

RICS Research

Practice-based Body of
Real Estate Knowledge





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of Real Estate Knowledge



A report for Royal Institution of Chartered Surveyors

Report written by:

Professor David Boyd
david.boyd@bcu.ac.uk

Abdul-Rashid Amidu
abdul-rasheed.amidu@bcu.ac.uk

Matthew Smith
matthew.smith@bcu.ac.uk
Birmingham School of the Built Environment

RICS Research team

Dr. Clare Eriksson FRICS
Director of Global Research & Policy
ceriksson@rics.org

Mr James Rowlands
Global Research & Policy Project Manager
jrowlands@rics.org

Ms Amanprit Johal
Global Research & Policy Project Officer
ajohal@rics.org

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Executive Summary

This study explored the activities that constitute the body of knowledge of real estate practitioners in order to represent practice better so that it can be improved and real estate education can be aligned to industry requirements. This went beyond notions of competency to establish the complexity and indeterminacy of practice activities. The key concept of activity node was used to describe an identifiable activity which involves expert judgment in context and these were placed in a model of real estate practice.

Data was collected using a modified Delphi technique with a panel of real estate experts practicing in the UK to deliver an anonymous consensus-building process. Two rounds of questionnaire (one unstructured and one structured) were sent to the panel to first identify and later rate a set of practice-based activities. A four point Likert scale was used in the second round to develop a consensus of opinion, predetermined at >75% agreement, for each activity identified in round one.

Round one revealed 50 activities, 66% of which achieved consensus as being practice-based activities performed by a real estate professional. 4 out of the 33 activities that achieved consensus were highly rated by both academics and practitioners across all the three practice contexts (professional, services and operation) in the body of knowledge framework adopted for this study; thus indicating their significance to real estate practice. These include:

- (1)** Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities,
- (2)** Develop new professional products and services,
- (3)** Discuss briefs with clients to identify their needs, and
- (4)** Ensure all aspects of operational work comply with internal processes and professional standards.

The Mann-Whitney U test was employed to determine if there were any statistically significant differences (set at $p<0.05$ and $p<0.1$) in the opinions of real estate academics and practitioners as well as real estate practitioners from public and private practice. No statistically significant differences were found between real estate practitioners; however, significant differences were observed between real estate academics and practitioners. An analysis of these differences revealed that real estate academics place higher importance on higher order cognition activities such as offering teaching and advice for students and developing practitioners.

This study concludes that more practice based knowledge should be identified and used for professional accreditation, real estate education and practitioner development. The research framework structures the compiled body of knowledge thus connecting the parts that constitute the real estate profession and demonstrate the true worth of real estate practice.



1.0 Introduction

There has been a growing interest in the establishment of Bodies of Knowledge for professions including the real estate profession. This is driven partly by a need to respond to challenges on professions from society's higher expectations of performance and also by education institutions seeking to deliver more employable graduates. Institutions of higher education continue to strive to implement innovative programmes that address the real-world needs of contemporary workers (Klein, 1999), but struggle with the problem of defining exactly what is meant by a body of core skills and expertise of a professional. From the real estate perspective, this problem is due, in part, to the diverse nature of real estate and, further compounded by the rapidly changing nature of the real estate industry itself, as it is presently expanding into globalised asset class and integrating into mainstream capital and financial markets (Key, 2009). As a consequence, the global demand of core real estate skills continues to increase and, it is critical that this is supported by courses and specialisms offered by academic institutions, particularly at postgraduate level of real estate education.

In today's business and competitive world, the development of new real estate courses need to reflect the knowledge and skills that would help students to prepare for the challenges they may face when entering the real estate industry (Tu et al., 2009). This is vital for attracting students who are not only faced with choices but are also increasingly demanding value for money. Thus, this research is an attempt to gain consensus from real estate academics and practitioners in the UK on what should constitute the body of knowledge for desirable real estate practice.

The relationship between what professionals do, the description of what they do and what is taught has limited evidence in real estate literature. Previous studies have generally taken the real estate body of knowledge to refer to topics/subject areas required for real estate education. However, some of these topics are often vague and subjective (Key, 2009). In fact, studies have revealed that real estate academic programs are usually out of touch with the industry (Souza, 2000; Worzala, 2003; Wernstein & Worzala, 2008). It needs to be acknowledged how education affects (limits or enhances) what professionals can do but provides the current language for describing the activities.

This current research seeks to explore what people do and how they describe this. Our survey questions sought the input of both real estate practitioners and academics on activities that reflect their real estate expertise at the workplace. Through a modified Delphi process, we were able to develop a consensus of opinion on these activities as well as identifying areas of divergent opinions. The survey results were also analysed to derive an overall sense of any possible discrepancies between real estate academic programs and workplace activities. A new framework for the assessment of real estate performance skills was also developed based on the results of the Delphi survey. This is particularly significant, and indeed essential, to professional bodies such as the RICS in its role to maintain the integrity of the profession as well as helping it define different sets of competencies for qualification. The research goes beyond a competency view and seeks to define expertise thus being able to explain the added value and excellence of the profession. These are essential for establishing the true worth of the profession as well as aiding professional development.



2.0 Descriptions of real estate practice and education

The organisation and delivery of real estate services varies throughout the world. According to Schulte et al. (2005, p1), the models of real estate education can be differentiated into three educational approaches:

“The “interdisciplinary approach” (which is practised e.g. in Continental Europe), the “surveying approach” (which is typically found in the UK and the other countries of the British Commonwealth), the “investment and finance approach” (which is dominating in the USA).”

These differences not only reflect the international divergence of real estate education but also the divergence in real estate business and the organisation of the profession. While still in its infancy in Continental Europe, real estate education is a well-established academic discipline in the UK and US. As a consequence, this section compares real estate education in these two countries (UK and US) and examines the role of professional bodies (particularly the RICS) in the delivery process.

In the US model, real estate appears to be a segregated profession with various professionals (real estate brokers, appraisers and investment managers). These professionals are all governed and regulated by different professional bodies and so are the routes to qualification. As noted by Key (2009), real estate courses in the US are generally designed at Masters level running (and are being administered) in Business Schools as a specialism in business and finance. Brokerage and appraisal, on the other hand, are usually considered as technical/vocational courses which are largely delivered through colleges and regulated by a number of professional bodies such as the National Association of Realtors (NAR) and Appraisal Institute (AI).

In contrast, the UK model can be described as an integrated profession which embraces and links the traditional surveying disciplines; building surveying (geometrics), quantity surveying and general practice surveying (now commonly referred to as real estate or estate management). This model, according to Key (2009, p268), treats real estate education as “a wide, and increasingly varied, cluster of specialisms running from building and construction through to finance and investment, with branches off into planning and environmental management, all overseen by the RICS”. Traditionally, these courses are delivered at both Bachelor and Masters Levels in Built Environment Schools. However, in recent years; some academic Institutions in the UK (such as the University of Aberdeen, City University and University of Reading) appeared to have adopted the US model by relocating their real estate degree courses into Business Schools and/or establishing real estate as an MBA major (for example University of Aberdeen, Sheffield Hallam University and College of Estate Management).

In the UK, the RICS not only serves as a body charged with the responsibility of organising real estate as a distinct profession, but also perform a pivotal role in the delivery of university level real estate education through the formal accreditation of courses. This role has evolved into a new ‘University Partnership System’ under which the RICS would no longer prescribe detailed syllabus that academic institutions need to follow to have their degree courses accredited. Instead, academic institutions are required to satisfy four key threshold standards; specify their undergraduate entry requirements, the quality of teaching and research and, the recruitment of graduates into relevant employment (Key, 2009). As a consequence of this new accreditation system and given the diverse nature of real estate, it has become increasingly difficult to define and agree on what core body of knowledge and skills reflect the expertise of a real estate professional. Any such effort, it is argued in this research, must reflect the dynamics of real estate practice.

