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# Alignment of Professional, Academic and Industrial Development Needs for Quantity Surveyors

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## Keywords

Quantity surveying competencies, academic, industrial, professional body, RICS, graduate quantity surveyors

## Abstract:

The academic, professional and training needs of Quantity Surveyors are pulled by different stakeholders in different directions. Academics are interested in producing a rounded graduate with the basic foundation in knowledge for further development whereas professional bodies are interested in graduates capable of progression to full professional status through the achievement of the required core competencies (RICS, 2009). The industry is looking for a graduate who can straight away contribute to the growth and daily functions of business activity. Hence, there is a three directional pull on the development needs of the Quantity Surveyor (QS). The present education system of the QS does not recognise these multi-directional needs and hence often produces a graduate whom the industry sees as not fulfilling their requirements. This leads to many problems with greater levels of employer and graduate dissatisfaction and obstacles to early career development of the QS graduate. This research aims at investigating the changing development needs of Quantity Surveyors within a post recession industrial environment that satisfies the aspirations of industrial, professional and academic stakeholders. The paper will present the initial findings of the research based on a series of stakeholder interviews examining RICS competencies and academic curricular.

## 1 Introduction

The role of the Quantity Surveyor (QS) has evolved over the years since its origins in the mid 19<sup>th</sup> century (Thompson, 1968) and more recently through a series of reviews under the auspices of the Royal Institution of Chartered Surveyors (RICS). The RICS report published in 1971 defined the role of the QS in a succinct and clear manner (RICS, 1971). It sought to establish the profession as specialists in measurement and valuation of construction work. This was then followed by the report on the Future Role of the Chartered QS in 1983 (RICS, 1983) which identified the skills and knowledge base of the QS while identifying the scope for expansion and diversification of services. A greater level of detail and definition to the role of the QS was brought about by the RICS report on “The Core Skills and Knowledge Base of the Quantity Surveyor” (RICS, 1992). These provided the basis for the development of the RICS QS competencies (RICS, 2009).

The direction and the development of the role of the QS were highly influenced in the early 90’s by the report published by Davis Langdon and Everest (DLE, 1991). This report entitled “Quantity Surveying 2000” identified threats and opportunities for quantity surveying approaching the 21st century. Brandon (1992) documented the changes in the role of the QS and provided a detailed account of the services offered by modern quantity surveying practices. Powell (1998) warned the profession of imminent changes in the light of changing attitudes of clients, pressures in the business world, formulation and execution of projects, development of skills base and the effect of Information Communication Technologies (ICT). The effect of ICT on the profession is something that is continuing and growing. It will have a profound effect on the profession, the way it operates and function. Carlidge (2002), attempts to capture these multi-directional developments and effects providing an insight in to the future of the practice of quantity surveying.

Today, the training needs of QS are pulled by three different stakeholders in three different directions. Academics are interested in producing a rounded graduate with the basic foundation in knowledge for further development whereas professional bodies are interested in graduates who can be progressed to full professional status through the achievement of the required core competencies (RICS, 2009). The industry is looking for a graduate who can immediately contribute to the growth and daily functions of business activity. The present education system of the QS does not recognise these multi-directional needs of the QS and hence often produces a graduate whom the industry sees as not fulfilling their requirements. This leads to many problems with greater levels of employer and graduate dissatisfaction and obstacles to early career development of the QS graduate. This research aims at investigating and identifying the different views of the three stakeholders while providing a platform for constructive alignment of these views. This paper describes the research undertaken and provides an account of the initial findings of the research.

## **2 Quantity Surveying Education**

The roots and the development profile of QS education is well documented in both Ashworth (1994) and Ashworth & Hogg (2007). Ashworth (1994) describes the traditional development of the QS through an articulated pupil scheme where a senior or principal surveyor trains new QS. The QS education system has evolved over the years from the early 60's to date with the predominant method of producing a surveyor today being through a graduate entry scheme via an RICS accredited degree. The process is currently undergoing another change with the introduction of the Associate RICS and Senior Professional routes for membership. It is too early to predict the effect these schemes will have on the profession although this research aims to identify trends and opinions of both industry and academia in this respect.

The conflicting concerns of academia, industry (both consulting and contracting sectors) and the professional body have long fuelled the “education versus training” debate and some conflict between Educators and Employers through which the RICS steers a sometimes difficult path. On the one hand it sends messages to the universities that it wishes to see programmes which lean more towards the “academic” rather than the “technical”, whilst on the other hand it sends messages to employers that they should accept graduates issuing from its accredited degree programmes as being appropriately qualified to take positions at higher than technician grade (for which the RICS itself has a specific training route via the HND / Foundation Degree and now ,through Associate membership). The debate of the need for a technical grade or otherwise is yet to be fully resolved.

