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Article Main Body contains 4,998 words

Estimating as a Profession in UK Construction

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Abstract:

Purpose

Both Quantity Surveyors (QSs) and Estimators have pivotal roles in the profitability of construction contracts; however, only the QS is classified as a professional. Preliminary examination of the responsibilities of the Estimator and the level of qualification required in comparison to the QS suggests that the current failure to recognise estimating as a profession may be an anomaly. The purpose of this inquiry was to consider the role of the Estimator relative to the accepted criteria attaching to professional status.

Methodology

To achieve this, available definitions of a profession were distilled into core criteria which were then used to compare QSs and Estimators in terms of remuneration, education and professional representation.

Findings

A statistical analysis on each of these criteria suggested that there was no significant difference in terms of salary offered or education required by employers. Further

investigation, however, did reveal a considerable difference in educational and professional opportunities available to QSs. With regard to the key defining criteria of a profession and the consideration given by employers, the results indicate that there is no difference between the two groups.

Originality/value

Given the information revealed by this research it may therefore be the case that the current standing of Estimators should be reconsidered with the purpose of upgrading estimating to a professional status.

Keywords: Estimators, Quantity Surveyors, construction, engineering, estimating, profession

Article Type: Research paper

INTRODUCTION

There are surprisingly varied opinions on the value of Estimators and estimating within the UK construction industry (CI), covering general construction and civil engineering. Negatively, Delargy (1999) suggested that Estimators were ‘boring 50 year olds’ and ‘anything but dynamic.’ The Construction Industry Training Board’s (CITB) website (2006) classifies Estimators as Technical Support and describes estimating as a technician’s role. The Chartered Institute of Building’s (CIOB) website (2004) is similarly dismissive in that the role of the Estimator is

underplayed to the extent that estimating is not even listed among the 15 roles that it classifies as “design and management” in its section on “Careers in Construction”. Anecdotal evidence from a member of staff at the CIOB (2003) suggested that Estimators come from a trade background and that their roles were to ‘put together an estimate that would fit with the considered total price that was generally known at the outset’. Skitmore and Lowe (1995) say that this role is often undertaken by QSs, intimating that it does not require specific training.

In complete contrast to the CIOB, Harris and McCaffer (1995) described the function of Estimators as building up the estimates “from scratch” to arrive at a final price that was accurate, competitive and workable. According to Akintoye and Skitmore (1991), cost estimating is crucial and, if inaccurate, has a significant impact on contracting business, with overestimates leading to tenders being unacceptable and underestimates resulting in contractors losing money on the projects. Smith (1995) stresses the importance of early estimates as being seminal to both the client’s brief and the viability of the entire project. In mentioning estimating careers for commercially-minded Engineers, McCaffer and Baldwin (1991) highlight the importance that estimating and tendering have on growth and prosperity and add that failure to gain contracts at the right price can jeopardise a company’s future. A more extreme assessment came from Hicks (1992) who thought that if the estimate was not accurate then nothing could be done to prevent a loss on a project, irrespective of know-how, management competence or financial strength, other than an act of God. While this is not entirely true, as in some cases

inaccurate but overpriced tenders do get accepted, thus affording an opportunity for increased profit, the point was made just how important he considered this work to be.

Such views indicate that opinions regarding the value of Estimators are polarised but, irrespective of their worth, if they have the potential to undermine a project as Akintoye and Skitmore, McCaffer, and Hicks (*op. cit.*) believe, then it has to be important to ensure the standards and accuracy of the estimating process. One way of achieving this would be through improved education and higher regulation, suggesting that the professionalisation of Estimators may be a solution. Given that QSs are carrying out many similar tasks in their involvement with construction costs and already have professional status, particularly through the Royal Institute of Chartered Surveyors (RICS), this lends further support to the argument that the current position of Estimators may need to be reviewed.

This study will demonstrate that the Estimator function is no longer confined to building up a project cost. Alternative forms of contract such as Partnering, Private Finance Initiatives (PFIs) and Frameworks are engaging Estimators in providing pre-tender information for clients and requiring them to work with design teams of qualified professionals. The need for respect and peer standing in these teams adds to the argument for a specific education and professional qualification.

In their book, ‘Professionalization’, Vollmer and Mills (1966, p.v) quote Hughes as saying that

In his own studies ‘I passed from the false question, is this occupation a profession?’ to the more fundamental, ‘what are the circumstances in which people in an occupation attempt to turn it into a profession and themselves into professional people?’