3.0 Previous real estate body of knowledge research

A disciplinary body of knowledge, according to Joshua (2010, p2) can be defined in two ways:

"The first is to develop a general outline of skills, attitudes and knowledge that will enable an individual to develop specific understanding and abilities necessary to become and remain a professional expert.

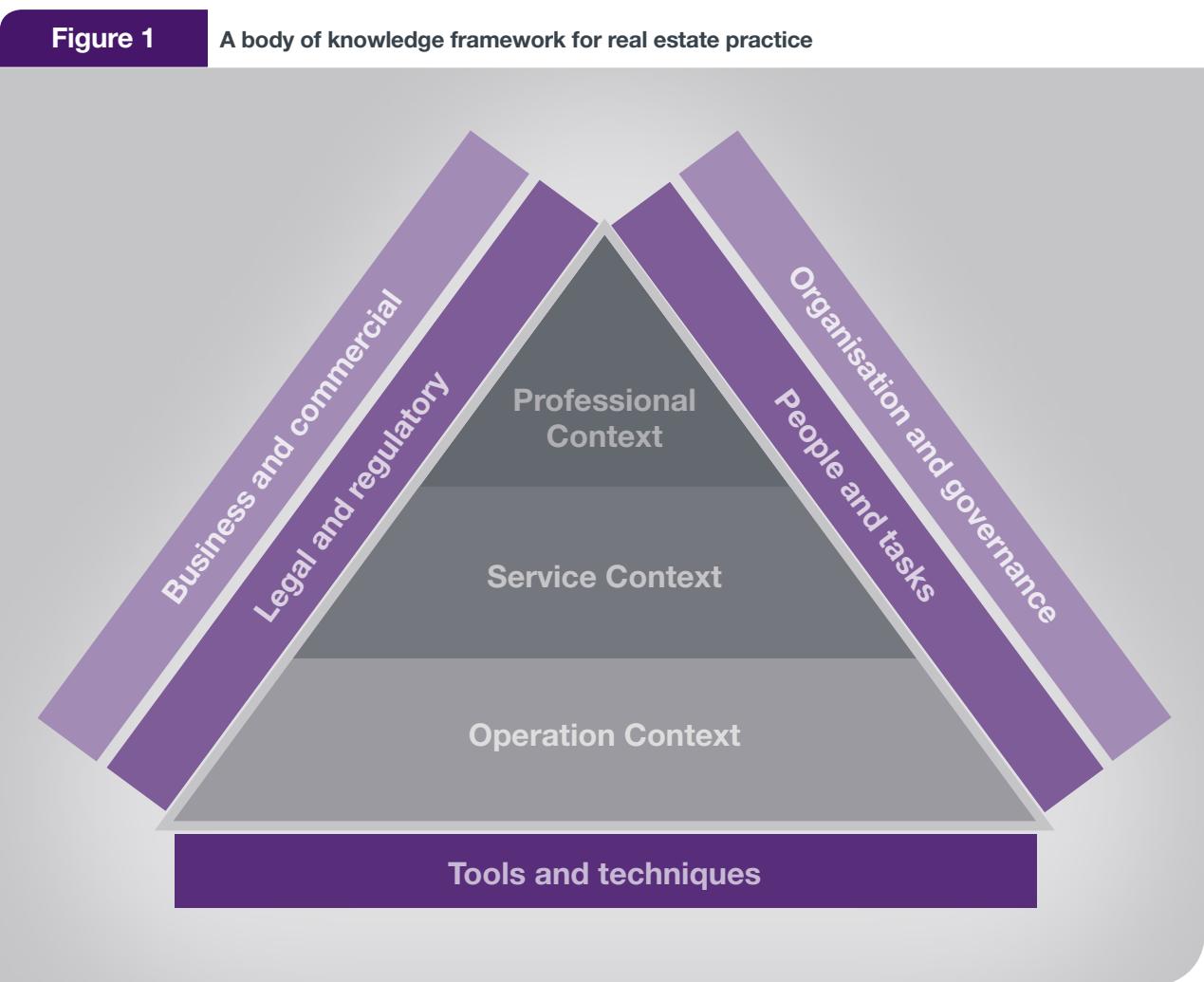
The other way to define a professions' body of knowledge is to compile a detailed list of theories, methodologies, technologies and procedures that have to be mastered for present professional practice."

There have been many research attempts, mainly by US academics, at defining real estate body of knowledge, using both approaches. Focusing on the foundation of knowledge structure for college level real estate education in the US, Roulac (1994) reviewed the contents of 12 real estate principle texts and found that their coverage was dominated by law and transaction topics. This, the author argued, represents a gap between topics and the contents required to train professionals capable of making decisions beyond the legal and transaction framework. In a subsequent study, Roulac (2002) defines real estate outcomes as 'a synthesis of theory, history, content, context, process and methodology' and identifies at least 48 requisite knowledge areas for effective real estate involvement, ranging from management and accounting, urban land economics, real estate economics, construction and investment to humanities, history of science, science and sociology. Utilising the generic disciplinary areas identified in Roulac (2002), Schulte (2002) identifies 12 primary subject areas for a real estate economics discipline.

Taking a more empirical approach, some US academics have sought to define a body of real estate knowledge by surveying real estate academics on what is or ought to be taught and employers on the desirable skills (see for example Black and Rabianski, 2003; Manning & Epley, 2006; Weeks & French, 2003). For instance, Black and Rabianski (2003) report the results of a survey of 275 real estate academics and practitioners across 23 countries, including the UK. In this study, a preliminary survey was employed to generate a list of 36 topics. Based on the results of the subsequent ranking of these topics, Black & Rabianski (2003) conclude that 'there is no consensus on what constitutes a body of knowledge in real estate based on this survey'. This, the authors claimed, was due to, specialism differences of the respondents.

Although the academic studies cited above have made a significant effort, their definition of the real estate body of knowledge is restricted to topics and subject areas. Perhaps, a deeper concern, as argued in Key (2009; p270), is that their definition "should be taken as a real estate body of knowledge in the wide sense of the term, the sum of all knowledge that constitutes the expertise of a profession, rather than the narrow sense of the expertise expected of individual member of a profession" thus, the disciplinary body of knowledge considered in this research is a presentation of the areas of understanding, activities and behaviours which define and provide identity to the real estate disciplinary area. Such a body of knowledge had been defined for such areas as project management (APM, 2012) but a more practice based knowledge approach has been developed here allowing people to develop effectively in the discipline and for the discipline to develop itself not just at novice level but throughout the profession.

4.0 Body of knowledge framework



The Body of Knowledge considered here is different from those presented previously and can be seen as complimentary as it views the professional activities in a practice context. As this has not been done previously, it is a challenging task and this research must be seen as a pilot exploration. Key to this research is the notion of 'practice knowledge' (Klein, 1999; Dreyfus et al., 1986; Nicolini, 2011) and how this is constructed and developed within a consensus. Focusing on practice and practice activities gives this complimentary view an application beyond the Assessment of Professional Competency (APC) to more senior levels and also a framework to develop the professional and demonstrate its added value.