The RICS has created the Competencies referred to above which require active cooperation between the academic sector (providers of basic subject knowledge and certain academic skills) and the industrial sector (providers of practical skills training) through the operation of their business.

Both the RICS and the educational sector show similarities in their lack of appreciation of the specific requirements industry may have of its newly graduated student members. At the same time the industry does not seem to appreciate that a graduate is a person with higher intellectual capacity to rapidly further develop their professional skills and technical knowledge. This conflict and lack of alignment of industry, academic and professional perspectives create a barrier for the development of the profession as well as the career development of the graduate QS.

Added to this is a more fundamental failure on the part of all parties to appreciate the dynamics of the market sector. The majority of new graduates appear to be entering more non-traditional QS routes. It has been shown both through research (Perera, 2006) and through records of 1st destination surveys (UNN Returns, 2001 – 2008) that a large majority of new graduates find employment not in Private

Consultancy Practice or the Public Sector, as was the case until the mid 1980's, but with Main Contracting and specialised subcontracting organisations. Perera (2006) shows that in University of Ulster more than 80% of graduates either seek employment or prefer to be employed in the non- PQS sectors of the industry. The situation is very similar in Northumbria University and in many other universities in the UK. Feedback from Assessment of Professional Competence (APC) workshops has noted a certain Private Practice bias within the presentation of advice and, indeed there is feedback at university level suggesting this. Both much of the academic content and the structure of the RICS would seem directed at the PQS and Government Sector, paying less attention to the skills inherent in the role of the Contractor's Surveyor. For their part, those engaged in developing Quantity Surveying within the construction sector may see this as another barrier to cooperating with the RICS when required. This is evident by the fact that RICS membership does not grow in the same proportion of the growth in QS student numbers (Perera, 2006). The emergence of Commercial Management (Lowe and Leiringer, 2006; Walker and Wilkie, 2002) as a distinct discipline encompassing the role of the contractor's QS is a fact that RICS would need to consider in detail in its development of career paths for the QS.

Leading QS professional bodies worldwide have begun to recognise these developments and trends. For example, recently the Australian Institute of Quantity Surveyors (AIQS) established a separate pathway for contractors' QS for completing professional qualification.

In summary, it is suggested that the present education system of the QS does not recognise their multi-directional needs and hence often produces a graduate whom the industry sees as not fulfilling its requirements. A further factor in the willingness or otherwise on the part of the Industry to accept and train new graduates must be born of the financial insecurity being experienced by existing members who might otherwise be more willing to accept the risk of employing and training new recruits. The problem is compounded and exacerbated by resource constraints caused by the economic recession being experienced particularly severely by the construction industry.

### **3 Research Methodology**

The RICS Competencies (RICS, 2009) provides a comprehensive list of mandatory, core and optional competencies for Quantity Surveyors. This research examines these competencies in the light of current practice and future needs identifying where further improvements are needed. It is very crucial to identify how these competencies relate to QS curricular used within UK university education system. There are 43 RICS accredited QS programmes conducted within UK. These different programmes use different curricular, approaches and fall within university quality assurance systems. Their professional relevance is governed through RICS partnership agreements. However, there is no

detailed mapping of how RICS QS competencies are dealt within course delivery, and no requirement to achieve particular levels of competency through undergraduate education. This research examines these issues in detail in order to make recommendations. Four RICS accredited QS programmes were taken as case studies to analyse the extent of mapping of these programmes to the RICS competencies. The results of this analysis are presented in this paper.

Two detailed surveys are currently carried out, one to obtain views of the industry and the other targeting academia. These will identify the views of each with respect to RICS QS competencies, and the debate of “training vs education”. The web-based surveys will seek views from the academia representing all universities delivering RICS accredited quantity surveying degree programmes. The employer survey targets organisations from the private consultancy sector, public sector and construction contractors. This research process enables to gather a reasonable amount of data even at a lower response rate sufficient to carryout detailed statistical analysis.

A forum consisting of ten specialists were identified. These consisted of three academics, three consulting QS, three contracting QS and one RICS official. A series of interviews were carried firstly to identify key issues and subsequently these are used to verify the findings of the surveys. The Content Analysis technique (Berelson, 1952) was used to extract key factors from the interviews while Delphi technique (Rowe and Wright, 2001) will be utilised to harmonise the views from the interviews and the findings of the surveys. The initial findings of the interviews are presented in this paper.

