Early Career Development of Quantity Surveying Professionals

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Abstract

It is recognized that early career experience can play a significant part in lifelong professional capability and the support and knowledge gained during the early years of post graduate employment can influence future career direction and success. For graduates seeking to become Chartered Quantity Surveyors, this process of early career development is managed through the Assessment of Professional Competence (APC), which details areas and levels of attainment and monitors and assesses task capability. An anticipated gain in surveying knowledge and skills throughout the ‚probationary' period (i.e. from graduation to successful conclusion of the APC), leading to a level of ‚Professional Competence' formally conferred by the Royal Institution of Chartered Surveyors should reflect the progressive nature and impact of training and workplace mentoring. Based on a research project which is focusing upon the early career development of quantity surveying professionals, this investigation explores the growth in surveyor capability from graduation to the achievement of Chartered Surveyor status relative to a range of recognised quantity surveying tasks.

Keywords: assessment of professional competence (APC), early career training, new graduates, quantity surveying (QS)

1. Introduction

A particularly challenging task for someone who is ‗starting out' in their professional life is to assemble and integrate several kinds of knowledge gained from general experience, education and work. Literature on early professional learning is largely restricted to medicine, nursing and teaching (Eraut, 2005), although Eraut (2005) also looked at early professional learning for graduate civil engineers. Also, whilst there are well prescribed models of graduate development relative to the surveying professions, for example, those relating to the APC or from a wide variety of training programmes established by major employers, there has been little evaluation in terms of their relative contribution to career success.

Highlighting the potential difficulties of early career learning, research (Charnley 1999, Godinez et al 1999, Greenwood 2000) has shown that the transition from student to newly qualified nurse is stressful and demanding. In the construction arena, research conducted by Love et al, (2001) indicated that there is a need to improve the skills levels of construction graduates. As learning in the university environment is, in the main, limited to classroom activity, the burden of work-based training for new graduates, recognised as essential to developing full professional competence, would naturally fall upon practitioners. The importance of employer involvement in enhancing professional capability and career satisfaction is clearly central.

Since the support and knowledge gained during the early years of post graduate employment is a contributing factor that can impact upon a new graduate's decision to continue to stay in their chosen profession or not (Eraut, 2003), and, linking this to the probability that dissatisfaction with career advancement opportunities has the largest effect on deciding to quit a profession (Gardner, 1992), a better understanding of the factors influencing early career development is a worthwhile objective. Recognition that early career experience can play a significant part in lifelong professional capability and satisfaction is of relevance to the QS profession. It is also of interest to the RICS in that it may throw some light on the apparent hesitance of some graduates to pursue professional body membership.

2. Early career development

Previous research has provided some understanding of the meaning and significance of the ‗career' as a fundamental part of personal development. The concept of the ‗career' as suggested by Arthur et al., (1999) is to explore individual identity and social institutions, work and other experiences. Extending this, as careers unfold, there will be a change in the way we present ourselves to others, are treated by others and interact with others (Barley, 1989). The process by which individuals pick up or cultivate a certain set of capabilities, connections, confidence, and cognition due to their work experiences at a particular employer is called career imprinting (Higgins, 2005), the focus of this research.

That a challenge exists in matching academic provision with professional needs is well versed and employers have expressed concerns, for example, on the apparent gap between engineering education and professional practice (Dillon, 1998; Florman, 1997; Pascail, 2006). In accepting this position, a better understanding of the needs of new graduates in the workplace will help employers in their provision of training and also educators in an improvement of programme design. This perspective is supported by research conducted by Coupland (2004), who identified that the company career structure has been described by some participants as lacking in explicit stages, suggesting that the company should take on a larger role in the individual's career.

As opposed to the traditional image of a linear and organizationally bound journey where graduates expect employers to play a larger role in an individual's career development (Coupland, 2004), the career has also been conceptualised as boundary less (Arthur and Rousseau, 1996; Arthur et al., 2005). In this alternative view, individuals are expected to self-manage their own careers rather than rely on organisational direction (Hall and Chandler, 2005; Hall and Mirvis, 1995). According to the Social Cognitive Career Theory (Lent, 2005), the model proposes that people are more likely to take actions to achieve their goals if they have access to environmental (organisational) support and resources relevant to the pursuit of these goals. However, the model of proactive behaviour (Crant, 2000) indicates that an individual's disposition or personality will influence the extent to which they take the initiative to engage in career management behaviours and achieve career satisfaction. Thus, the onus of developing one's career is on the individual; to take up a range of activities outside work that are geared towards personal development or on-going employability. However, the provision of opportunity for career imprinting should still lie with the employer.

Competency is defined in this study as an identifiable aspect of prospective work behaviour attributable to the quantity surveyor that is expected to contribute positively and/or negatively to organizational effectiveness in the construction industry. In a study by Meretoja et al., (2004), a positive relationship between competency and frequency of use was found. This survey explores this relationship further by incorporating other factors which may bear upon competence gain.