The framework developed/adapted for the Real Estate Body of Knowledge is shown in Figure 1; this framework allows the identification of 'activity nodes' which present practice activities. Practice involves the 'composition' of a number of these activities into a practice engagement/event. The framework highlights the different levels of practice activity surrounded by the enabling techniques, behaviours, knowledge and constraints. Surveying involves

a variety of services offered in complex, uncertain and dynamic contexts. The success of this service and, indeed, the nature of the service is defined by the context as well as the independently by the profession. Thus, the different levels of practice involve different engagements with this context. All practice takes place at all three levels but individual activities may be restricted to a level.

The primary level is the operation of the service. This provides the framework for activities performed, defining processes and operational structures. This context may be a private consultancy (such as a real estate practice or some other practice such as an accountancy or legal), a private company engaged in activities that use buildings in themselves or as assets, or a public authority either providing a service or regulating other services or a training or educational environment.

The next level is the service context itself, namely how this relates to its business or authority environment. This provides the route and reason for the service task but also where the success of the service is defined and evaluated.



This will be different for private consultancies, private businesses, public authorities or training environments. In particular it defines and includes what is generically known as the service client who may occur in a variety of places depending on the task and context. The nature of the service context also defines its continuing operation for example as a viable business or what real estate service is required.

The final level is the professional context which is partly defined by the professional body like the RICS but also the business and social regulatory and governance framework. The latter differ between countries but professional institutions attempt to offer consistency of practice wherever this is undertaken.

The surrounding knowledge domains provide the collective and historically developed position on activities. The discipline has its own set of tools and techniques some of which are unique to it. The use of these is a key aspect of the operational context and often what is promoted both in the professional and service contexts. The operation of buildings as assets is heavily influenced and constrained by the legal and regulatory environment. Although this is controlled by others, the professional is a key player in its operation. Similarly, clients and the service organisation itself are part of the business and commercial

environment; thus the reason to perform the service and how this is undertaken is set here. More generally, the delivery of the service in all contexts involves people and the collective action. This involves behaviours, some of which might be problematic as well as possibilities of better action. Connected to this, are the organisational and governance issue which involve the structural and procedural aspects of working collectively. Again this forms some of the reason to perform the service but also the method for its achievement.

This framework was developed and used in the research to identify ‘activity nodes’ which describe actions taken within these areas in the real estate context. It is these activity nodes which practitioners use to compose successful practice.

Activity nodes are composite actions. They do not exist in isolation but can be identified and described in isolation. These are rich areas which involve judgement not just in the activity itself but in the way the activity connects with the other activity nodes. Greater expertise is demonstrated in the complexity of the activity contexts involving multiple levels and in the more effective and comprehensive composition of activity nodes.

5.0 Methodology

5.1 Research design

The research was carried out using a modified Delphi technique to data gathering. The Delphi process is a research technique that combines both qualitative and quantitative approaches to explore the future. It is a group communication process for establishing, as objectively as possible, a consensus among a panel of experts on a complex and subjective issue and where participants are separated by physical distance (Borg & Gall, 1979; Jones & Hunters, 2000). Unlike other conventional decision making techniques, such as committee meeting face to face, which often suffer from follow-the-leader tendency and a reluctance to compromise previously expressed opinions, the Delphi communication process is anonymous and provides a layer of protection for a participant views (Melpignano & Collins, 2003). In fact, since it was first developed and used by Helmer and Delkey in the 1950s, the Delphi technique has been fruitfully employed as a reliable empirical approach for consensus building in a number of other subject domains such as project management (Brill et al., 2006), journalism (Smith, 1997), electronic commerce (Addison, 2003) and health care (Whiteman, 1990). Thus, the technique was considered the most appropriate method of research to identify and build a consensus among practitioners and academics on the activities that really reflect what real estate professionals' do that demonstrates their expertise in practice.

5.2 Delphi iteration

The Delphi technique, according to Brill et al. (2006), requires the collection of data from identified experts in response to open-ended initial questions. Those data are then analysed for themes, compiled, and fed back to the panel of experts through a second round in questionnaire form for ratings. This process is repeated until consensus is achieved. In this research, a modified Delphi technique with two iterative rounds of communication was adopted. The key stages of this process are illustrated in Figure 2.

The primary objective of the first iteration was to identify the broad activities under our body of knowledge framework discussed in the previous section. Raw responses to the first questionnaire were collated to develop a more formalized questionnaire for the second iteration where our panel of real estate experts were asked to rate their level of agreement on the importance, to real estate practice, of the activities identified in round one. At each round, we chose to administer our questionnaire via the World Wide Web which not only served as an efficient medium for survey research (Dilliman, 2000; Rossett, 1999, Zhang, 2000) but also help achieve pre-condition, anonymous interactions, of the Delphi technique (Linstone & Turoff, 1975). Panellists were contacted through e-mail, with an explanation of the aim of the research and the link to the survey website provided for easy access.