## **4 RICS Quantity Surveying Competencies**

### **4.1 *Development of Competencies***

Ever since the move away from a series of Professional Examinations, Stages 1 to 3, into graduate entry to the profession, the RICS has assessed the standard of its applicants through administering tests of one form or another to determine candidates’ levels of professional competence as explained below:

- a. In the 1970’s this took the form of a rigorous Test of Professional Competence (TPC) a 48 hour previously unseen practical multi-faceted simulated real time exercise set and issued by the RICS but carried out by the candidate in their own workplace. No candidates were interviewed except for borderline cases. This was very much a “hands-on” practical test of the would-be surveyor’s skills in the workplace. The disadvantage for many candidates, particularly those employed by contracting organisations, was that the Test, in all its parts, tended to mirror the duties of a Client’s surveyor, rather than those of the Contractor’s.
- b. In the early 1990’s the above gave way to the Assessment of Professional Competence (APC) a test administered in a regional Test Centre. Here candidates were required to write an essay of their choice from a set of previously unseen titles. They would have a set time to produce their response, after which they would be questioned on this and other matters at an interview

by a Panel of Assessors. Again, the essay scenarios tended, in the main, to reflect the world of Private Practice, rather than that of Contracting.

- c. In the latest manifestation of the APC, instituted in the mid to late 90's, the candidate must now prepare a Critical Analysis – a written report centred on a particular project upon which they have worked in practice and for which they have had responsibility during their employment since graduating. At interview, at a Test Centre, candidates are required to present a summary of this report and are also asked questions on it by a panel of Assessors. The Panel goes on to question the candidate, to verify their attainment, or otherwise, of a series of Professional Competencies set out in the RICS (2009) publication Requirements and Competencies (latest edition July 2009). The type and level of experience required should be driven more by the candidate's work situation than by universal norms as used to be the case.

Whilst Professional Competencies only emerged during the 1990's in the prescriptive and detailed form for all three stages of the development of the Graduate Route. It required maintenance of a Diary and Log Book by candidates. Candidates had to make diary entries against specific coded professional skills, forerunners of today's competencies. One element of their TPC/APC assessment would be the Assessors' judgement as to the degree of experience which candidates had picked up in these areas. An even spread was required across the majority of areas and formulae were created, and issued to Assessors, indicating acceptable degrees of attainment, chiefly in terms of the balance of time spent across the range of required skills.

The current Professional Competencies forming the subjects of this research have grown out of the above. They define a training which "seeks to assess that [the candidate is] competent to carry out the work of a professionally qualified surveyor". They are a mix of Mandatory, Core and Optional competencies (RICS, 2009).

**Mandatory Competencies:** personal, interpersonal and business transferable skills common to all routes and compulsory for all candidates. There are ten of these, thirteen for those seeking entry to the profession via the senior professional route.

**Core Competencies:** primary skills of the candidates chosen faculty (in this case, QS and Construction). These must be attained to maximum specified minimum levels. There are seven of these.

**Optional Competencies:** selected by the candidate, additional skills relating to candidates chosen specific route to qualification. This will usually be governed by the nature of the candidate's employment. A choice of two must be made from twelve possibilities.

## **4.2 Interpretation of Competencies**

Each competence is expressed in between one and three levels, defined by the RICS as follows:

Level 1; demonstrating knowledge and understanding

Level 2; demonstrating the capacity to apply the above knowledge and understanding

Level 3; demonstrating the capacity to reasoned advice

There is variation between the level which must be achieved by candidates, depending upon whether the competence in question is classified as Mandatory, Core or Option to complete APC. Mandatory competencies must be achieved to at least level One, some higher. Core competencies, as one might expect, must be achieved at level 3 while Optional competencies must be achieved to at least level Two.

It is generally recognised that students undertaking the Graduate Route to qualification will achieve Level 1 capability in areas on which they are engaged during their period of formal university-based studies, as this consists of acquiring basic knowledge and some basic skills. These will, in most cases, be possible during the first two years of a Full Time or Sandwich degree.

Capacity to apply the above, as suggested by Level 2, can be acquired, to a certain extent, through work in class and involvement in university-based Project work during later years of a taught course. It will more easily be acquired by Part Time students in appropriate employment and those in Sandwich programmes fortunate enough to undergo an Industrial Placement.

