

THE IMPACT OF RICS EDUCATION REFORM ON BUILDING SURVEYING

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ABSTRACT

Purpose - It is of major concern to the Surveying profession that the seven years between 1994 and 2001, witnessed a decline in the numbers of UK student surveyors of nearly 50%. This was significant, especially when considered in the context of rising student numbers overall. Of equal concern, and set against the backdrop of a general move in education and the workplace to widen participation, was the reduction in applications from females, some 50% of the workforce. Furthermore demand for surveyors was high, and practices found it difficult to recruit graduate surveyors. The factors leading to low uptake in the profession were; low starting graduate salaries; lack of publicity and awareness of surveying as a career option, and a poor public image. The RICS decided to implement an education policy with the aim of increasing graduate quality. The policy adopted stated that 75% of each student cohort was to have an average of 17 A level points or 230 UCAS points for entry on undergraduate courses. These changes were introduced in UK Universities from September 2001. A number of Universities saw their professionally accredited courses withdrawn as the RICS imposed academic entry standards and research output based on the UK Government's Research Assessment Exercise (RAE) criteria on which to base their 'partnership' relationships. Simultaneously there has been the development of post-graduate degree courses in surveying in the UK to attract noncognate degree holders into the profession on a fast track basis. The policy has generated a considerable amount of debate and very strong views within academia and also within the profession as to whether the policy was appropriate, and likely to succeed. It is now over 3 years since the policy was implemented and figures released by the RICS in 2003 indicated that surveying student numbers have increased by 17%, in all areas except Building Surveying where they fell by just under 25% to 445 in 2001. A number of questions arise. Why were Building Surveying courses failing to recruit students whereas other surveying courses have increased their numbers? If the figures continue to decline or remain at these low levels, what is the future for the BS? In short, could Building Surveying become an endangered profession?

Methodology - All UK university BS course leaders were approached by questionnaire and approximately half responded. The study was partly funded by the RICS Education Trust.

Findings - The small amount of quantitative data collected, suggest that recruitment is static at a time when other built environment courses are recruiting well. Course leaders expressed strong views about the impact of the education reforms.

Research Limitations - Failure by some BS course leaders to provide some statistical data prevented completion of the quantitative part of the study.

Value - Key recommendations have been made to the BS Faculty Board of the RICS about the future of BS education.

Keywords: building surveying, education, RICS, UK, universities.

Paper Type - Research Paper

INTRODUCTION

For professions to flourish, they have to attract new members. It was a major concern to the Surveying profession that between 1994 and 2001 numbers of UK student surveyors plummeted from 4700 to 2400. Overall, students enrolled on accredited courses fell from 19,000 to 14,000 from 1996 to 2001 (RICS 1999b). This was significant, especially set against a context of rising student numbers and additionally moves in education to widen participation, the reduction in applications from females, 50% of the workforce. Current demand for surveyors is high, and practices experience difficulties in graduate recruitment. Why is there low uptake in the surveying profession? Williams suggested low starting graduate salaries, lack of publicity and awareness of surveying as a career, and poor public image were factors affecting recruitment. Marketing surveying with innovative career packages including sponsorship and placements was

suggested to raise the status of the profession amongst young people (Estates Gazette, September 2002).

Lay (1988) expressed three critical concerns; the surveying profession attracted less graduates, the graduate quality was declining, and the status of the profession was declining. The profession sought to address the issues and to raise the status to that of accountancy and law (RICS 1999a). The RICS decided to implement an education policy to increase quality (RICS 1999c), as Lay noted, education was an area of 'fundamental importance ... requiring urgent attention' (Lay 1998). The final proposals were based on four issues, the need to attract high caliber graduates from a range of disciplines, to raise entry requirements and to promote the profession by marketing at undergraduate and post-graduate level. Minimum entry requirements were rejected by RICS in favour of aggregated marks for the cohorts as the original proposal contravened education policy of widening participation. A critical influencing factor was perceived low demand for courses in the lower end of the league tables where entry level requirements were low (RICS 1999c). Academic provision at the time was perceived as too narrow to give commercial experience akin to law and accountancy degree courses (Crosby 1999, Lay 1998, Latham 1994). The policy stated that 75% of each student cohort was to have an average of 17 A level points or 230 UCAS points for entry on undergraduate courses. A further academic weakness (RICS 1999c) was in post-graduate provision, where more business aware, motivated, analytical, ambitious surveyors would be found (Van-Dorp 1999, Crosby 1999).