Figure 2

The process of the application of the Delphi technique in this research

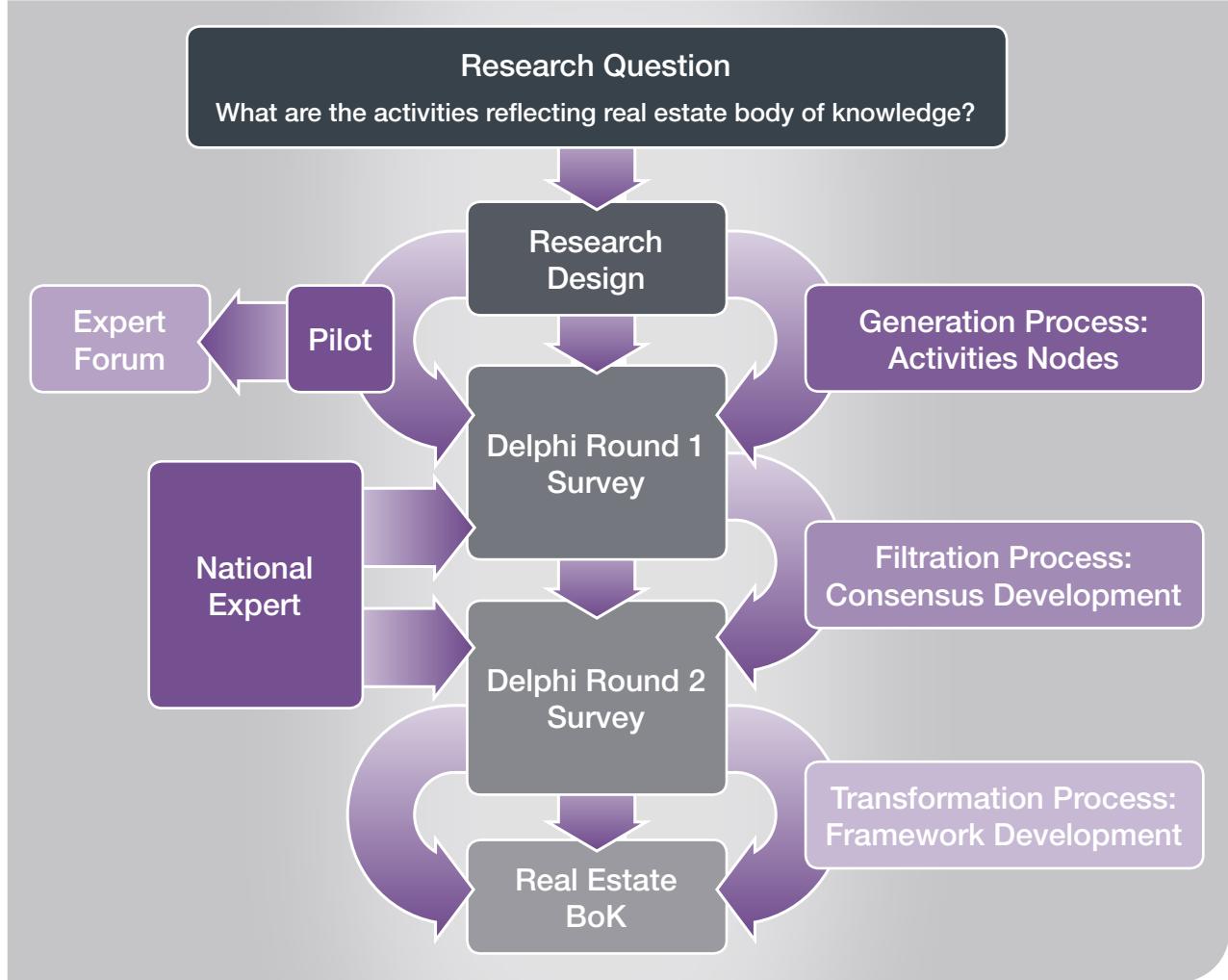


Figure 3

Representation of the study population



5.3 Selection of expert panel

The study population of this research is a national sample of real estate experts who work in various sectors in the UK (see Figure 3). The choice of a sample of an expert panel in a Delphi process is usually based on “inclusion” or “eligibility” criteria (Brink, 2000; Hasson et al., 2000). Thus, a purposive sampling technique, a type of non-probability sampling technique (Hasson et al., 2000) was applied in this research. While there are varied criteria to select an expert panel; experience in “publishing”, “conference presentation”, “practice” and/or those “nominated by peers” (Long, 1991; Raskin, 1994; Ritchie & Earnest, 1999), for this study our sample selection of real estate experts was based on practice experience and RICS membership. We reasoned that individuals who have qualified as either MRICS or FRICS would have had to demonstrate some level of experience in practice and as such are able to give informed opinions about real estate body of knowledge. In addition, we also relied on referrals as a way of identifying experienced real estate professionals.

In total a 200-member panel of real estate experts were targeted for the first round of our Delphi survey. We had 35 (16%) total responses from the first round. Whilst the low response rate was due, at least in part to the open-ended nature of our initial questionnaire which takes about 30 minutes to complete, the 35 responses represented a wide body of opinion, larger than could otherwise have been achieved in committee face to face decision making. In addition to the 35 respondents we had in the first round, a separate group of 20 real estate professionals also participated in the second round (response rate of about 55% based on our target 100-member panel for this round).

5.4 Questionnaire design

The questionnaire used in the first round of our Delphi survey comprised open-ended questions asking respondents to identify the activities that describe their work as a real estate professional. The adoption of an open-ended question format at this stage is consistent with the requirement of the Delphi method and our objective of generating ideas on the activities that reflect the core expertise of individuals in the real estate profession. Also, it was difficult for the research team to pool these ideas together from previous real estate body of knowledge literature. The work activities were solicited in relation to the 8 context and knowledge domains (operational context, service context, professional context, legal and regulation knowledge, business and commercial knowledge, organisation and governance knowledge, people and task knowledge and tools and techniques knowledge) of the real estate body of knowledge framework developed in the previous section. However, given the complexity of these domains and reflecting on their varied interpretations, we decided to guide our respondents by providing a brief description of each domain with an example of work activities. The initial questionnaire also contained closed-ended questions on background information.

The second iteration questionnaire was based on a closed questionnaire construction. The purpose in these rounds of Delphi process was to seek consensus by asking respondents to rate their agreement or disagreement with the 50 activities generated in the first round and our investigation of role extension opportunities for real estate professionals. Typically respondents could have been given a 5-point rating scale (strongly agree, agree, neither agree nor disagree, disagree and strongly disagree). However, a 4-point rating scale (excluding neither agree nor disagree) was used to force respondents to offer an opinion as it did not allow them to be non-committal (Polgar & Thomas, 2000). In addition to supplying the rating scale, respondents were given the opportunity to make open-ended comment after rating each of the fifty survey activities.

6.0 Analysis of data

In the first Delphi iteration, our panel of real estate experts described the various activities that reflect their core expertise in practice. An initial scan of the responses revealed some overlap in the knowledge and skills domains presented in our body of knowledge framework. As a consequence, the constant comparative method of data analysis was employed in analysing the responses from our first questionnaire. This method involves an interpretative process of sorting out the responses into various themes and grouping the themes into representative categories (Bogdan & Biklen, 1998; Merriam, 1998). The constant comparative method was supplement with researchers' triangulation to ensure internal validity (Merriam, 1998). As a result, three researchers (two from the project team and one PhD student) independently coded (via NVivo) the 35 'Round 1' survey responses into recurring and identifiable themes which were then negotiated to arrive at the final, mutually agreed, list of 50 activities for the Round II Delphi survey.

Further reflection and analyses of the raw data revealed that certain activities were repeated more than others. As a result, the research team decided to map the 50 activity nodes to the 3 context and 5 knowledge domains in the body of knowledge framework we developed for real estate practice. Table 1 presents the results of the mapping.

The questionnaire for the second and third Delphi iterations produced mainly quantitative data which were analysed using descriptive statistics via SPSS statistical software. Also, a categorical analysis was performed on the background information to compare the opinions of real estate academics and real estate practitioners as well as the opinion of real estate practitioners employed in the public versus private sectors. The Mann-Whitney test was conducted to determine if the differences in opinions are statistically significant.



7.0 Consensus development

In a Delphi study, the place of consensus needs to be established at the start of the study (Crisp, et al.1997). Similarly, consideration must be given to the level of consensus employed (Hasson et al., 2000). Given the goal of this study, to identify and seek agreement on activities reflecting the core expertise of a real estate professional at workplace, a statistical definition of consensus was adopted. Consequently, the mean response score for each activity was calculated, to provide an indication of the level of agreement amongst the panel members. The standard deviation provides a measure of dispersion and therefore also gives an indication of the degree of consensus. There does not seem to be a commonly agreed percentage or mean level indicating consensus (Hasson et al., 2000). Therefore, the recommendations of Sumsion (1998) were adopted in setting the consensus level for this research. Thus, a mean score of >3 ($>75\%$) and a standard deviation of <1 for an activity was taken as consensus of opinion that the activity reflects the core expertise of individuals in real estate profession. A mean of <2 indicated agreement that that activity does not reflect the core expertise of individuals in real estate profession. When the mean of the scores ranged between ≥ 2 and ≤ 3 this indicated divergence of opinion.