It is unusual for a student on Industrial Placement to be put in positions of leadership or responsibility in which they would be called upon to give conclusive advice, to clients. It may be that a Part Time student, dependent upon age and length of time with a certain employer, may be in such a position. This is not common however.

The research to date appears to bear out the above pattern, both in the type and level of university-based study and the type and level of attainment expected by Employers. However, whether these are explicitly considered at the time of design of courses is questionable. Furthermore, the understanding by industry or academia of the level of competencies required of a new graduate is another factor in doubt. This research aims to explore these aspects in the case studies analysed in the following section and the interviews analysed in the section 6.

## **5 Competency Mapping Case Studies**

QS programme curricular from 4 leading universities in QS education were obtained to carry out an analysis mapping curricular to RICS competencies. These are presented as case studies A, B, C and D in Table 1 below. In each case, the syllabus for each module was studied and a judgement formed as to the mapping of competencies to curricular and to the degree of satisfaction of competencies. These were applied to each module and to each of the respective three levels of competencies. The “scoring” system used a scale of 0 to 1 indicating non satisfaction to full satisfaction. The scoring was applied as follows: 0.25 where addressed at a partial level, progressing by 0.25 intervals until 1.00. For each competence and at each level a total amassed, based on a number of scores relating to coverage by a

number of modules. Hence, if 6 modules on a degree programme each attracted a score of 0.5 at level 2 in respect of any one competence then the total for that competence would be 3 (Table 1). This is a somewhat crude measure of satisfaction of competencies but does provide a tool for making comparative analysis of different QS degree programmes as well as identifying levels of concentration of competencies. The satisfaction ratings produced in Table 3 are still provisional as these have not yet been verified through the individual programme coordinators as to the validity of rankings attached. This approach will bring a consensus view of the satisfaction ratings and provide a reasonable degree of cross programme comparison.

Table 1 Competency Mapping of QS Honours Degree programmes

Competency	Code	Name	LEVEL ONE				LEVEL TWO				LEVEL THREE			
			A	B	C	D	A	B	C	D	A	B	C	D
Mandatory	M001	Accounting principles and procedures	0.00	0.00	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mandatory	M002	Business planning	0.00	2.25	0.75	0.75	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mandatory	M003	Client care	1	0.75	1.25	1.00	0.00	0.0	0.50	0.25	0.00	0.00	0.00	0.00
Mandatory	M004	Communication and negotiation	1	0.25	1.00	4.25	3.5	1.0	1.50	0.75	1	1.00	1.00	0.00
Mandatory	M005	Conduct rules, ethics and professional practice	0.75	1.50	1.00	2.00	0.00	0.00	0.50	0.25	0.00	0.00	1.00	0.00
Mandatory	M006	Conflict avoidance, management and dispute resolution procedures	0.00	0.00	4.00	1.00	0.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00
Mandatory	M007	Data management	4.75	0.50	3	2.75	2	2.50	1.00	1.75	0.00	0.00	0.50	0.25
Mandatory	M008	Health and safety	0.5	0.00	0.25	2.25	1	0.00	0.00	0.50	0.00	0.00	0.00	0.00
Mandatory	M009	Sustainability	1	0.25	1.25	1.75	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
Mandatory	M010	Team working	1.50	1.00	1.25	4.75	2.75	2.50	1.50	0.75	0.00	0.00	0.00	0.00
Core	T010	Commercial management of construction	0.25	1.00	1.50	2.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
Core	T013	Construction technology and environmental services	3.5	2.25	1.25	2.25	3	0.00	1.50	0.25	0.00	0.00	0.00	0.00

Competency	Code	Name	A	B	C	D	A	B	C	D	A	B	C	D
Core	T017	Contract practice	0.75	1.75	0.75	2.75	1	0.00	2.00	0.25	0.00	0.00	0.00	0.00
Core	T022	Design economics and cost planning	1.25	1.25	2.50	1.50	1	0.75	1.25	0.75	0.00	0.00	0.00	0.00
Core	T062	Procurement tendering	0.5	0.50	0.50	1.75	1	1.00	2.50	0.25	0.00	0.00	0.00	0.00
Core	T067	Project financial control and reporting	2	0.50	1.25	1.00	0.00	1.00	1.00	0.50	0.00	0.00	0.00	0.00
Core	T074	Quantification and costing of construction works	0.5	1.00	1.75	3.00	2	0.00	2.50	0.75	0.00	0.00	0.50	0.00
Optional	T008	Capital Allowances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Optional	T016	Contract administration	1.25	1.50	2.00	1.75	1	0.75	0.00	0.00	0.00	0.00	0.00	0.00
Optional	T020	Corporate recovery and insolvency	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Optional	T025	Due diligence	0.00	1.00	0.00	0.00	3	1.75	1.50	0.00	0.00	0.00	0.00	0.00
Optional	T045	Insurance	0.00	0.00	0.25	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00
Optional	T063	Programming and planning	0.5	0.75	1.00	1.00	1	2.25	1.00	0.25	0.00	0.00	0.00	0.00
Optional	T066	Project Evaluation	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Optional	T077	Risk management	0.00	0.50	0.00	0.75	0.00	1.75	1.00	0.00	0.00	0.00	0.00	0.00