Changes were introduced in UK Universities from September 2001, amidst mixed views from academics and practitioners. Some Universities had accredited courses withdrawn as RICS imposed entry standards and research output based on the UK Governments Research Assessment Exercise (RAE) criteria as a basis for 'partnership' relationships. Simultaneously there was development of post-graduate degree courses to attract non-cognate degree holders on a fast track basis. The policy generated considerable debate and very strong views within academia (Syms 2001, Green 2000, Mackmin 2001, Greenhaigh 2000 and Frazer 2001) and within the profession regarding appropriateness.

It is 3 years since the policy was implemented and figures released in 2003 (Business 2003:7) indicated that student numbers increased by 17%, in all areas except Building Surveying. 585 Building Surveying students were enrolled on RICS accredited courses in 2000; however this figure fell by just under 25% to 445 in 2001. Why were Building Surveying courses failing to recruit? What were the numbers of BS students enrolled in 2002/3? If the figures continue to decline, what is the future for the BS? Could Building Surveying become an endangered profession? The growth and development of the BS profession is such that technically minded and able Chartered Surveyors, grew their professional services by taking instructions from Architects and Engineers who were unable to meet demand in the 1960s and 70s for repair and refurbishment projects. It is possible that the trend could be reversed, if Building Surveyors are unable to meet demand for their services. Surveying Technology courses provide TechRICS members but it is unclear how many students are enrolled on these courses. It is also unclear whether there is enough supply of Surveying Technology students to meet demand for BS services. The Surveying Technology degree at one northern university ceased recruiting students in 2004 and will close. Similarly, is there sufficient employer awareness of these students, their skills and their knowledge base? This research sought answers to these questions.

Research aims and objectives

This research had 2 aims and 2 objectives:

Aim 1– to identify the impact of RICS Education Policy on UK BS student numbers.

Aim 2 – to consider the implications for the future of the BS profession.

Objective 1 – to identify the number and type of new post 2001 PG Building Surveying courses in the UK.

Objective 2 – to ascertain the current numbers of students studying on undergraduate and post-graduate Building Surveying courses in the UK.

QUESTIONNAIRE DEVELOPMENT

This was qualitative research that sought to ascertain quantitative data on BS student numbers on undergraduate RICS accredited courses in the UK and also qualitative data on Course Leaders' views of RICS education policy and Building Surveying. Questionnaires were used to obtain such data, the researchers adopted a census approach to reach the population, gaining a representative sample for valid, reliable results. Moser and Kalton (1979) and others (Robson 2003, Naoum 2001) state good questionnaire design is a prerequisite for a good response. Best practice guidelines were adopted in the design which was piloted. Academics are busy and unlikely to have time for questionnaire completion, therefore questions were limited to those which were easy to complete. As some of the opinion based information could be considered sensitive, and as it was imperative to gain the honest view of the education policy, the questionnaires were anonymous.

The questionnaire comprised three parts. The first dealt with course provision in the institution; to find out what provision existed and whether institutions were seeking multiple accreditation of awards. The extent of PG provision was also identified. A third question asked about BS recruitment since 2001 while a final question asked for employment statistics. The second part comprised one question which required respondents to provide information regarding student numbers on each level of their UG and PG BS courses. The question asked for information regarding numbers of males and females and mature entrants to ascertain whether the education policy affected the gender ratio within, and mature entrants to, the profession. It asked for part time and full time numbers to ascertain whether the education policy had affected the mode of study. This section of the questionnaire provided much of the quantitative data. The third section of the questionnaire comprised qualitative opinion based questions. Questions were posed about the perceptions of the quality of the students enrolled since 2001 as it had been one of the aims to increase the quality of students. A follow up question benchmarked the data by asking respondents to provide information relating to student levels of attainment in Building Technology. The data received for this question would enable the researchers to state whether levels of attainment, as an indicator of quality, were revealing tangible and measurable increases in the quality of students. The researchers considered measures of 'quality' in students and considered motivation, attendance and participation to be credible indicators. A question asked whether there were any changes in motivation since 2001. Attendance was another measure; good attendance reflects high motivation to complete the course and succeed. Question 9 asked about attendance levels. Question 10 asked about participation in class discussions; a higher rate would indicate more student engagement in learning. Two open questions asked respondents for their opinion on PG conversion courses. A number of courses have been accredited and there was