Table 1

Activity nodes mapped against context and knowledge domains

	Activity Node	Professional context					Operational context					Service context				
		O	P	L	T	B	O	P	L	T	B	O	P	L	T	B
1	Identifying political, economic, social, legal, sustainability, financial factors and reflect their significance when giving advice	X	X	X		X										
2	Assess new policy and practice issued by RICS	X		X												
3	Interpret professional standards when offering client services				X		X	X	X	X						
4	Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities.					X				X						X
5	Use a performance evaluation program to motivate staff		X													
6	Disseminate good practice through formal and informal training, publishing and other means		X		X											
7	Assess internal practice operations						X		X	X	X					X
8	Develop and assess IT capabilities and other modern methods of working	X		X												
9	Recruiting competent and qualified staff		X													
10	Awareness of staff training and development issues	X	X													
11	Assimilate client feedback to appropriately improve quality of delivery											X	X			
12	Develop new professional products and services	X	X	X			X	X	X		X	X	X			
13	Instigate appropriate client care		X		X							X			X	X
14	Appropriately ensure that clients pay fees	X		X												
15	Discuss briefs with clients to identify their needs				X					X						X
16	Instigate and monitor quality assurance processes						X	X	X							
17	Ensure all aspects of operational work comply with internal processes and professional standards	X	X	X	X		X	X	X	X	X	X	X	X	X	X
18	Keep abreast of and digest relevant laws	X	X													
19	Ensure company involvement in RICS activities	X	X	X												
20	Assess requirements of regulatory bodies such as FSA	X	X													
21	Ensure proper interpretation of leases and other records				X					X						
22	Maintain appropriate health and safety procedures			X	X				X	X			X	X		X
23	Offer teaching and advice for students and developing practitioners		X	X												
24	Maintain ethical standards		X	X	X											
25	Maintain professional integrity												X			
26	Conduct research in and around the field of real estate			X	X										X	X
27	Develop and maintain formal and informal communication and information systems						X	X				X	X		X	X
28	Develop an effective reporting framework								X	X			X	X		

	Activity Node	Professional context					Operational context					Service context				
		O	P	L	T	B	O	P	L	T	B	O	P	L	T	B
29	Manage and improve the work premises					X										
30	Forecast fee income from existing and potential work										X					
31	Manage expense claims and disbursements effectively									X						
32	Develop and maintain procedures for managing staff problems	X	X													
33	Undertake self-evaluation and reflect on improvement						X	X				X	X			
34	Ensure resources are used efficiently									X						
35	Integrate technical, infrastructure, and personal resources to ensure effective service delivery						X	X	X			X	X	X		
36	Provide leadership about problematic and controversial issues of practice			X	X	X							X	X		
37	Review decisions to ensure client expectations are met										X					X
38	Listen to complaints and resolve conflicts											X			X	X
39	Negotiate with clients to achieve a win-win situation											X			X	X
40	Facilitating team working and collaboration among different organisational units	X	X											X	X	
41	Implement research into practice			X	X											
42	Display and maintain empathy for staff, work enthusiasm and other social attributes that contribute to an enabling work atmosphere	X	X	X			X	X	X							
43	Apply regulatory directives				X		X	X	X							
44	Make judgements about market conditions									X						
45	Negotiate with external parties on behalf of clients					X									X	
46	Appropriately maintain client accounts						X									
47	Inspect property and maintain documentary evidence of inspections										X					
48	Delegate and deal with complex lines of responsibility within the organisation							X	X							
49	Use appropriate measuring and other equipment and operate them safely and effectively									X						X
50	Conduct evidence-based critical analysis and debate of real estate-related issues with peer inclusion			X	X											X

Key: O refers to Organization and Governance, P refers to People and Organisations, L refers to Legal and Regulatory, T refers to Tools and Techniques, B refers to Business and Commercial

8.0 Results from Delphi round two

The background profile of the panel of real estate experts who responded to the round two questionnaires are presented in Table 2. All the 55 respondents indicated they are employed either as academic (36.4%) or practitioner (63.6%) in private organisations (49.1%) or public institutions (14.5%). More than 78% have at least 10 years of real estate experience in practice and/or academic. Also, virtually all the respondents are chartered surveyors in various pathways running from valuation, commercial property to GP.

Table 3 presents the descriptive analyses of the overall responses in rating order, from highest mean rating to lowest mean rating. Of the 50 activity nodes listed, there was a consensus ($M > 3$) that 33 (66%) of the activity nodes reflect the core expertise of a real estate professional in practice. Consensus could not be reached on the bottom 17 (34%) activity nodes ($2 \leq M \leq 3$).

The responses were separated and compared by area of profession. The responses of the group of practitioners and the group of academics are presented in Table 4. To determine if any statistically significant difference of opinion exists between these two groups of respondents, we carried out a categorical analysis on all the 50 activity nodes. Specifically, a Mann-Whitney U test (Table 5) was used to test the following hypothesis:

H_{01} : For each activity node, the opinions of the group of respondents who are real estate practitioners are the same as the group of respondents who are real estate academics.

H_{02} : For each activity node, the opinions of the group of respondents who are real estate practitioners, employed in the public sector, are the same as the group of respondents who are real estate practitioners, employed in the private sector.

Table 2

Descriptive statistics of real estate experts

Variables	Proportion of the Sample Responses (%)
Area of Profession	
Academics	36.4%
Practitioners (Private – 49.1%, Public – 14.5%)	63.6%
Professional Qualification	
TechRICS	1.8
MRICS	72.7
FRICS	25.5
Experience	
<5 years	3.6
5 – 9 years	18.2
10 – 14 years	12.7
15 – 19 years	9.1
20 – 24 years	18.2
>25 years	38.2
Academic Qualification	
Vocational exam	3.6
Bachelor degree	54.5
Postgraduate Cert/Dip	5.5
Master degree	27.3
Doctorate degree	7.3

As indicated in Table 5, 9 out of the 50 activity nodes had two-tailed p values of less than 0.05, leading to the rejection of the null hypothesis at that significance level. As a consequence, it can be inferred that real estate practitioners and academics differ in their opinions on the importance of certain activity nodes to real estate practice. These differences highlight the fact there are differences in the expectation of the group involved with performing competencies (practitioners) and the group involved in teaching competencies (academics), a point which further provides empirical support for the argument about the gap between real estate programs and practice (Souza, 2000; Worzala, 2003; Wernstein & Worzala, 2008). A scan through the activity nodes that are statistically different in mean ranks reveals that are either tasks requiring academic skills (e.g. 'conduct research in and around the field of real estate'), managerial skills (e.g. 'use a performance evaluation program to motivate staff') or skills that can

otherwise be supplied by somebody who is not necessarily a real estate professional (e.g. 'appropriately ensure that clients pay fees').

The Mann-Whitney U Tests for the group of real estate practitioners employed in the public sector and the group of real estate practitioners employed in the private sector reveals no statistically significant difference at both $p<0.05$ and $p<0.1$ two-tailed levels for all the 50 activities, suggesting the acceptance of the null hypothesis. However, given the small number of practitioners employed in the public sector ($n=8$, 14.5%), no conclusion could be drawn from the results.



