

The University of Greenwich
Faculty of Education and Health

**The potential impact of the HE Educational White Paper 2011 on higher
education and professional construction education: professional quantity
surveying education in England**

Yvonne Simpson

**A thesis submitted to the University of Greenwich for the degree of
Doctor in Education**

September 2014

A thesis submitted in partial fulfilment of the requirements of the University
of Greenwich for the Doctorate in Education (EdD)

DECLARATION

“I certify that this work has not been accepted in substance for any degree, and is not concurrently being submitted for any degree other than that of Doctorate in Education (EdD) being studied at the University of Greenwich. I also declare that this work is the result of my own investigations, except where otherwise identified by references, and that I have not plagiarised another’s work.”

SIGNATURE (STUDENT) DATE

SIGNATURE (SUPERVISOR) DATE

ABSTRACT

This thesis aims to investigate the effect of the Government's Higher Education White Paper 2011 on the provision of vocational undergraduate degree provision within the UK. In particular the provision of quantity surveying education in the English Higher Education sector will be used as an exemplar.

The intention of the study is to glean the potential impact and effects on professionally focused education in the 21st Century. There were two prongs to this study, one reflecting the experience of Australian quantity surveying provision to give some hindsight, the other reviewing the on-going debate between professional education and strategic education as raised by Cardinal Newman (1852). There was attention on the changing role of the state and the rise of individualism, in HE provision. Underlying this study was the anticipated role of knowledge in the form of professional knowledge and competencies.

The methodology undertaken was pragmatic and employed mixed methods of qualitative and quantitative data collection. Future studies (Ratcliffe 2008) had an influence on the data collection methods and a Delphi technique tool was designed to harvest the data, the use of thematic analysis (Brown and Carasso 2013) enabled the construction of themes. Philosophical lens of Bourdieu's cultural capital (1973) and Bhaskar's critical realism (1978) were employed to provide a basis from which to explore the findings of the thesis.

The themes which arguably arose were uncertainty, inequality, barriers, quality, marketization, conflict and power. The findings indicated a withdrawal of state from funding professional HE programmes, rise of individualism which acknowledges the cultural capital of professionally accredited courses and a study of power within the community of practice (Wenger 1998) of chartered quantity surveyors. Surprisingly, it is the lack of awareness surrounding the role of knowledge in favour of competencies which may indicate the schism between professional and generalist HE provision.

Keywords: Higher Education White Paper 2011, Chartered Quantity Surveyor, Power, Knowledge, Cultural Capital, Critical Realism, Qualitative, Quantitative, Delphi Technique.

ACKNOWLEDGEMENTS

What a rollercoaster of a ride! Where to start? There have been many people who have helped me on this journey by providing moral, emotional and practical support. Those who have listened, those who have read, those who have shared and all with good humour. To all those people heartfelt and God-given thanks were offered on a daily basis.

I would like to thank the Department of the Built Environment based in the University of Greenwich for the support it has given me to enable the commencement and completion of this Doctorate of Education (EdD); especial thanks to Professor Keith Jones and Stuart Allen. Also, the Department of Sociology at the Universidad de Complutense in Madrid, for hosting me whilst I worked on this study, especially Professor Jesus Leal and Dr Almudena Martinez del Olmo.

Sincere thanks have to be awarded to my academic supervisors, Bill Goddard and Dr Andrew Lambirth, for all their encouragement, feedback and guidance. Thank you for the faith you placed in the creation of this thesis. The academic team who supported me in the earlier part of this course of study are to be commended for their enthusiasm, interest and professionalism in delivering the EdD; in particular, Professor Jill Jameson, Francia Kinchington, Dr Heather Brunskell-Evans and Dr Neil Hall. A special thank you goes to Shirley Leathers who keeps the administration ticking along so well.

Acknowledgement and thanks are given to the interview sample and the pilot interviewees without whom this research would not have been possible. Many thanks to Glyn Jones, Sue Collins, and my doctoral colleagues: a special a blessing on Monica Grinfeld who introduced me to this whole process. A very special set of thanks are given to Brian Jones, who persevered in giving advice, pastoral care and encouragement. From the bottom of my heart thank you.

Special thanks are offered to my loving family and friends, most especially my children Daniel, Alexander and Olivia, who have kept me grounded and balanced. To my sister and brother, cousins, nieces, nephews, Pelagie and my mother, thank you for all the support and patience. I am back now. My faith and belief, in God the Almighty who has given me the strength to undertake this journey, has been well founded.

This thesis is dedicated to my loving family, whom I adore: Daniel, Alexander, Olivia and mum, and also to the memory of my dad, Dewar Simpson.