Proposals, of the conditions that they believe exist for professional recognition, have come from Larson (1977), in that professionalisation has its roots in times of radical and rapid change and from Stinchcombe (1959), that organisations in new forms have a tendency to appear at a time when it is precisely possible to found them and when they can effectively function within a new structure.

Radical change is happening with the introduction of these different forms of project procurement, and the ‘Integrated Teams’ approach proposed by Sir John Egan in ‘Rethinking Construction’ (Department of Trade and Industry (Dti), 1998) and ‘Accelerating Change’ (Strategic Forum for Construction, 2002), together with an economy that appears to be in good shape, with figures from the Dti website (2006) showing a steady increase in UK construction output from £62b in 1994 to £80b in 2004, and the Construction Confederation’s (CC) website (2006) illustrating an increase to £93b during 2006.

The objective of the study, therefore, is to enquire whether it would benefit the CI as a whole and Estimators individually, if Estimators in the UK were to be

professionalised. To inform of this possibility, the intention is to demonstrate why estimating should fit within a framework of what constitutes professional organisations by developing five methodologies. These will:

- List some of the definitions and views on professionalism from authors
- Catalogue job competencies
- Produce hypotheses on salaries/benefits offered and qualifications desired by employers

To add weight to the argument it does so, where necessary, in direct comparison with QSs.

1. Definition of Professions

Introduction

Currently there is no definitive list of occupations that are considered to be professions but the CI seems to have developed an inclination toward certain disciplines in some areas. Fleming (1980) classified three occupations: Architects, Surveyors and Engineers. A fourth group, Building, was added by Betts (1991, p208) following the formation of the CIOB. Butler and Savage (1995, p103) added a further six roles and the Construction Industry Council (CIC), with the Department of Trade and Industry (Dti), in a Professional Services Survey (2001/2002), categorised 43 professions, none being estimating. This does not relate to other countries, such as the USA, where estimating has long been regarded as a

profession and has at least two professional organisations representing Estimators.
(U.S. Department of Labor website, 2006).

Definitions of a profession vary widely but whereas they were originally considered to encompass medical, legal and scholastic institutions working “for the common good” (Etzioni, 1969; Macdonald, 1995) and highlighted by authors such as Friedson (1973) who considered professions to be prepared to surrender self interest for that of their clients, they have evolved into embracing disciplines within capitalist organisations that reflect a change in the relationship between society and individuals (Krause, 1996; Schmidt, 2000).

Aims

To discover a range of attributes that authors considered were essential in order for individuals or groups to be considered professional.

Methodology

Definitions of a profession, described in the introduction, are summarised from a larger study on professions [1]. Author definitions held a number of common themes which have been categorised, with author accreditation.

Take in Table I.

Results

A breakdown of the various definitions and descriptions of what does or should constitute a profession and a professional was undertaken and the work summarised as individual attributes together with the frequency with which these were mentioned.

Take in Table II.

Conclusions

There is no classic definition of a profession; they have evolved from the original tightly constrained concept, to which most professions currently in existence, or being created, would fail to conform. They have developed by adapting a broader range of attributes and core criteria within which it is possible to operate, which means that they can be employer-oriented and work within teams as well as autonomously for a client.

2. Estimator Match to Defining Professional Criteria

Aims

To establish the key criteria that form a prerequisite for professional status as it relates to estimating.

Methodology

From the list of definitions displayed in Table II, columns were added indicating attributes that would be considered necessary and achievable for Estimators with a 'Y' and those that would be considered unlikely or unachievable with an 'N'.

Take in Table III

Results

Of 15 attributes, construction Estimators could be expected to achieve 11 which compared equally to construction QSs; consultant Estimators achieve 12 which also compared equally to consultant QSs.

Conclusions

For QSs and Estimators working for construction organisations, 11 attributes from a total of 15 may appear low, but three of these emanate from original professions: Creating a Monopoly, Mediating/ Fiduciary role, Core Meaning of Life. The fourth, Personal Responsibility, has been entered as 'no' because the criterion for this was considered to be whether or not professional indemnity insurance (PI) was required. For employees within industrial organisations in the UK, including recognised professional people, it is not normally needed. Both consultant Estimators and QSs miss on three counts as above, being: Creating a Monopoly, Mediating/ Fiduciary role and Core Meaning of Life. In their case Personal Responsibility has been entered as 'yes' since, following the outcome of the England and Wales Court of Appeal (Civil Division) Decisions, *Merrett v Babb* (2001), they may be held

personally responsible for their work in certain circumstances, making PI advisable. (A summary of this can be read on the British and Irish Legal Information Institute website (2006).)