Generally, in terms of curricula and thus syllabi and learning outcomes, Modules of similar or related nature appear evenly across all years developing each competence over time. Thus, successive modules move the student onwards from modules in years 1 or 2 which impart basic knowledge and certain core skills (as per Level 1 Competencies) through to modules in years 3 or 4 whose learning objectives demonstrate the student (and thus the graduate's) capacity for carrying out tasks independently (as per Level 2 Competencies). Exceptionally, a student who undertakes an Industrial Placement year may enhance their experience in certain skill areas. Such students may be thought to have attained Level 2. The mapping provided in Table 1 does not consider placement as the level of attainment of a competence at placement is variable upon the level of experience gained by the individual than that of the nature of the programme the student is enrolled.

As noted, the progression to Level 2 is not uncommon, where Level 2 can be defined as demonstrating the capacity to apply the knowledge and understanding (See Section 4.2). Perhaps this is not surprising for, as was noted in Section 4, there is a general acceptance within the industry that a new graduate will have achieved Level 2 or something near to this by the time that student leaves university (see section 6.2.1. below).

Understandably Level 3 is unattainable in the majority of Competencies, given its definition in most cases, involves demonstrating the capacity to give reasoned advice [to Clients] (See Section 4.2), notwithstanding the possible exception of certain more mature and experienced students on placements and similar individuals on Part Time modes. There are examples where students appear to attain the higher level of competence, specifically in data collection and management, communication and team-related skills areas. This is mainly due to the fact that it is possible for students to display these competencies through Dissertation and Project work areas, especially in their Final Year.

Analysis of the satisfaction ratings (Table 1) indicates a significant variance between the extent(s) to which different academic institutions meet the requirements of Option, Mandatory and even Core Competencies. It can be seen that some institutions may not even cover all of the competencies. Specifically in the case of Mandatory Competences, some are seen as too workplace-specific. For example, mandatory competencies such as Client Care, Negotiation, Conduct Rules and ethics, are difficult to simulate within a classroom environment. However, some institutions attempt to address some of these issues through the adoption of a project-based delivery strategy. This may still surprise the RICS, as they have recently laid increasing emphasis on universities teaching transferable skills and enhancing employability.

Where gaps appear, perhaps schools are dependent on the staff strengths in particular professional specialism and are thus selective in what they can/will offer. Data from the academic survey should

clarify the position. If certain universities are knowingly delivering a QS education that falls short, in certain respects, of what the RICS might expect then this should be considered in the light of the expectations of Partnerships agreements between such Institutions and the RICS.

Once the above data is verified by the respective programme leaders and the results from the academics survey have been analysed it will be interesting to see how closely these initial impressions are mirrored by what is actually happening out there.

## **6 Analysis of Views of the Expert Forum**

The content analysis of the 10 interviews carried out is presented in this section. The interviews comprised of 3 academics, 3 Private practice QS (PQS), 3 Commercial QS (CQS) and 1 RICS representative.

### **6.1 Role of Quantity Surveyor**

The interviewees were requested to provide views on the present and future role of the QS. With respect to the present role of the QS they generally agreed that the role centred on cost advice, estimating, and measurement. One academic noted that it differed from a contractor's surveyor to consultant's surveyors though others did not stress the difference. There was some disagreement as to the development of the role of the QS. One PQS noted the role had not changed much whereas one CQS noted it had changed a lot. There was a strong feeling that the role would become more complex, taking more concepts such as sustainability and whole life costing into account. 1 PQS stated "We are looking at the whole life cycle (WLC) of the facility and its use in a wider context". The importance of WLC was noted by 2 respondents, 1 CQS and 1 PQS. Two respondents (PQS & CQS) suggested that the name QS should change to reflect the function more accurately on the lines of Cost Manager or Cost Engineer. The name change is indicative of observations by other respondents that the difference between PQS and CQS is narrowing and the two roles are merging. The respondents in general indicated the need to up skill the QS knowledge base in use of ICT and its impact on the profession. They also agreed that collaboration and team working should be a more important skill to develop. Sustainability and project management skills were seen as areas for further development while civil engineering construction, infrastructure development and mechanical and electrical (energy related) projects were seen as growth sectors for the future.