debate about whether the courses equip graduates with acceptable breadth and depth of surveying knowledge. Building Surveying has a technical basis and the Universities have, until recently, not provided PG conversion courses in this discipline. The last question asked respondents to give their opinion on the reforms.

DATA COLLECTION

The population and sampling frame were those UK HE providers offering BS degrees through UCAS for commencement in Autumn 2003 (plus the College of Estate Management, the main distance learning provider). There were 26 providers. The questionnaire was sent out by email in October 2003 to all Course Leaders and non-respondents chased in November 2003 and again in July 2004. Twelve providers returned questionnaires although not all completed the entire questionnaire and therefore the researchers were unable to draw all the conclusions they initially hoped to. For example, it was not possible to identify whether female participation rates had been affected by the reforms. The response rate was 46%. Eleven were English Universities and the other was located in Scotland. The low response rate was disappointing and having reflected on possible reasons for this, the following may have been contributing factors:

1. Universities may have seen over-lap in the data we were collecting with what they provide annually to RICS.
2. Academics in an under-funded sector have considerable demands upon time.
3. Universities have seen an improvement in recruitment to BS courses since the research was commissioned and may perceive that there is no problem.
4. Course leaders may not have wanted to be seen to be critical of the RICS; though we offered anonymity they may not have trusted us.

RESULTS

Course provision

All Universities responding offered RICS Partnership UG courses and two offered PG conversion courses for non-cognates. Six of the twelve Undergraduate courses were accredited by the Association of Building Engineers, two by the Chartered Institute of Builders and another by both these institutions. 3 respondents developed PG conversion courses to commence in 2004 and 42% of the respondent universities have conversion courses running. Half institutions are seeking secondary accreditation of their UG BS courses, with a minority seeking multiple accreditation. Having secondary or multiple accreditation, may make courses more attractive to students. These graduates may choose to become Chartered Builders or Building Engineers, undermining the RICS aspirations regarding graduate employment. Another factor is that the Universities may have accreditation with other professional bodies to protect course provision against possible de-selection by RICS. The growth in UK PG conversion BS courses is considerable and indicates a strong trend in growth in this sector. There is a current under supply of UK Building Surveyors and this may be a means of meeting the demand. It will be interesting to ascertain how these post graduates fare in their APC assessment compared to the under graduate APC candidates. As the market matures it will be interesting to ascertain how employers perceive the difference between the UG and PG entrants to the BS profession.

Impact of Threshold Entry Standard on Recruitment

The responses to this question are indicated in Table 1.

Table 1: Impact of entry threshold on recruitment

Impact on recruitment	n	Reasons Cited
Increase	4	1. higher profile of profession (1) 2. course closures elsewhere and good product (1) 3. commencement of our MSc course (1) 4. popularity of property TV programmes and increased demand for graduates (1)
Decrease	6	1. RICS entry threshold (5) 2. overall decline in interest in construction subjects and the relative increase in other subjects e.g. media/IT (1) 3. Poor marketing of course by school (now rectified) and construction not perceived as 'sexy' (1)
Remained the same	2	1. competition from other courses (Quantity Surveying and Construction Management) has inhibited growth (1) 2. static for last few years but recruitment for 2004 up – probably because of higher tuition fees next year (1)