3. Attributes Comparison

Aims

To develop lists of core competencies for both disciplines, by providing a summarised “body of knowledge” for each, in order to compare their abilities.

Methodology

Job descriptions for Qs were obtained from: the RICS website (2003), the RICS website (2004), Cornick and Osbon (1994), Skitmore and Smith, both above.

Further descriptions were extracted from detailed job advertisements specifying employers’ requirements. These came from recruitment agencies: Anders Elite (2003), Calco (2003), Construction Jobs UK (2003), Cordon Recruitment (2003), Coyle Personnel Recruitment (2003), Elliot Marsh (2003) and Judd Farris (2003).

Sources for Estimators came from: Harris and McCaffer, above, Learn Direct website (2004), an RICS survey (2002), Skitmore and Smith, both above, and from recruitment agencies Anders Elite, Construction Jobs UK, Cordon Recruitment, Coyle Personnel Recruitment, Elliot Marsh, all above, Hays Personnel (2003), Henry Recruitment (2003) and Hill McGlynn (2003).

Following the above surveys, a Delphi study [2] was undertaken to underpin and develop the information. This provided data from experts in estimating and quantity surveying on which attributes they considered were necessary in order for each discipline to perform its tasks. The same four groups were selected as for methodology 2 and sampling these groups was determined by a combination of two methods, in that a random method would provide fairness and, because of the need to sub-divide the groups, this should be a Stratified Random Sample. Added to this would be the need to ensure that each sub-group was adequately represented and therefore an element of Quota and Dimensional Sampling also required consideration. To represent each group, experts were selected from:

- *Employers* – Chief/Regional/Senior, Qs and Estimators
- *Educators* – Individuals responsible for the provision of QS courses and Estimating/Tendering modules
- *Professional bodies* – Staff responsible for setting up examination, training and ongoing professional development for Qs and Estimators
- *Public Bodies* - Personnel responsible for training and examination of Qs and Estimators

100 people were chosen from each discipline producing a total of 400 requests to Estimators and Qs undertaking work for construction and consultancy companies. Addresses were obtained from: Building Magazine (2004), CIOB (2004), RICS (2004), University and Colleges Admissions Service (UCAS) (2004) and 10 local authorities (LAs) that were selected at random. The requests, defined as Round 1 of

the study, were sent out by e-mail. However, Round 2 involved participants placing appraisals on a Visual Analogue Line, to be measured by the assessor, thus this round needed to be sent out by post and returned in the same way.

Results

More than 150 competencies were recorded from the surveys and Round 1 of the Delphi study, which were condensed into specific headings e.g. ‘Good Personal Qualities’ included honesty and integrity, ‘Intelligence and Cognitive Ability’ included being logical and rational. The lists are set in tables with the source of the information alongside each item.

Take in Table IV for Estimator list and Table V for QS list.

Round 1 of the Delphi study enhanced the survey by confirming its results and providing additional competencies. Round 2 provided supplementary data that aided the comparison by producing ‘order of importance’ rankings of the agreed competencies. From these rankings Kendall Coefficient of Concordance tests were carried out which demonstrated that, amongst each group and sub group, there was no significant (.05) diversity in their opinions as to which attributes were required of each role. These tests were done with:

Estimators as:

- A complete group
- A construction sub-group

Qs as:

- A complete group
- A construction sub-group
- A consultant sub-group

Consultant Estimators could not be included as a sub-group as just two people responded, thus rendering the return too low for a test to be performed.

Statistical calculations and the collated data have been excluded due to their volume. As consultant Estimators could not be included, the comparison was judged on each overall group. From the tables, $p < .0005$ for a single-tailed test, therefore the level of agreement on the core competencies was significant which meant that there was no significant diversity on either QS or Estimator groups' views on their core competencies.

An Estimator-QS comparison of how each group ranked the importance of individual competencies was also included in Round 2 of the Delphi study and was determined by a Spearman Rank Correlation test. This demonstrated that, although both disciplines required similar abilities, the level of importance of each one differed to the extent that there was a significant (.05) diversity of views on core strengths.

Take in Table VI

The overall response to the Delphi study, although disappointing in that just 28 responses were received in Round 1, dropping to 22 respondents in Round 2, was encouraging in that there was significant concordance achieved amongst their groups, saying much for the quality of the information provided by them, and was well inside the limitations of the Statistical Probability Tables used to determine the results.