Table 3 Overall responses to Delphi round two questionnaire

Rank	Activity Nodes	F	M	SD
1	Maintain professional integrity	54	3.56	0.69
2	Maintain ethical standards	54	3.52	0.61
3	Identifying political, economic, social, legal, sustainability, financial factors and reflect their significance when giving advice	55	3.35	0.70
4	Ensure proper interpretation of leases and other records	53	3.34	0.78
5	Discuss briefs with clients to identify their needs	54	3.31	0.75
6	Disseminate good practice through formal and informal training, publishing and other means	55	3.31	0.63
7	Ensure all aspects of operational work comply with internal processes and professional standards	55	3.31	0.66
8	Listen to complaints and resolve conflicts	54	3.28	0.66
9	Keep abreast of and digest relevant laws	55	3.27	0.53
10	Recruiting competent and qualified staff	55	3.25	0.93
11	Offer teaching and advice for students and developing practitioners	54	3.24	0.67
12	Assimilate client feedback to appropriately improve quality of delivery	55	3.24	0.74
13	Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities.	55	3.24	0.61
14	Provide leadership about problematic and controversial issues of practice	54	3.20	0.56
15	Make judgements about market conditions	55	3.20	0.78
16	Undertake self-evaluation and reflect on improvement	55	3.18	0.55
17	Inspect property and maintain documentary evidence of inspections	54	3.17	0.95
18	Maintain appropriate health and safety procedures	54	3.15	0.81
19	Instigate and monitor quality assurance processes	55	3.15	0.65
20	Interpret professional standards when offering client services	55	3.15	0.73
21	Conduct research in and around the field of real estate	54	3.13	0.67
22	Display and maintain empathy for staff, work enthusiasm and other social attributes that contribute to an enabling work atmosphere	54	3.13	0.58
23	Ensure resources are used efficiently	55	3.13	0.70
24	Awareness of staff training and development issues	54	3.11	0.63
25	Conduct evidence-based critical analysis and debate of real estate-related issues with peer inclusion	53	3.09	0.69
26	Instigate appropriate client care	55	3.09	0.73
27	Integrate technical, infrastructure, and personal resources to ensure effective service delivery	54	3.07	0.70
28	Facilitating team working and collaboration among different organisational units	54	3.06	0.63
29	Review decisions to ensure client expectations are met	54	3.06	0.81
30	Apply regulatory directives	55	3.05	0.65
31	Implement research into practice	55	3.04	0.72
32	Appropriately maintain clients' accounts	53	3.02	1.12
33	Appropriately ensure that clients pay fees	53	3.02	0.97
34	Develop and maintain formal and informal communication and information systems	53	3.00	0.59
35	Develop an effective reporting framework	54	3.00	0.61

Rank	Activity Nodes	F	M	SD
36	Assess new policy and practice issued by RICS	55	2.98	0.78
37	Use appropriate measuring and other equipment and operate them safely and effectively	55	2.98	0.91
38	Forecast fee income from existing and potential work	54	2.96	0.87
39	Delegate and deal with complex lines of responsibility within the organisation	54	2.94	0.68
40	Develop and assess IT capabilities and other modern methods of working	55	2.91	0.84
41	Negotiate with external parties on behalf of clients	54	2.91	0.92
42	Negotiate with clients to achieve a win-win situation	54	2.91	0.92
43	Develop and maintain procedures for managing staff problems	53	2.89	0.82
44	Develop new professional products and services	55	2.87	0.64
45	Manage expense claims and disbursements effectively	54	2.87	0.75
46	Assess internal practice operations	54	2.85	0.68
47	Assess requirements of regulatory bodies such as FSA	55	2.82	0.70
48	Ensure company involvement in RICS activities	55	2.80	0.85
49	Use a performance evaluation program to motivate staff	54	2.74	0.76
50	Manage and improve the work premises	54	2.72	0.76

Key: F – Sample M – Mean SD – Standard Deviation

Table 4 Comparison of responses by area of profession

Activity Nodes	Practitioners			Academics		
	R	M	SD	R	M	SD
Maintain professional integrity	1	3.49	0.66	1	3.68	0.75
Maintain ethical standards	2	3.46	0.51	2	3.63	0.76
Ensure proper interpretation of leases and other records	3	3.41	0.66	13	3.21	0.98
Recruiting competent and qualified staff	4	3.4	0.69	22	3	1.21
Discuss briefs with clients to identify their needs	5	3.4	0.6	17	3.16	0.96
Disseminate good practice through formal and informal training, publishing and other means	6	3.32	0.55	4	3.45	0.76
Identifying political, economic, social, legal, sustainability, financial factors and reflect their significance when giving advice	7	3.31	0.53	5	3.4	0.94
Inspect property and maintain documentary evidence of inspections	8	3.31	0.8	31	2.89	1.15
Ensure all aspects of operational work comply with internal processes and professional standards	9	3.29	0.57	9	3.35	0.81
Make judgements about market conditions	10	3.29	0.67	21	3.05	0.94
Interpret professional standards when offering client services	11	3.26	0.51	30	2.93	1
Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities.	12	3.26	0.51	15	3.2	0.77
Assimilate client feedback to appropriately improve quality of delivery	13	3.26	0.61	16	3.2	0.95
Instigate appropriate client care	14	3.26	0.56	36	2.8	0.89
Appropriately ensure that clients pay fees	1	3.23	0.88	45	2.61	1.04

Activity Nodes	Practitioners			Academics		
	R	M	SD	R	M	SD
Maintain appropriate health and safety procedures	16	3.23	0.73	23	3	0.94
Forecast fee income from existing and potential work	17	3.23	0.65	44	2.47	1.02
Listen to complaints and resolve conflicts	18	3.23	0.55	7	3.37	0.83
Keep abreast of and digest relevant laws	19	3.2	0.41	6	3.4	0.68
Awareness of staff training and development issues	20	3.18	0.39	24	3	0.92
Review decisions to ensure client expectations are met	21	3.17	0.71	35	2.84	0.96
Display and maintain empathy for staff, work enthusiasm and other social attributes that contribute to an enabling work atmosphere	22	3.15	0.56	20	3.1	0.64
Appropriately maintain clients accounts	23	3.15	0.96	37	2.79	1.36
Instigate and monitor quality assurance processes	24	3.14	0.55	18	3.15	0.81
Provide leadership about problematic and controversial issues of practice	25	3.14	0.55	10	3.32	0.58
Negotiate with external parties on behalf of clients	26	3.14	0.77	48	2.47	1.02
Facilitating team working and collaboration among different organisational units	27	3.12	0.48	27	2.95	0.83
Develop an effective reporting framework	28	3.11	0.58	38	2.79	0.63
Undertake self-evaluation and reflect on improvement	29	3.11	0.4	11	3.3	0.73
Ensure resources are used efficiently	30	3.11	0.53	19	3.15	0.93
Integrate technical, infrastructure, and personal resources to ensure effective service delivery	31	3.11	0.53	25	3	0.94
Apply regulatory directives	32	3.11	0.53	28	2.95	0.83
Delegate and deal with complex lines of responsibility within the organisation	33	3.11	0.53	42	2.63	0.83
Use appropriate measuring and other equipment and operate them safely and effectively	34	3.11	0.8	39	2.75	1.07
Offer teaching and advice for students and developing practitioners	35	3.06	0.54	3	3.58	0.77
Develop and maintain procedures for managing staff problems	36	3.06	0.6	46	2.58	1.07
Develop and assess IT capabilities and other modern methods of working	37	3.03	0.75	40	2.7	0.98
Negotiate with clients to achieve a win-win situation	38	3.03	0.75	41	2.68	1.16
Conduct evidence-based critical analysis and debate of real estate-related issues with peer inclusion	39	3.02	0.74	14	3.21	0.72
Assess new policy and practice issued by RICS	40	3	0.73	28	2.95	0.89
Use a performance evaluation program to motivate staff	41	3	0.54	50	2.26	0.87
Conduct research in and around the field of real estate	42	3	0.64	8	3.37	0.68
Develop and maintain formal and informal communication and information systems	43	3	0.49	25	3	0.7
Manage expense claims and disbursements effectively	44	3	0.59	43	2.63	0.96
Assess internal practice operations	45	2.97	0.62	44	2.63	0.76
Manage and improve the work premises	46	2.91	0.56	49	2.37	0.96
Implement research into practice	47	2.91	0.61	12	3.25	0.85
Develop new professional products and services	48	2.89	0.53	31	2.85	0.81
Assess requirements of regulatory bodies such as FSA	49	2.8	0.72	32	2.85	0.67
Ensure company involvement in RICS activities	50	2.77	0.77	33	2.85	0.99