The responses to this question are interesting. 17% of institutions felt that numbers remained the same and attributed this to competition from other courses, whereas another reported static numbers until 2004 when increases were attributed to students enrolling to avoid higher fees. 50% of the sample, perceived a decrease in BS numbers, with 5 of the 6 citing the RICS threshold as a reason for this. This is a negative perception shared by 5 of 6 institutions and is evidence that the institutions are uncomfortable with the changes. One institution noted a decline in interest in construction subjects and a further institution cited poor marketing of surveying courses as a reason for a reduction. When reasons for the increase in numbers are examined, one institution cited an increase due to property television programmes which contradicts the perspective held above. 33% of institutions perceive increases in BS numbers. These institutions cited a greater number of reasons for the increase in numbers, four as opposed to three given for the decrease in numbers. One institution attributed the increase there, to the introduction of a PG conversion course, whereas another considered their expansion a result of closures elsewhere. One felt that the 'higher profile of the profession' was the reason for the increase, which was part of the rationale for the changes to RICS policy and indicates a limited perception of success.

Employability

Nearly all providers indicated that approaching 100% of graduates entered Building Surveying employment. The lowest figure was given for the year 2001/2002 and was 71% - which is below the RICS 75% employment threshold. The overwhelming number of responses indicated that graduates are entering the profession as desired by RICS.

Detailed Course Statistics

Most respondents failed to complete this table and we do not have the meaningful quantitative data from which to draw conclusions. It is possible that course leaders objected to providing this

data, which duplicates that provided in RICS annual returns. This was the most time consuming section of the questionnaire to complete.

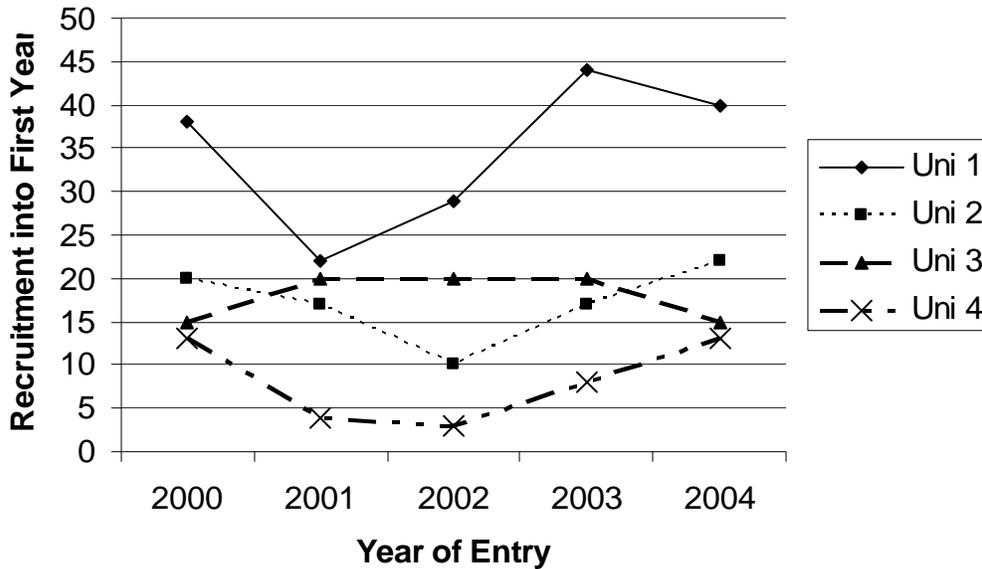


Figure 1: Building Surveying 1st Year Student numbers from 2000 to 2004

Figure 1 above provides a ‘snapshot’ of recruitment over the 5 academic years commencing the year before the education reforms took effect. This provides an incomplete picture but does indicate trends in the recruitment of students onto Year 1 of four BS UG degree courses that are well distributed geographically throughout the UK. Three universities experienced a decline in numbers from 2000 to 2001, with two of the three recording a further decline to 2002, however after this numbers rose between 2002 and 2003 in 3 of the four universities with the other institution recording static enrolment. 2003 records a decline in numbers. Overall by 2004 two institutions are enrolling student numbers marginally higher than the numbers enrolled in 2000, with the other two showing static student numbers. Clearly this is limited data and it is not possible to draw significant conclusions regarding students numbers enrolled on BS courses in the UK as a whole. However in this data set, there were wide swings in recruitment to courses in both directions over short periods, and this makes it difficult for the universities to plan business. The snapshot shows that BS student numbers have not increased significantly in these Universities. This data presents an inconclusive picture as to whether the policy is working for Building Surveying.