Conclusions

The results indicate a clear picture of Estimators and QSs requiring a similar attribute base but necessitating differing levels of knowledge, skill and ability in each, thus linking them intellectually but demonstrating diverse job requirements.

4. Salary Comparison

Aims

To determine and compare salary levels and other benefit packages being offered by employers at trainee, project, senior and head levels.

Methodology

Two hypotheses were developed on the assumption that the QSs, being a professional occupation, would receive greater remuneration and supplementary benefits than Estimators. To test these, details of salaries and benefits offered were

extracted from job applications of both. A survey was carried out using information from 108 advertisements placed by recruitment agencies through:

- ‘Building’ magazines (2003)
- Internet Websites of construction recruitment agencies, above
- The ‘Express and Star’ newspapers (2003)

Where there was insufficient information within the context of each advertisement the agencies were contacted to fulfil these requirements. In order to undertake this work, decisions were required on the sampling method or methods that would be most appropriate and therefore the factors that needed to be taken into consideration before making such decisions were:

- That it should be a ‘snapshot’ survey of the CI during 2003, between September and November. Stevens (1996, p6) says that ‘For the purposes of statistical analysis, samples of 100 or more are considered adequate since power is not an issue’. The sample should therefore cover at least 100 advertisements and could provide a minimum of 50 for each role
- That there should also be a comparable numbers of QSs and Estimators, segregated by skill levels
- That samples should be selected at random from these subgroups using as impartial a method as possible

Sampling methods were as for the Delphi study above (p 12).

In order to obtain a fair sample, the numbers of jobs advertised were selected on an even basis although recruitment is not, it seems, evenly balanced, with a total of 1,526 QS jobs on offer compared to 305 for Estimators, giving a ratio of 5:1 (2003). The information was collated by specified divisions, determined by the Department of Trade and Industry (Dti) from their Construction Statistics and Economics website (2004), in providing information on CI turnover, number of employees and number of companies. This categorised companies as:

- Small; employing 1-13 people with turnover <£1m
- Medium; employing 14-79 people; turnover >£1m - <£10m
- Large; employing 80-1,200 people; turnover > £10m

However, it was found that, almost exclusively, small companies could not be included as there were few, if any, QS- or Estimator-specific roles within those organisations as the work is usually undertaken in a dual role. Coverage therefore encompassed medium and large companies.

Take in Table VII.

Tables, not shown here due to volume of information, were designed to contain information on:

- Job type
- Job description
- Date and source of information
- Salary
- Benefits and qualifications

Data obtained was entered and then collated using the Statistical Package for Social Sciences (SPSS).

In addition, a comparison was made between salaries gleaned from this survey and a September 2000 salary guide published by one of the recruitment agencies, Hays Personnel (website 2003). Figures for Head positions have been excluded as there were insufficient numbers of advertisements for these positions to provide viable information.

Because of the volume of work needed to produce this study, this section being completed over two years ago, an updated survey carried out in 2005 is also included from the Hays Personnel website (2006).

Results

Results in the form of hypotheses are listed below. In each case, where applicable, the significance level was taken as 5% (.05).

(a) H_1 *At similar grades, QSs are offered salaries in excess of those offered to Estimators.*

Salary levels were collated from job advertisements in four separate bands: £5,000, Median, Minimum and Maximum. Tests showed that, in all four, there was no

significant difference between QSs and Estimators and therefore the hypothesis was not supported.

Take in Table VIII.

(b) H_1 *At similar grades, QSs are offered a greater range of benefits than those offered to Estimators.*

A range of benefits were derived from the information, categorised as:

- General Benefits
- Car or Allowance
- Bonus
- Pension
- Health Care
- Profit Scheme
- Study time

Using t-tests and Fisher's Exact Probability tests, three benefits held significant results: Car/Allowance, Pension and Health Care, but all three were significant in favour of Estimators. As all of the other results showed no significant difference between each group, the hypothesis was not supported.

Take in Table IX.

The salary survey comparisons suggest that there is sufficient similarity between each sub-group level for the figures used in the statistical analyses to be viewed with a degree of confidence.

Take in Table X

The updated survey from Hays Personnel, above, demonstrates that, while salaries have increased, a close comparison between each group and sub-group remains, which endorses the current relevance of the analyses.

Take in Table XI

Conclusions

Almost every test carried out failed to demonstrate any significant difference between Estimators and Qs in the way in which their roles appear to be valued by their prospective employers. In the instances where there was a significant difference, each of these cases favoured Estimators and went against the hypotheses. It can be concluded, therefore, that employers value Estimators at least as highly as they do Qs.