Key: R – Rank M – Mean SD – Standard Deviation

Table 5**Difference of opinion between practitioners and academics**

Activity Nodes	Mann-Whitney U Tests		
	Mean Ranks		2-tailed p
	Practitioner	Academic	
Identifying political, economic, social, legal, sustainability, financial factors and reflect their significance when giving advice	26.00	31.50	0.984
Assess new policy and practice issued by RICS	27.97	28.05	0.984
Interpret professional standards when offering client services	29.34	25.65	0.355
Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities	27.90	28.18	0.942
Use a performance evaluation program to motivate staff	32.07	19.08	0.001*
Disseminate good practice through formal and informal training, publishing and other means	25.49	32.40	0.078
Assess internal practice operations	29.19	24.39	0.193
Develop and assess IT capabilities and other modern methods of working	29.77	24.90	0.239
Recruiting competent and qualified staff	29.26	25.80	0.400
Awareness of staff training and development issues	27.91	26.80	0.754
Assimilate client feedback to appropriately improve quality of delivery	27.53	28.83	0.749
Develop new professional products and services	27.69	28.55	0.813
Instigate appropriate client care	30.61	23.43	0.060
Appropriately ensure that clients pay fees	30.13	20.92	0.028*
Discuss briefs with clients to identify their needs	28.40	25.84	0.527
Instigate and monitor quality assurance processes	27.43	29.00	0.685
Ensure all aspects of operational work comply with internal processes and professional standards	26.83	30.05	0.419
Keep abreast of and digest relevant laws	25.80	31.85	0.105
Ensure company involvement in RICS activities	27.34	29.15	0.666
Assess requirements of regulatory bodies such as FSA	27.94	28.10	0.968
Ensure proper interpretation of leases and other records	27.65	25.84	0.652
Maintain appropriate health and safety procedures	28.60	25.47	0.444
Offer teaching and advice for students and developing practitioners	22.76	36.24	0.001*
Maintain ethical standards	25.11	31.89	0.081
Maintain professional integrity	25.33	31.50	0.103
Conduct research in and around the field of real estate	24.70	32.66	0.049*
Develop and maintain formal and informal communication and information systems	26.61	27.75	0.749
Develop an effective reporting framework	29.74	23.37	0.083
Manage and improve the work premises	30.71	21.58	0.022*
Forecast fee income from existing and potential work	31.37	20.37	0.007*
Manage expense claims and disbursements effectively	29.41	23.97	0.170
Develop and maintain procedures for managing staff problems	29.32	22.84	0.106
Undertake self-evaluation and reflect on improvement	25.70	32.03	0.070
Ensure resources are used efficiently	26.77	30.15	0.383
Integrate technical, infrastructure, and personal resources to ensure effective service delivery	27.53	27.45	0.983

Activity Nodes	Mann-Whitney U Tests		
	Mean Ranks		2-tailed <i>p</i>
	Practitioner	Academic	
Provide leadership about problematic and controversial issues of practice	26.04	30.18	0.272
Review decisions to ensure client expectations are met	29.11	24.53	0.249
Listen to complaints and resolve conflicts	25.70	30.82	0.196
Negotiate with clients to achieve a win-win situation	28.69	25.32	0.416
Facilitating team working and collaboration among different organisational units	28.41	25.95	0.505
Implement research into practice	25.07	33.13	0.041*
Display and maintain empathy for staff, work enthusiasm and other social attributes that contribute to an enabling work atmosphere	27.84	26.93	0.807
Apply regulatory directives	28.90	26.43	0.519
Make judgements about market conditions	29.10	26.08	0.453
Negotiate with external parties on behalf of clients	30.93	21.18	0.019*
Appropriately maintain clients accounts	28.09	25.05	0.464
Inspect property and maintain documentary evidence of inspections	29.21	24.34	0.237
Delegate and deal with complex lines of responsibility within the organisation	30.56	21.87	0.022*
Use appropriate measuring and other equipment and operate them safely and effectively	29.74	24.95	0.245
Conduct evidence-based critical analysis and debate of real estate-related issues with peer inclusion	25.38	29.89	0.248

9.0 Discussion

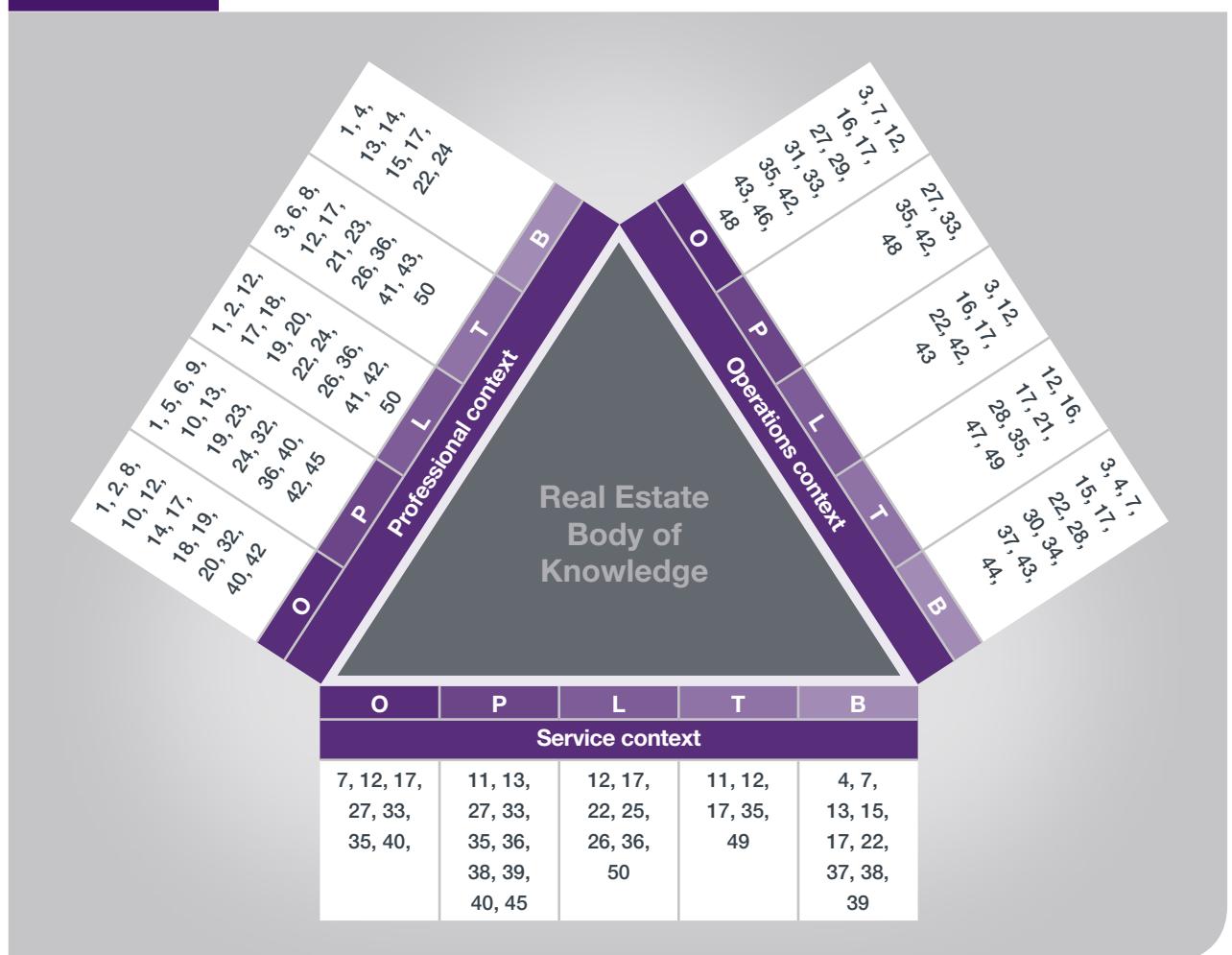
Based on the results of this study, the following body of knowledge framework (Figure 4) is proposed. This framework encompasses the knowledge and skills areas (domains) as well as the activity nodes (represented in numbers as contained in Table 1) identified by our Delphi panel as describing the real estate practice in the UK.