3. Research methodology

3.1 Questionnaire design and sampling

In Section One of the questionnaire, general information was sought from the respondents on the years of experience, their role and the academic route to acquire their qualification. In the following Sections Two, Three and Four of the questionnaire, using a Likert scale of 1 to 5, each of the respondents were asked to rate their competency relating to core QS skills, the frequency in which those skills were carried out in their job and the extent to which various types of support were given by their employer. As Likert scales with odd number response points are arguably empirically more valid than forced-choice scales (Ray, 1990), a 5-point Likert scale was used, being more cost and time effective than a seven-point scale (Munchi, 1990). A key feature of the questionnaire is the use of self-evaluation in determining levels of

graduate competences. Although this pragmatic approach may raise doubt over the validity of the data relating to this aspect of the research, previous work by Lee and Quazi (2001) found that scores from a well-constructed self-assessment questionnaire closely correlate with actual scores made by independent evaluators.

The sample population in this study is quantity surveying professionals. Non Probability Sampling, whereby the research subjects are chosen for specific attributes rather than from a random selection, is adopted in this study as the research primarily looks at the early career of quantity surveying graduates. Rather than taking a random cross section of the population to be studied, ―small numbers of people with specific characteristics, behaviour or experience are selected to facilitate broad comparisons between certain groups that the researcher thinks likely to be important" (Walker, 1985). In order to gain insights to the research area, make inferences and draw conclusions from the research, a mix of quantitative and qualitative research approaches were adopted. Survey research methodology is adopted in this research to investigate a particular phenomenon, i.e. the competency level and training of quantity surveying graduates in their early careers. The research questionnaire was designed using variables identified during exploratory studies.

4. Findings and discussion

A survey was conducted which targeted early career quantity surveyors. From a total population of 4430 recent graduates between 2006 and 2008, 425 surveys were completed online. The level of work experience of the sample is indicated in the analysis of the distribution below.

Table 1: Number of questionnaires received from various groups of respondents

No of years of experience	No. of response
Less than 1 year	102
1 Year	42
2 Years	93
3 Years	54
More than 3 years	134
Total	425

Of the 425 respondents, 58% are working as consultant quantity surveyors, 31% in contracting, whilst the remaining 11% are working in a range of organisations including local authorities and client bodies.

The following analysis and discussion considers the findings relating to: QS activities and corresponding perceptions of competence, the impact of years of post graduation experience, the QS role undertaken and the academic route taken by the respondents.

4.1 QS activity and perceptions of competence

A list of quantity surveying skills were listed in the questionnaire survey which incorporated a wide range of QS activities, identified from the RICS Assessment of Competency Guide for Quantity Surveying and Construction pathyway (RICS, 2008). Respondents were asked to indicate their own perception of competence and also the frequency of engagement with regard to each of the following tasks:

- preparation of schedules of works or Bills of Quantities invloving measurement and estimation

- cost management to ensure budget compliance

- recommendation of a suitable procurement route

- management and preparation of variation accounts

- preparation of feasibility studies

- interim valuation of construction work

- application of value management

- preparation of life cycle costing data and advice

- preparation of tender reports

- advising clients and negotiation with contracting parties in contract administration

- preparation of final accounts

From the survey results, the five QS activities which respondents carry out most frequently and perceived themselves to be most competent at are:

1) interim valuation of construction work

2) preparation of final accounts

3) cost management to ensure budget compliance

4) preparation of tender reports

5) management and preparation of variation accounts

The association between the respondents' self perception of competence and frequency of carrying out the range of QS activities was investigated using Spearman correlation coefficient. The strength of correlation of r = 0.811 indicates that there was a large positive correlation (>0.5), suggesting a strong relationship between competence and frequency of use.

Gibbons et al., (1994) affirmed that the creation of knowledge is through practice. Also, as illustrated by Graham and Mckenzie (1995), the best learning occurs in real life and for the majority of new graduates, learning will be achieved by ‗doing'. That ‗practice makes perfect' is widely recognised and in applying this tenet in this situation, we are able to assume that frequency of use will result in improved competence. Conversely, activities such as life cycle costing, value management and giving procurement advice to clients, in that they are not frequently carried out by recently graduating quantity surveyors, will suffer from reduced levels of competence. It is also recognised that the development of new graduates is influenced by factors such as the job content, timing of projects, the attitude of the individual and relationship with line manager (Graham and Mckenzie, 1995). Thus, this reduced exposure to aspects of practice could contribute to underdevelopment of certain knowledge and skills which may be reflected in future hesitance in application.

4.2   Impact of years of post graduation experience

The Kruskal Wallis test was also applied to the questionnaire survey data in considering the following relationship:

1) Years of experience and the respondents' competency level of various QS tasks.

2) Years of experience and the respondent's frequency of carrying out the various QS tasks

3) Years of experience and the extent of training the respondents' company provide to them

Table 2: Kruskal Wallis test result on the relationship between years of experience and competency, frequency and training

	Competency	Frequency	Training
Chi-Square	7.843	3.902	7.000
df	4	4	4
Asymp. Sig	0.097	0.419	0.136

* results are statistically significant at $p < 0.05$

No of years of experience	Mean Rank		
	Competency	Frequency	Training
Less than 1 year	195.32	194.09	208.83
1 Year	192.80	186.81	202.73
2 Years	180.06	180.98	184.83
3 Years	215.29	218.62	194.16
More than 3 years	221.40	199.56	225.57

The results (as shown in Table 2) indicate a significance level of 0.097, 0.419 and 0.136 for all 3 relationships. Significance levels of more than 0.05 thus suggest that there are no differences in perceived competency, frequency of use and training across the range.