Quality of Students since 2001

Tutors were asked whether they had noticed any improvement in the student quality since 2001. Responses to this question are summarised in Table 2.

Table 2: Improvement in quality of students since 2001

Improvement noticed	No	Reasons Cited
Yes	3	<ul style="list-style-type: none"> • Students are working harder to achieve better grades in their HND/HNC and therefore subsequently do better on their degree programme (1) • The surveying students on the whole seem to score higher than students on other courses taking the same shared modules (1) • Poorer – 18 year olds tend to be naïve, less worldly and relate less well to others because of lack of experience (1)
No	5	<ul style="list-style-type: none"> • Our experience is that previously <u>all</u> of the best students, measured by degree classification and career progression, would not have met entry standards. Generally good BS students have been older and had wider work experience than students on other related courses (1) • RICS may think that the students are getting better just because the A level points are on average increasing. I'm afraid they simply don't understand Building Surveying. Part-time, trade-background, HND /HNC. Mature etc. students, many of which are low down or below threshold perform as well or better than a young 18 year old with little understanding or commitment. This may be because of the vocational/technical nature of the subject. I'm afraid we really don't know (1) • Student quality has reduced considerably. There are fewer mature students with HNC/D qualifications. General motivation and learning skills have diminished and students tend to work to support themselves financially (1) • A level scores do not reflect the performance on the course. Some of the students who are 'weak' academically on joining the course perform better than average (1)
About the same	2	<ul style="list-style-type: none"> • We still seem to be able to attract reasonably good quality students. Our entry requirements were already relatively high (1) • No discernible difference (1)

The aim was to increase the quality of student intake. 70% of respondents stated either that the student intake was the same or that no improvement was noticed. 20% felt the quality of students' was the same with reasons cited as entry requirements being already high and that there was no discernable difference. Half of the respondents felt that no improvements were noticeable,

citing a range of reasons. Others considered performance and noted that students can improve on weak entry level qualifications over and above students who commence with higher levels of attainment, due to motivation and work rate. One institution was negative in their perception of the RICS understanding of Building Surveying. Some attributed this to the lower numbers of mature students with BTEC qualifications who had positive influences on cohorts. Three of the five institutions cited maturity and previous work experience as reasons for students achieving good academic performance. It appears that part of the technical base of the BS profession may be ‘lost’ as fewer mature students with relevant work experience enter the profession. Building Surveying emerged as a profession with a technical base, does this potential loss of technical base represent the evolution of the profession, or will a loss of the technical underpinning of BS ultimately weaken the profession?

Not all views were negative, 30% of institutions reported that the quality of students improved. The reasons for improvements were that students worked harder in HND/C and this prepared them for degree programmes. Another institution stated that compared to other students on academic ‘programmes’, BS students were attaining higher marks. Overall there is evidence that the quality of students is improving in some institutions but there is evidence elsewhere, and more of it, suggesting the opposite is occurring. This is a finding which raises some concerns and indicates that RICS policy may not be working as planned.

Construction Technology Benchmarking

Only four respondents completed this question which required them to provide data on student performance in the Level 1 Building Technology module. While we would not attempt to draw conclusions from such a small sample it is noted that the average performance was in two cases higher and in one case lower after the entry standards had been in force for one year.

Motivation of post 2001 Students

Tutors were asked whether they had noticed any change in motivation in their post 2001 BS students. Responses to this question are summarised in Table 3.

Table 3: Changes in Student Motivation

Change in motivation?	n	Comments
Yes	3	<ul style="list-style-type: none"> • Students are more highly motivated (1) • Slight but perceptible decline in motivation (owing to financial as well as academic pressures) (1)
No	5	<ul style="list-style-type: none"> • Students are still keen – just more naïve (1). • Class discussion weaker (1)
Don't Know	2	

30% stated motivation levels had changed, one said student motivation had increased positively whilst another stated student motivation had decreased. Of the 50% who stated no change in motivation – some said motivation was still positive but that students were more naïve and another reported weaker class discussion presumably as a result of losing the mature students.