As shown in Figure 4, real estate practice exists in a broader context that includes operation (the tasks undertaken by professionals as part of real consultancy services), service (the company/firm within which real estate tasks are performed) and professional (the wider social and institutional influences on the tasks performed by real estate professionals). Within each context, there are five broad knowledge and skills areas. These include:

1. Organisation and governance (O), involves activities dealing with operating the company internally (for example, managing work flow);
2. People and tasks (P), involves activities dealing with people within the organisation (for example, motivating the team);
3. Legal and regulatory (L), involves activities that are governed by law and regulation (for example, appreciating tax advantage);
4. Tools and techniques (T), involves activities dealing with the use of technical methods to complete tasks (for example, accurately valuing a property);
5. Business and commercial (B), involves activities dealing with the operation of a company/firm in the business world (for example, determining fee levels).

Figure 4

Practice-based body of real estate knowledge framework for UK



Although these knowledge areas appear as discrete elements in the framework, they generally overlap: none can stand alone (this is evidenced in the overlapping nature of the activity nodes presented in Table 1). As such, it is not necessary for every real estate professional to be an expert in all the five knowledge and skills areas. However, effective real estate practice needs to integrate them into all aspects of their practice.

The analysis of the data obtained from both academics and practitioners strongly suggests that regardless of the real estate context, the following four activities are viewed as highly crucial to the real estate practice based on the results obtained from our first Delphi iteration:

- 1.** Network with businesses, clients, and other professionals to be aware of their concerns and see opportunities (No. 4 in the framework)
- 2.** Develop new professional products and services (No 12 in the framework)
- 3.** Discuss briefs with clients to identify their needs (No 15 in the framework)
- 4.** Ensure all aspects of operational work comply with internal processes and professional standards (No 17 in the framework)

As evidenced in Table 1, these activities were highlighted by the research respondents across all the three contexts, thus indicating their significance to real estate practice. Since this research focused more on gaining perceptions about activities relevant to the real estate sector, rather than exploring the reasons why relevance was attached to these activities, it is not completely clear why academics and practitioners regard the four activities listed above as especially critical. An evaluation of the responses obtained from the first round of the Delphi survey would suggest that this is due to the awareness of real estate professionals about consistently meeting the needs of clients (customers of real estate services, or students of the real estate discipline) and identifying the commercial opportunities that arise out of meeting client's needs. A further study of stakeholder motives and interests surrounding the selection of real estate activities is required to provide greater elaboration not just on what activities were selected but also on why they were selected.

Unlike the real estate contexts (professional, service and operation) explored in this research, the knowledge areas experienced a higher degree of inter-relationship, as greater number (about 80%) all of the activities featured in at least two areas which again re-enforces the point made earlier about the need to integrate them for an effective real estate practice.

There are clearly some activity nodes on which the real estate academic and practitioners differ statistically (see Table 5). An analysis of these differences reveals that real estate academics place higher importance on higher order cognition activities such as offering teaching and advice for students as well as developing practitioners. Perhaps, what is of more concern is that there were statistically significant differences of opinion between real estate academics and practitioners on the activity nodes that achieved overall consensus with mean rating greater than 3. These activities include:

- 1.** Appropriately ensure that clients pay fees
- 2.** Offer teaching and advice for students and developing practitioners
- 3.** Conduct research in and around the field of real estate
- 4.** Implement research into practice

These differences have implications for real estate education and hence the training of real estate graduates at workplace. As a result, further research needs to be conducted to investigate the nature of these differences between real estate academics in Higher Education Institutions and real estate practitioners in professional practice.

Also, there are immediate implications for benchmarking the assessments of real estate practice and education with regards to the activity nodes that achieved consensus as reflecting the core expertise in real estate practice. These activity nodes reflect real estate practice performance which describes what the real estate professional actually does in real estate practice. Real estate competencies, on the other hand, describe what a professional is able to do at an expected level of achievement. Therefore, It would seem logical that the RICS, as a regulatory body, includes those activity nodes in the assessment of real estate competency in order to match performance with expectation. In essence, all the aspects of the Assessment of Professional Competence (APC) should reach real estate performance status as the professional practice in real workplace. The extent to which this is reflected in the RICS APC guidance is beyond the scope of this present study. Hence, further investigation is required to map real estate competence with real estate performance. Real estate education should also create an environment of real estate teaching that accurately reflects the requirements of real estate practice.

10.0 Conclusion

This research has attempted to provide an insight into the activities of real estate professional practice through the informed opinion of practitioners and academics about what constitutes the skills and knowledge that are most crucial. The use of a Delphi approach, through a number of iterations, sought a consensus on activities that define the profession.

The significance of this research is two folds. First, the activities identified can inform the decision making by professional bodies, such as the RICS for the assessment of professional competency and academic institutions for the development and/or improvement of learning outcomes for real estate programs. Second, the research contributes to literature by redefining real estate body of knowledge differently from the approach adopted in previous studies. Indeed, the research framework that was developed structures the compiled body of knowledge thus connecting the parts that constitute the real estate profession, identifying specialisms (e.g. the commercial or the regulatory) and so demonstrating the true worth of real estate practice.



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RICS HQ

Parliament Square
London SW1P 3AD
United Kingdom

**Worldwide media
enquiries:**

e pressoffice@rics.org

Contact Centre:

e contactrics@rics.org
t +44 (0)24 7686 8555
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(**excluding United Kingdom and Ireland**)

Rue Ducale 67

1000 Brussels

Belgium

t +32 2 733 10 19

f +32 2 742 97 48

ricseurope@rics.org

Asia

Room 2203

Hopewell Centre

183 Queen's Road East

Wanchai

Hong Kong

t +852 2537 7117

f +852 2537 2756

ricsasia@rics.org

Americas

One Grand Central Place

60 East 42nd Street

Suite 2810

New York 10165 – 2810

USA

t +1 212 847 7400

f +1 212 682 1295

ricsamericas@rics.org

United Kingdom

Parliament Square

London SW1P 3AD

United Kingdom

t +44 (0)24 7686 8555

f +44 (0)20 7334 3811

contactrics@rics.org

Africa

PO Box 3400

Witkoppen 2068

South Africa

t +27 11 467 2857

f +27 86 514 0655

ricsafrica@rics.org

Ireland

38 Merrion Square

Dublin 2

Ireland

t +353 1 644 5500

f +353 1 661 1797

ricsireland@rics.org

Oceania

Suite 2, Level 16

1 Castlereagh Street

Sydney, NSW 2000

Australia

t +61 2 9216 2333

f +61 2 9232 5591

info@rics.org.au

Middle East

Office G14, Block 3

Knowledge Village

Dubai

United Arab Emirates

t +971 4 375 3074

f +971 4 427 2498

ricsmenea@rics.org

India

48 & 49 Centrum Plaza

Sector Road

Sector 53, Gurgaon – 122002

India

t +91 124 459 5400

f +91 124 459 5402

ricsindia@rics.org