5. Qualification Comparison

Aims

To verify the educational preparation for Estimators and Qs at course levels:

- Undergraduate

- Foundation Degree
- HND
- HNC

together with initial and ongoing training provided by:

- The CITB
- Professional Bodies (PBs)

It was also considered appropriate to test employers' expectations in regard to the education of both disciplines.

Methodology

Two hypotheses were developed, based around the assumption that employers' requirements of Qs would be greater than those of Estimators. To assess these, an initial search was made for construction courses designed specifically for each role and a comprehensive list obtained from UCAS (2004). This listed 582 courses related to Building, covering all areas of the CI. However, whilst yielding 49 courses specifically designed for quantity surveying, no courses were found for estimating. Therefore, a refinement to the search criteria was made to locate courses that would provide core estimating subjects, identified in Table IV as preparing the estimate, which Harris and McCaffer emphasised as being important to the process of calculating the project cost. Each course likely to contain an estimating and/or tendering module was searched, via UCAS, and information was also gathered for PBs and the CITB. A table was designed to collate this information which contained: the year or level for that module, the university or college, the module

title, the qualification and course title and, where possible, the number of credits offered, but this has not been reproduced here due to the volume of information. The universities and colleges offering these modules are provided in the reference section. In much the same way, modules were shown from PB training courses and the CITB in tables showing: level, module title, qualification and again, where possible, number of credits.

To augment this work, an attribute-ranking list was produced from the Delphi study that gave an indication of the measure of importance attached to education and professional training by the CI.

Results

The two hypotheses and their outcomes were:

(a) *H₁ At similar grades, QSs are required to hold better formal qualifications than those required of Estimators.*

The assumption of “minimum expected cell frequency”, using a Chi-squared test, was violated and because it was a 2x5 table it was not possible to carry out a Fisher’s Exact Probability test. The information obtained was therefore tabulated in a descriptive form only.

Take in Table XII (top row).

These descriptive statistics show a low requirement by employers for clearly defined formal qualifications. For QSs, almost 65% did not specify any form of formal qualifications and for Estimators the figure was just over 70%. Where qualifications were asked for there appeared to be little difference in the demand from either discipline, and therefore there seemed to be little difference between QSs and Estimators that could support the hypothesis.

(b) H_1 *At similar grades, QSs are required to hold better professional qualifications than those required of Estimators.*

The assumption of ‘minimum expected cell frequency’, using a Chi-squared test, was again violated and because it was a 2x5 table it was not possible to carry out a Fisher’s Exact Probability test. The information obtained was therefore tabulated in a descriptive form only.

Take in Table XII (bottom row).

There is a greater requirement for QSs with an RICS membership (MRICS) but as they are part of the institution that provides this qualification this is understandable. Again, the majority of advertisements were non-specific regarding qualifications - at 83% in the case of QSs and 93% in the case of Estimators, and there is therefore little evidence to show any significant difference between the groups that would provide support for the hypothesis.

A gulf exists between educational opportunities for these two groups:

- QSs had 49 undergraduate Degree courses available, either distinctively or with another subject. [3]
- . Estimators were not provided for specifically in 2004 and the current position has not changed
- 21 Estimating/Tendering modules were on offer at undergraduate/higher national level
- 14 Estimating/Tendering part-modules were on offer at undergraduate/higher national level
- 4 Estimating/Tendering modules were on offer at Foundation Degree level
- The CITB offered some core estimating content with its BTEC National Certificate in Construction and further modules in its NVQs
- An Estimating/Tendering module is included by the CIOB (2003) in its MCIOB qualification but with just 15 credits from a total of 360
- It is not clear whether the RICS part-module, entitled ‘Measuring and Costing Construction Works’, includes estimating in its MRICS qualification

- The Association of Cost Engineers (ACostE) estimated that 10% of their 2,000 members might be employed as Estimators (website 2004). Information in the tables cannot be offered as they had no independent training or examination process in place. This had not changed two years later although they have now developed a continual professional development programme (CPD) (ACostE, 2006)

Take in Table XIII

Rankings from the Delphi study for Estimators place:

- Formal education at 14th of 18 places
- Professional training at 15th of 18 places

Take in Table XIV

Rankings from the Delphi study for Qs place:

- Formal education at 19th of 19 places
- Professional training at 16th of 19 places

Take in Table XV

The competencies in each list differed only in one extra item, ‘Conflict Management’, which was contained only within the QS list.