Educational research supports the benefits of peer learning amongst students, this data supports the view that the loss of mature entrants results in less peer learning in BS courses. Peer learning has become more important as part of the students access to learning, as Universities reduce class contact time and increase self managed learning in the face of year on year cuts in Government funding and rising costs. 20% reported that they were unsure whether motivation had changed. The results show a range of views on motivation and it is impossible to identify clear trends. It is possible to state this data could not support a claim to show motivation has improved as a result of changes to policy and entry thresholds on accredited courses.

Student Attendance

When asked to rate student attendance in the post 2001 cohorts, five respondents indicated that they were lower, one noted no difference and three did not keep records. Attendance was a good indicator of quality however this data shows that half of responses indicate lower levels of attendance. Attendance is an issue to consider carefully, because if levels of attainment remain the same or increase whilst attendance decreases, Universities may need to re-evaluate their teaching, learning and assessment strategies. If academics have little direct contact with students it becomes difficult to provide employers with informed and detailed references for students. There is anecdotal evidence that students enrolled on other courses also have problems attending and this may be due to balancing part time employment and study.

Student Participation in Class Discussions

Six respondents indicated that participation in class discussions in the post 2001 cohorts had decreased three believed that there was no difference and one was not sure. 60% record a decline, 30% perceive no difference and 10% are not sure if participation has increased. Better quality students should participate more in class and be more engaged with the subjects they are studying, this data suggests that the opposite is happening. The BS courses may attract entrants with higher entry qualifications however there is less participation in discussion which may be attributable to the reduced numbers of mature entrants with work experience. The picture which emerged was that the definition of quality may be the issue. If we define 'quality' in students as motivation, participation and attendance, these results indicate the quality is declining. On the other hand, if we define quality as entry level qualifications, the quality of BS students on accredited courses is improving. This data suggests most academics participating in this research may be adopting the former definition. The BS profession needs to consider carefully where it seeks to, position itself in the medium term, as a technically based profession or as an information manager of the technical aspects of construction.

Opinions of PG Courses

This open question allowed respondents to express their view in respect of the PG conversions courses which are expanding across the UK. This market has grown significantly over the recent past with the number of post graduate courses expanding. Of the 9 views expressed, all but one are negative. A number of different reasons are given such as inadequate depth and breadth of knowledge. Only one course leader has a positive opinion of the post graduate courses but the reason is to expand the quantity of Building Surveyors and there is no mention of the quality of these graduates. The implication here is that the role of the employer in providing adequate and supported structured training for PG students is greater than that required for UG in order to develop the depth and breadth of their knowledge to APC level. The real testing ground for these

post graduate courses and students will be in quantitative comparisons of pass rates at APC and this data will become available only in the next few years.

Overall Opinion of 2001 RICS Education Reforms

A second open question asked for views of the RICS education reforms. There were some very concerning opinions expressed which should give both the RICS and the BS Faculty cause to review and reflect carefully. The overwhelming view is negative and some of the views, such as 'elitist' and 'lost the plot' are expressed strongly and indicate that the professional body has eroded the support of its academic colleagues. Given that the changes are 3 years into operation, there does not appear to have been a softening of views and opinions we might have expected to find as people accustom themselves to change. Of concern is that courses are being accredited by other professional bodies and there is a view that the RICS accreditation is becoming less important to universities. The perception that the RICS education policy 'discriminates' against students by not benchmarking graduate output or attainment as a measure of entry into the profession is, in the current climate of widening participation in education, a move which does take the RICS away from current prevailing attitudes. The BS Faculty should take note of the view which felt that Building Surveyors will break away from the RICS and/or move to the ABE, a move which could undermine the Building Surveying position within RICS in the future.

CONCLUSIONS

Wherever change is proposed, there are issues to consider; first there is inevitably some resistance and second, the changes will take time to bed down before one can evaluate. The rationale for the research was that sufficient time had elapsed to evaluate the change and for initial resistance to change to have softened. The key conclusions of this research project in the context of the research aims are:

Aim 1 – to identify the impact of RICS Education Policy on UK BS student numbers.