One PQS was of the view that there is potential for procurement to revert back to more traditional methods due to economic pressures. This could be seen as an important possibility that further enhances the cost control role of the QS.

### **6.2 Quantity Surveying Competencies**

The RICS QS competencies provide the basis on which a quantity surveyor will be judged capable to act as an independent professionally qualified chartered surveyor. The respondents were first asked to

consider the competencies in general. The RICS representative noted that there are more prescribed core competencies for QS than for any other pathway. This was however to be combined with the understanding that not every competence need be met by the universities and that the RICS welcomed diversity to reflect the individual strengths of each. Industry CQS respondents noted that the competencies were relevant and “do adequately describe what we want”.

#### *6.2.1 Expected level of competency for graduate quantity surveyors*

Most respondents agree that a Level 1 competence relates to attaining knowledge which could be expected from graduate QS. Some academics foresee students progressing beyond Level 1 to attain a portion of Level 2 competencies through practical experience gained from project based work while part time students and placement students will also be able to progress beyond Level 1. However, one PQS stated that they would expect graduates to have attained Level 2 in both Mandatory and Core competencies. This indicates that there is differing interpretation of competencies and the graduate’s likely level of attainment.

One PQS expressed the view that “contracts are now more important as this forces cost control, it is a rapidly developing area and students are not up to speed”. This indicates a tension between trying to cover all the competencies to a particular level and placing certain emphases on areas that are considered more important. This tension is seen later on in other parts of the discussion and shows that with different expectations from various sections of the industry that universities cannot be all things to all people. The RICS representative echoes this, stating that when a course is considered RICS will be looking at how it maps onto the technical competencies they will be looking more at the core competencies.

Three respondents (1 academic, 1 PQS, 1 RICS) commenting on the mandatory skills agreed that these were general competencies covering transferable or softer skills.. One academic noted that they did not have a specific module to cover these skills but that the student picks these up as they progress through the course. Three respondents (2 academics, 1 PQS) stated that core competencies largely define the primary role of the QS With respect to Optional Competencies, one academic noted that these should allow for flexibility or to pick up on diversification and one PQS noted that candidates should understand what the competencies cover but they should not bend their experience to fit the competency, a practice he purported as wide-spread.

When queried about possible additional competencies, three respondents (1PQS, 1RICS and 1CQS) identified sustainability, business management and planning, accounting, communication (language, report writing and team working), new building technologies, pre-fabrication, civil and infrastructure

engineering, life cycle costing as possible additional competencies. Some of these are already covered in some competencies. Since competencies do not give lengthy descriptions of content, these are open for interpretation.

4 respondents (3CQS, 1PQS) noted that there were areas that were not given enough attention or that the students had poor knowledge of; valuation (1), measurement (1), building contracts (1), construction technology (2), M and E services (1), environmental services (1), team working (1), and data management (1).

3 respondents (2 academic, 1 CQS) were happy with the coverage and felt that there should be no new additions to the competencies/skills. One PQS stated that contract administration is listed as optional but felt that it should be core. No respondents felt that there was any obsolete content taught.

One PQS felt that some courses do not deliver what employers want and one academic stated “students are going out without the necessary skills to undertake their basic job and that is where employees feel that the universities are letting the system down”. This being said the general view was that it is not easy to generalise and some courses are better than others and also it is down to other factors such as the student, mode of study, and employer.

### **6.3 QS Education System**

Six respondents shared their views on the present nature QS education (1 RICS, 2 academic, 2 PQS, 3 CQS). As class sizes get bigger to make courses more economically viable the ability of tutors to spend more contact time and give more feedback will be compromised by the numbers of students they have to work with.

One PQS expressed the view that there was too much mass teaching, with a mismatch where the learning outcome does not map to the industry requirement and also felt that some lecturers need to update their knowledge so that the graduates should be the ones with the knowledge on the latest techniques. The respondent did however note that it was not possible to make generalisations and there were differences between universities and individual lecturers. One PQS also felt that RICS had less than adequate involvement in regulating curricular while another CQS felt that although there are so many RICS accredited programmes they were not comparable in most respects.