However, an inspection of the mean rank suggests that respondents with 3 years or more work experience perceive themselves to be more competent than the other respondents who have less than 3 years work experience. This observation could be due to the fact that people with less years of experience in quantity surveying have yet to accumulate enough work experience which they think is adequate for them to be competent in their tasks. Very often, tacit knowledge is accumulated and acquired through _learning by-doing'. Such form of non-formal learning is termed _implicit learning'; where there is no intention to learn and no awareness of learning at the time it takes place (Eraut, 2000).

Additionally, a very thorough inspection of the mean rank suggests that respondents with less than 1 year experience, 3 years and more than 3 years experience tend to carry out various QS tasks more frequent than the others.

Further inspection of the mean rank between years of experience and training was made and the results suggest that employers tend to focus their training on respondents with less than 1 year, 1 year and more than 3 years experience. The emphasis on training for respondents with more than 3 years work experience, which could be due to the fact that most new graduates are close to their APC for Chartered Surveyor status.

4.3   Impact of quantity surveying role

Respondents were asked to identify their role in their current job; whether they are working as a consultant QS, contractor's QS, sub-contractor's QS or others. Of the 425 respondents, 12 were working for sub-contractors and the 47 identified under _Others' are working on jobs

such as employer agent, development executive, commercial surveyor, building surveyor, contract administrator. In our analysis, the 12 respondents working for sub-contractors have been included within the category of respondents working as contractor QS reflecting their commercial stand point whilst the 47 respondents identified as ‗Others‗ are included in the consultant QS category, reflecting a client focused advisory function.

The relationship between the respondents‗ competency level and the role they played was analysed using the Kruskal Wallis test.

Table 3: Kruskal Wallis test result on the relationship between role and competency

	Competency
Chi-Square	*1.822*
df	*1*
Asymp. Sig	*0.177*

* results are statistically significant at $p < 0.05$

Role	*Mean Rank*
	Competency
Consultant	*208.74*
Contractor	*191.72*

The result in Table 3 with a significance level of 0.177 indicates that there is no difference in competency and the role respondents played.

An examination of the mean rank indicates that respondents working as consultant QS perceive themselves to be more competent in the listed QS activities than respondents who are working for contractor. Correspondingly, the data also indicated a greater level of experience of these QS activities by the consultant than the contractor QS and this is consistent with the positive correlation between frequency of use and competence.

4.4   Academic route

Respondents were given a list of academic route which they follow to enter into the QS profession. The distribution of respondents from the various academic routes is shown in the Table 4 below:

Table 4: Academic route respondents take to enter the QS profession

Academic Route taken by Respondents to enter the QS profession	*No. of respondents*
5 years / 6 years part-time study	*96*
3 years full-time study	*58*
4 years sandwich course	*103*
2 years distance learning	*37*
Others	*123*

Missing data	*7*
Total	*425*

A relatively large number of ‗Others‘ responses reflect the range of academic entry routes, including graduates from Scottish universities who gain their qualification through 4 years full-time study, graduates holding HND qualification, graduates who did a 2 years part-time masters conversion course, etc. From the data received, we can assume that the QS profession can be entered through various forms of education route.

Kruskal Wallis test was conducted to look at the relationship between the respondents‘ competency level and the academic route they take to enter the QS profession.

Table 5: Kruskal Wallis test result on the relationship between academic route and competency

	Academic Route
Chi-Square	*4.612*
df	*4*
Asymp. Sig	*0.329*

* results are statistically significant at $p < 0.05$

Role	*Mean Rank*
	Academic Route
5 years / 6 years part-time study	*211.10*
3 years full-time study	*199.96*
4 years sandwich course	*179.19*
2 years distance learning	*205.33*
Others	*206.30*

The result in Table 5 with a significance level of 0.329 indicates that there is no difference in competency and the academic route they take to enter the QS profession.

However, the mean rank indicates that respondents who enter the QS profession via part-time study tend to perceive themselves to be more competent in the QS activities listed in the survey than respondents who complete their education via full-time study. This could be due to the fact that QSs on full-time work and part-time study tend to be learning while on their job and so feel more competent in the QS activities.

There is no concluding result from the analysis on the academic route taken by the respondents and the frequency of them carrying out the QS activities. Similarly, there is no significance in the academic route taken by the respondents and the training they received from their employers.

5. Conclusion and further research

The findings of the present study show that (i) there is a strong relationship between competence and frequency (ii) graduates with more years of expereince tend to perceive themselves to be more competent (iii) gradautes who enter the QS profession via part-time study tend to perceive themselves to be more competent (iv) the development of new graduates is subject to opportunity and timing of projects.

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