1. The data collected was insufficient to draw significant conclusions regarding UK BS student numbers but provide a snapshot of four institutions student numbers and 9 institutions views and perceptions.
2. Secondary and multiple accreditation of BS degree courses are more common which gives students a broader range of professional bodies to join other than RICS.
3. The prevailing perception amongst these respondents is that student numbers are in decline, however anecdotal evidence for this year is that students numbers have increased across all courses, though there may be other reasons for this universal increase in numbers. Therefore it is not possible to conclude that RICS education policy is having either a positive or a negative effect on student numbers.
4. The employability of students entering is very high and is evidence that this aspect of policy is working.
5. The aspiration to raise quality through the education policy was evaluated and found that there was no improvement; motivation is more or less as before; attendance is declining; and participation is declining. This indicated that the policy had not had a positive impact in respect of quality.

Aim 2 – to consider the potential implications for the future of the BS profession.

1. With secondary and multiple accreditation the loyalty to RICS and BS may not be strong from both students and / or Universities in the future.
2. BS numbers have not increased significantly as a result of the changes but neither have they declined, and the shortage in supply of BSs is likely to continue in the future.
3. The perception of the quality shows no increase, an aspiration of the policy and an issue for the profession.
4. Employers have to provide greater support in their structured training for PG entrants if they are to attain sufficient depth and breadth of knowledge for success at APC.
5. The policy may reduce access to the profession at UG level from mature and non traditional entrants who have provided a strong technical underpinning to the profession.

Objective 1 – to identify the number and type of new post 2001 post-graduate Building Surveying courses in the UK. Objective 2 – to ascertain the current numbers of students studying on undergraduate and post-graduate Building Surveying courses in the UK. It was not possible to draw quantitative conclusions from the data collected for objectives 1 and 2 due to non returns.

RECOMMENDATIONS

Given the impacts identified by the research, it is recommended that the RICS BS Faculty should debate the findings and the concerns raised, in particular:

1. The impact on future supply of graduate BS by monitoring of APC registrations.
2. The appropriateness of PG conversion courses which of necessity have a lower technical content than traditional undergraduate degrees courses.
3. Whether the profession wishes to position itself as a technically based profession or an information manager of the technical aspects of construction.
4. The BS has prospered because of the willingness of other professions to distance themselves from their technical underpinning. Does the BS profession wish to follow the same path?

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REFERENCES

Business, February 2003: Surveying graduates increase for the first time in a decade. RICS.

Crosby, N cited by Benyon, L (1999) The University challenge. Property Week, **64**(32) 22-23.

Estates Gazette, September, 2002.

Frazer, W., cited by White, A. (2001). Schools out. Estates Gazette Interactive. 0114 7 Apr 2001, 59-61.

Greenhaigh, P cited by Eade, C (2000) Universities try to make the grade. Property Week 65 (35) 6 Oct 2000, pp41-42.

Green, M cited by Eade, C (2000) Universities try to make the grade. Property Week **65**(35) 41-42.

Latham, C (1994). Meeting the challenge of change. Estates Gazette Interactive. visited 19 November 2001. URL: http://www.egi.co.uk/egarchive_detail.asp?arch_id=47504

Lay, R (1998) The agenda for change: 1998 Presidential address. LONDON, RICS.

Mackmin, D (2001) A profession in decline? Chartered Surveyor Monthly September 2001:2.

Moser, C.A and Kalton, G (2nd ed) (1979) Survey methods and social investigation. Heinemann: Educational.

Naoum, S.G (2001) Dissertation research and writing for construction students. Butterworth Heinemann.

RICS, (1999a) Promoting status and focus: a consultation paper from the promotion task force. LONDON, RICS.

RICS (1999b) Investing in futures Education Task Force Final Report. LONDON, RICS.

RICS, (1999c) Education Task Force Report to General Council LONDON, RICS.

Robson, C (2nd ed) (2002) Real world research. Blackwells.

Syms, P., cited by White, A., 2001. Schools out. Estates Gazette Interactive. 0114 7 Apr 2001: 59-61.

Van-Dorp, (1999) cited by Benyon,, (1999). The University challenge. Property Week 64(32) 20 Aug 1999:22-23.