The academic curricular content was commented on by 5 respondents (1 academic, 1PQS, 3 CQS). The academic noted that they were able to cover a lot of the core competencies in a 4 year degree and that they could map modules that they teach to the core competencies. 2 respondents (1PQS, 1CQS)

stated that the coverage was pretty good in general terms. However, the industry respondents felt that it was difficult to map modules taught at universities to RICS competencies.

On the aspects of curricular development 5 interviewees responded. Two identified measurement as an area that needs greater attention (1 CQS, 1 PQS). Other areas identified include taxation (CQS), understanding building technology and construction (CQS), bill of quantities (PQS), cost planning, preconstruction estimating (CQS) while there was an overemphasis on management of projects (1PQS, 1CQS). The aspect that caused most concern for one PQS was that graduates had a poor understanding about construction technology and no real understanding of on-site conditions. Reflecting on these views it is clear that there is greater attention needed on some core areas of quantity surveying. But if so, the academics will be faced with the dilemma of identifying which areas to forego in lieu of areas of expansion.

Two respondents (1PQS, 1CQS) commented that there is a reasonable level of employer engagement with the universities. However, the level and extent of engagement is one aspect that requires further exploration.

All 10 interviewees had contributions to make concerning their views on placement. This was unanimously seen as a positive, if not crucial thing for a student to have. The experience the student gains from having practical experience cannot be replicated in any other way. The current economic situation is having a negative impact on the availability of placements.

The majority of respondents (9) stated that Part time students were far better and rounded than full time students, though this was usually in respect of their dedication to work and approach to the job.

#### **6.4 RICS-Industry-Academic Institution communication**

The level of communication and the respondents' perception was analysed with respect to RICS Partnerships for programme accreditation, RICS and Universities, RICS and Industry communication, Industry and universities communication.

The RICS partnership process was seen as facilitating greater discussion but that most communications still came down to personal relationships. One academic saw the accreditation partnership as a way to understand how the course is being assessed "so that students come out with the ability to be Quantity Surveyors". These indicate the primary role of the RICS partnership agreement as regulating RICS accredited programmes. However, the level and detail of regulation was criticised. One PQS felt that there was a conflict of interest in the RICS education board if there

were academics on the board and this led to them influencing the decisions. But, this is questionable as the role of education board is not necessarily to project the view of industry alone. A balanced representation perhaps might be useful. Lack of consultation with the professional group was also noted adding that RICS communication with industry was not good. One CQS did not know about the partnership arrangements. Another felt that there was a real inertia around working out solutions to problems that were identified. There was recognition of the difficulty involved in getting all three parties around the table and keeping the lines of communication open.

With specific reference to the communication between RICS and universities 4 respondents (2 academic, 1 CQS, 1 PQS) made contributions. The 2 academics noted that they had a good rapport with the RICS. The CQS did not know about this while the PQS thought that some had good communication with RICS and others did not.

The general consensus with respect to communications between RICS and industry was that it is in need of much improvement, although it is beginning to move in the right direction. There is a need for increase in regional and local level of involvement (2 academic), fees scales need to be more realistic (1PQS), and RICS needs to be more in touch with leading edge work (1PQS). Three respondents (1 PQS, 2 CQS) did not really have any contact with RICS through their role in the company with one commenting that RICS has lost its focus on members and become a business instead of an institution (CQS).

The communication between universities and industry were generally seen to be reasonable although it was added that universities try the hardest and industry needs to be better at communication. The state of the economy was seen as a factor that influences level of communication (1 academic). Greater involvement of the industry as a stakeholder in the development of programmes, face to face industry consultation and industry taking programme development and contributions as part of their corporate social responsibility were seen as steps that can be used to improve the situation.

## **6.5 RICS Membership path ways**

The RICS recently revised their membership pathways. Accordingly, two interviewees (1PQS, 1CQS) stated that they are not familiar with the new routes of membership other than the graduate route. A total of seven (1 RICS, 2 academic, 2 PQS, 2 CQS) expressed that they are happy with the graduate route of membership. One CQS did note that it was sometimes hard to push graduates into becoming chartered, suggesting that this was due to a combination of fees and not seeing any advantage in becoming chartered. Another problem that exists is that more specialised contractors did not give the graduate a wide enough experience in some competencies (1 academic, 1 RICS).