An indication of the number of Estimating/Tendering modules, found from University and HE courses, their levels and resulting qualifications, without

distinguishing between credits offered, is provided in two charts (full and partial modules).

Take in Figures 1 and 2

Conclusions

At present, QSs have the confidence of specific qualifications from universities and the RICS, Estimators can obtain Degrees in Quantity Surveying, Construction Management, Construction Studies etc. but not in Estimating or even in Quantity Surveying with Estimating. This implies that Estimators do not require a specific formal qualification and that their work is therefore envisaged as being of less significance than that of QSs. Within the HE courses where Estimating/Tendering modules are available, the number of complete modules for Estimators is less than half the number of specific degrees for QSs. There are PBs that house Estimators but none offers a comprehensive training programme or a specifically recognised section within their organisations.

From the information obtained on employer requirements (Table XII) and the importance rankings from the Delphi study (Tables XIV and XV), there appears to be a considerable degree of either apathy or disaffection within the industry toward the formal and professional education currently offered.

The results of the Delphi study cannot be regarded as definitive due to the poor response. The study achieved the minimum requirements and is therefore valid, but

more confidence could be placed on its conclusions if a larger group could be surveyed.

SUMMARY

This study has developed a number of aims intended to provide a modern view of the role and status of Estimators in the CI. It began by unearthing considered definitions of today's professions and demonstrated that many of these criteria would not sit incongruously if inculcated into the estimating role. To provide a project cost that is accurate and competitive requires knowledge, needing a high level of study to achieve, skill and ability, which are among the many criteria expected of a modern profession. Estimators have been shown to meet these criteria and compare equally with Qs.

A further comparison with quantity surveying looked at the skills and core competencies required. This determined a level of ability for Estimators and demonstrated that, whereas the roles serve different purposes, there is an overlap in almost all key competencies essential to both.

Another Estimator-QS comparison was based on remuneration offered and qualifications required by employers and this failed to find any significant difference between them on any of the proffered hypotheses. Both appear to receive similar recognition.

In comparing educational opportunities, there was considerable divergence. QSs have accessibility to an education that is tailored to their needs within the university system and a professional body that is geared to providing specific QS training and a continual programme of ongoing development (CPD). Estimators, on the other hand, whilst able to find courses that will provide a comprehensive knowledge of construction, an ability to understand and measure architectural drawings and prepare Bills of Quantities (BQs), are badly neglected in respect of their core subject of Tendering/Estimating within these courses and totally neglected in the provision of being afforded a specific Estimating Degree. Professionally there are opportunities to join organisations that will afford them a professional qualification but palpably little specific Estimator training or CPD. There is, therefore, an educational chasm that needs to be bridged, not only by educators but also by employers, training organisations and PBs.

Akintoye, Skitmore, McCaffer and Hicks have all described the consequential damage that impacts upon construction projects, emanating from inaccurate estimating. A high level of performance from Estimators is therefore crucial to project financial viability. A fulfilment of the skills and abilities that have been described here, together with other criteria, could bring with it professional status.

Informal discussions with Estimators during this study have left the impression that a specific Degree, as a sandwich course, and a professional qualification would be welcomed, would make their job more attractive and desirable, and would bring

much needed “new blood” and quality trainees into the industry. However, to attain this, the desire, drive and co-operation of the CI, educators, trainers and PBs are needed, which at present do not seem to be there.

In essence, Estimators do not differ from QSs in terms of required ability, responsibility or potential for financial damage, yet they do not have a similar job preparation. This means that the preparatory safeguards afforded to QSs are unavailable to Estimators. Therefore there is more risk attached to the Estimators’ roles because they may not be afforded a sufficient skills- or knowledge-base. The provision of specialist educational training would reduce this risk and would enhance their eligibility for professional status. Achieving this will incur costs in university fees and professional training but would surely advance the recruitment rate and excellence of trainees and in so doing, improve the quality of contractors’ estimates, enhance the worth of the information now being provided at pre-tender stage, reduce project financial risk and provide construction clients with greater confidence in the contractors that are entrusted with developing their projects.

[1] “What Constitutes a Profession” is a section of the lead author’s PhD research.

[2] “Delphi Study” is a section of the lead author’s PhD research.

[3] Updated, this figure is now 53 (UCAS, 2006)

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Sponsors

There was no external sponsorship for this study but the lead author's company, James Hackett Project Management Limited, which he has managed for 31 years, has encouraged his desire to make a contribution to the future of the CI by making time available whenever possible and funding stationery, printing, postage, travel and other out of pocket expenses.