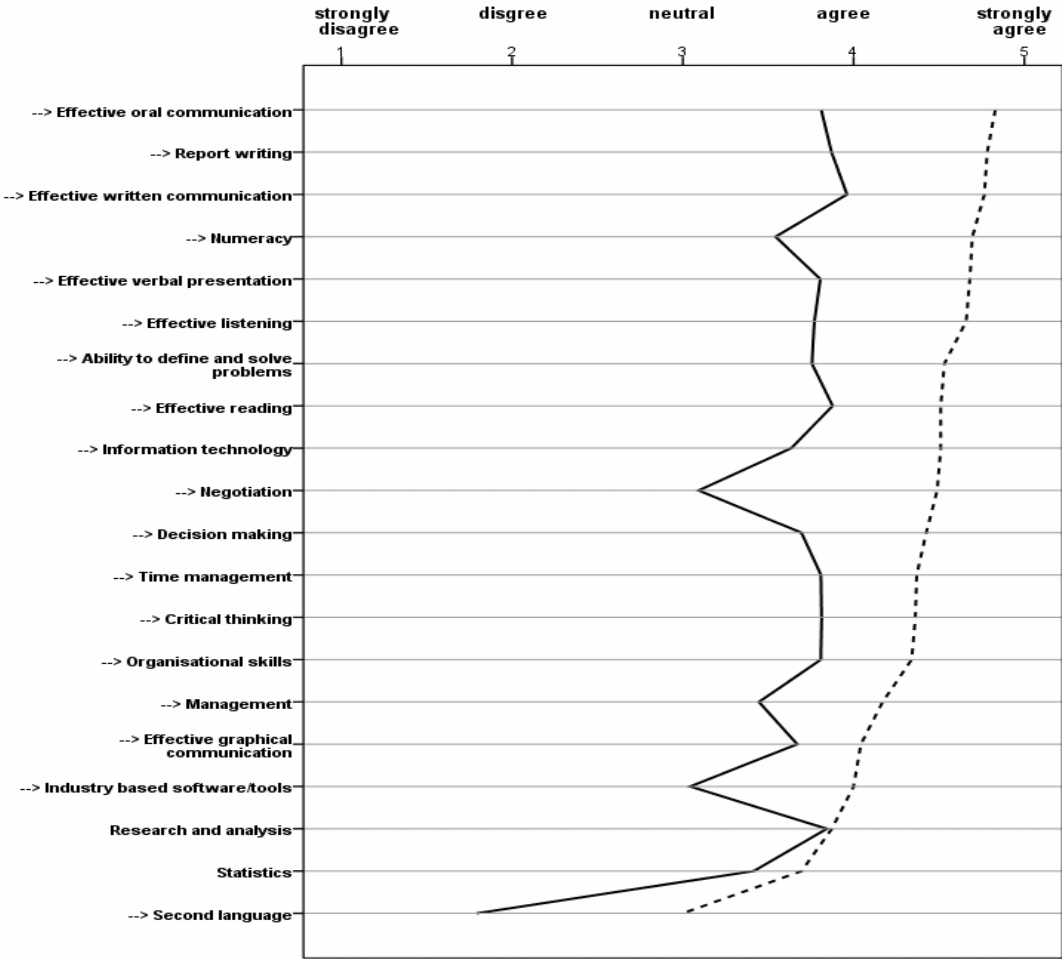
**Figure 2: Skills:** Comparison of what employers feel graduates require and what graduates feel they acquired during their studies (skills are ordered from highest rated to lowest rated –



Employers response)

For the *attributes* section there was a significant difference ( $p < 0.01$ ) for 18 of the characteristics (marked with '-->' in Figure 3), again all rated higher on the Likert scale by employers than by graduates.

**Figure 3: Attributes: Comparison of what employers feel graduates require and what graduates feel they acquired during their studies (attributes are ordered from highest rated to lowest rated – Employers response)**



We must consider the idea that graduates may have felt that they had the knowledge, skill, or attribute, but did not attribute their gaining of it to their experience at university, and thus gave a lower score than they would have given if instead they were asked the question ‘do you *have* or *demonstrate* the following knowledge/skills/attributes’. We realise this pitfall, but wanted to make sure we could relate the knowledge and skills to education in particular. Though this issue may have arisen for some attributes (creativity, enthusiasm), for the knowledge areas specifically, this should not have been the case, and still, in all three areas, graduates agreement on what they felt they acquired was lower than what employers felt graduates required. Graduates responses, taken independently show that many graduates feel that their programmes did not help them acquire the knowledge, skills, and attributes listed (which were thought to be a thorough listing of what real estate graduate should need).

Taken independently, employer responses show what knowledge areas, skills and attributes are seen as most important for real estate graduates. Most scored with a mean of 4 or above (12 knowledge areas, 17 skills, and 18 attributes) demonstrating that employers feel most of these are important and necessary for graduates. The top five for each category are listed in Table 2.

**Table 2: Top five knowledge, skills, and attributes rated by employers**

<b>Knowledge</b>	<b>Skills</b>	<b>Attributes</b>
valuation	effective oral communication	ability and willingness to update professional knowledge
property law	report writing	professional attitude
landlord and tenant law	effective written communication	interpersonal skills
professional practice and ethics	numeracy	ability to effectively work as part of a team
client care	effective verbal presentation.	enthusiasm

There is some comfort for universities in these findings as many would confirm the top five knowledge areas and top five skills are present to a greater or lesser extent in most real estate programmes of study. Those designing courses should ensure that these knowledge areas and skills are core to their curriculum. Of course while educators can strive to encourage the attributes listed, these are really things that are outside of their control. Presumably these attributes are the things that employers look for at interview and it would be very interesting to carry out further research to investigate the relative weighting of the attributes, compared to the skills and knowledge, that employers apply when selecting graduates.

#### 4.2 Graduate comments

Open-ended questions (comment fields) were analysed by reading all the comments, determining themes and subsequently coding comments. See table 3 for the major themes from graduates' responses.

The items that stand out in the 'knowledge' category are *practical knowledge* and *work experience*. Of course placement years are very important and possible in normal economic climates. Universities should encourage students to undertake work experience during their studies and of course project work should be made as industry relevant as possible.

**Table 3: Number of graduates that commented on each theme**

<b>Practical knowledge / experience</b>	
Practical knowledge /application / exercises /projects	94
Work experience / placement	56
<b>Knowledge</b>	
Commercial awareness / knowledge	29
Market knowledge	23
Valuation/ Redbook	23
Negotiation	22
Construction / Building Techniques	18
General Business	16
Law (L & T, Property)	14
Leases	11
<b>People skills</b>	
Communication	17
Interpersonal skills	13
Networking	13
Presentation skills / speaking	11
<b>Programmes should provide information on:</b>	
Careers options / advice / sectors	28



RICS/APC/ Qualification	18
<b>Technical skills needed:</b>	
Excel / Software / IT	37
Report writing / writing	17
Measurement	10
<b>Attributes</b>	
Professionalism / Manners / Grace	14
<b>Other comments</b>	
Gained skills/ attributes outside education	11

## 5. Conclusion

This study describes the initial findings from a CEBE funded research project. There is clearly a gap between what employers expect of graduates and what graduates feel they attained in their education. Whether this means education is not doing a good enough job, or whether this gap is attributable to the knowledge they then gain ‘on the job’ is unclear. From the comments it seems that both employers and graduates would like to see a greater amount of practical skills and knowledge incorporated within university curriculum.

The second stage of this research is to discuss our findings with course providers and employers to gain a deeper insight into some of the interesting findings from the questionnaire part of the study reported in this paper.

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