The new associate pathway was stressed as not being a shortcut to becoming chartered surveyor by the RICS representative. One academic said that it was a nice idea but did not see its relevance and felt that it was not clear enough where the cut off point was between the two levels while another expressed some reservations. One PQS felt that it may lead to people aiming for a minimum standard and that ASSOC RICS is not good enough to be recognised. 1 CQS noted that it was helpful to people who don't have degrees but to then progress to MRICS or FRICS was a very convoluted route. Another CQS said their company had looked at this route but gone back to the graduate route. These sentiments suggest there is lack of understanding about the new route as well as some doubt as for the need for this new route.

There was a mixed response to the new senior professional route. 3 respondents stated that they were not happy with this route. 1 academic viewed it as a rubber stamping exercise. One CQS said "my main problem with that route is that it doesn't test technical competence". One PQS did not think that people should just be given MRICS for their long experience and although it provides an opportunity to get practitioners into mainstream RICS, they should still fit the APC model and competencies. One academic warned that the RICS have to be careful not to be seen as an institution desperate to get new members in. On the positive side 1 PQS noted that it was good and had worked well for them, adding that the CIOB are doing the same thing.

The RICS representative noted that unless the company has signed up to the structured training programme they should not take on a graduate for APC. Three respondents (2 CQS, 1 PQS) stated that they did have a structured training programme. One PQS noted that there were very low completion rates for the APC and felt that this was due to very poor levels of basic knowledge and that there were big gaps between what is learnt at university and what is needed to get chartered. The possible reasons for this were seen as employers not seeing it as important and that they lack a structured training programme. It was also noted that it is difficult to provide all the training in three years. Smaller companies often struggle as they do not have the volume or frequency of work types to enable them to have a smooth training process. One PQS was highly critical of the APC process itself, stating that it is a daunting process that makes candidates unduly nervous. The RICS process compares with the CIOB less favourably as the CIOB process is friendlier and they help you to get through it.

## **6.6 Education Vs Training**

All 10 respondents considered what a university should provide with regards to QS education. They were requested to respond to:

- a. Provide an overall academic knowledge and a good foundation in Quantity Surveying, or
- b. Concentrate on training students for direct QS employment.

6 respondents agreed with statement a (2 PQS, 1 CQS, 1 RICS, 2 academics). 2 respondents agreed with statement b (1 PQS, 1CQS). 1 CQS felt that it should be a bit of both, a balance of academia with vocational on a 50/50 basis. One academic was undecided. One CQS stated that over the last 30 years they have seen the quality of technical Quantity Surveying become diluted and warned that if the trend continues we would lose technical standards forever.

In overall terms most wished to see a sound academic background for the graduate quantity surveyors but did not want to see any compromise on the level of knowledge. They also seem to expect improved technical competence in graduates going to the industry.

## **7 Conclusions**

This paper provides an account of the development of quantity surveying education from its roots to present day university based education. The paper presents a set of interim findings of a detailed research project that aims at developing a frame work for constructive alignment of industry, academia and professional body in quantity surveying education. The graduate route is the main pathway to become a chartered quantity surveyor in the RICS. However, there is an increasing discontent from industry at the level of competence of graduates. This research investigates this issue by first analysing the quantity surveying programme curricular of four leading QS programmes spread across UK. It maps the curricular to RICS competencies and attempts to provide a level of satisfaction ranking to indicate relative levels of satisfaction of competencies through the programme content. Subject to the limitations of this analysis (discussed in section 5) it can be concluded that some programmes do not meet some RICS core competencies at even Level 1. The analysis and the interpretation of competencies also reveal that there is no clear prescribed level of expectation of level of achievement of competencies by graduates. This is at present open to interpretation as both academia and industry interpret completely different expected levels of satisfaction of competencies. This in itself is a source of friction and dissatisfaction both on the part of industry and academia. It begs the question that if there is no bench mark to say that graduate quantity surveyor should have achieved different competencies at a certain level then it is open for interpretation and one would naturally have to expect different standards.

The research also involved a detailed structured interview of a forum established as experts. The forum consisting of industry practitioners, academics and RICS representatives provided vital information and perceptions as to the different angles of this problem. The issue of non availability of

a benchmark standard to interpret the level of satisfaction of competencies by graduates was further confirmed by the interviewees. There was discontent with the role of RICS in QS education as well as their communication and engagement strategies. There was also a good deal of satisfaction expressed (specifically by academics) on the RICS partnership process in accreditation of programmes. However, this is not to say that there is no scope to improve.

The research is not conclusive as there are two ongoing surveys that will provide a vital insight in to the views of both industry and academia. Further ongoing research will produce an overview of the perceptions related to QS education and provide a platform for re-direction and re-shape of the QS education system.

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