GLOSSARY

APC	Assessment of Professional Competence
ATO	Australian Taxation Office
BERA	British Education Research Association
BIM	Building Information Management
CEM	College of estate Management
CI	Construction Industry
CoP	Community of Practice
CRAC	Cronbach Alpha Reliability Coefficient
DEEWR	Department of Education, Employment and Workplace Relations
FE	Further Education
HE	Higher Education
HECS	Higher Education Contribution Scheme
HEFCE	Higher Education Funding Council for England
HEI(s)	Higher Education Institution(s)
HELP	Higher Education Loan Programme
NHS	National Health Service
NSS	National Student Survey
PESTLE	Political, Economic, Social, Technical, Legal and Environmental
QA	Quality Assurance
QAA	Quality Assurance Agency for Higher Education
QS(s)	Quantity Surveyor(s)
RICS	Royal Institution of Chartered Surveyors
TEQSA	Tertiary Education Quality Standards Agency

TABLES AND FIGURES

<i>Figure 1. Problem development adopted from Evans 2013. Implication of the HE White Paper (BIS 2011) England</i>	15
<i>Figure 2.1 Flowchart of HE Acts in the UK from 1992</i>	21
<i>Figure 2.2 Bourdieu's analytical framework of capital</i>	62
<i>Figure 2.3 Research framework developed for the investigation of this thesis</i>	72
<i>Table 2.1 RICS professional examinations</i>	38
<i>Table 2.2 Classification system for quality standards used on RICS-accredited undergraduate programmes – Adapted from Harvey (2002)</i>	56
<i>Table 2.3 Critical realism as described by Bhaskar 1978</i>	65
<i>Table 2.4 Parameters identified for this investigation</i>	65
<i>Figure 3.1 Diagram representing the balance of research methods employed</i>	80
<i>Figure 3.2 Reflexive and reiteration stages of data analysis – Wei and Fine cited in Creswell 2007</i>	85
<i>Table 3.1 Initials of respondents versus ranking of top ten words generated – KQ1</i>	88
<i>Table 3.2 Table used to select method: The Delphi Method Group Communication Techniques</i>	104
<i>Table 4.1 Initials of respondents versus ranking of top ten words generated – KQ2</i>	114
<i>Table 4.2 Points raised by participants and incorporated in the questionnaire</i>	150
<i>Figure 5.1 Capital, habitus and practice adapted to show legislation and policy impact</i>	171
<i>Table 5.1 Clarification Appendix E Q11</i>	185
<i>Figure 5.2 Prior to emergence of policy impact</i>	177
<i>Figure 5.3 Emergence of policy</i>	180
<i>Figure 5.4 Model in flux</i>	181
<i>Figure 5.5 Professions, education and practice: adapted from Bourdieu 2014</i>	189
<i>Figure 5.6 Capital, habitus and practice adapted to show how legislation and policy impact are absorbed</i>	190

<i>Figure 5.7 Capital, habitus and practice adapted to show fitness to practise as a barrier to entry</i>	192
<i>Figure 5.8 Critical realism: occurrence of policy impact</i>	196
<i>Figure 5.9 Critical realism: idealised version of policy impact</i>	197
<i>Figure 5.10 Critical realism: reality of policy impact</i>	198

CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENTS	iv
GLOSSARY	v
TABLES AND FIGURES.....	vi
CONTENTS	viii
1 Chapter 1: INTRODUCTION.....	1
1.1 Research aims.....	8
1.2 The outcome of the study	9
1.3 The key questions are:	9
1.4 Data representation and analysis	11
1.5 Summary.....	12
2 Chapter 2: LITERATURE REVIEW.....	13
2.1 Introduction	13
2.2 Structure.....	13
2.3 Topics.....	13
2.4 Themes	14
2.5 Development of problem to be investigated	15
2.6 Development of the Key Questions:	16
2.7 Development of the objectives.....	16
2.8 Search strategy	17
2.9 Overview of the literature.....	18
2.10 Politics and development of policy: governmental views.....	18
2.11 Policy – White Paper 2011	19
2.11.1 History of the White Paper 2011	25
2.11.2 Government – ideology, politics and economic ideology	26
2.12 Universities: historical perspective	30
2.12.1 The role of higher education.....	30
2.12.2 Purpose of education and the HE White Paper 2011	31
2.12.3 The university and how it came to be.....	32
2.12.4 European philosophical basis	32
2.12.5 The role of the university.....	34
2.12.6 Types of education: generalist or specialist.....	35
2.13 Provision of construction education.....	38
2.13.1 Professional education – what is a profession?	39
2.13.2 Education – strategic and technocratic	40
2.14 The surveyor and the profession’s historical context	42
2.14.1 Historical context.....	42
2.14.2 What is a QS?	48
2.14.3 Societal perspectives: demands upon professionals	52
2.14.4 Demands upon the 21 st century professional.....	53
2.14.5 Stakeholders views – employers, industry, government, society in general	54

2.15	Community of practice	55
2.16	Instrumental themes – instrumental impacts.....	56
2.16.1	Vocational programmes.....	56
2.16.2	Philosophical theme.....	58
2.17	Bourdieu.....	59
2.17.1	Introduction	59
2.17.2	Economics of Bourdieu	59
2.17.3	Distinction	60
2.17.4	Capital.....	61
2.17.5	Power.....	61
2.17.6	Reflexivity	62
2.17.7	Some problems with Bourdieu’s stance	62
2.18	Critical realism.....	63
2.19	Australia – the end of free HE	66
2.19.1	Similarities between Australian and British undergraduate provision of quantity surveying education	66
2.19.2	Investigation into the Australian HE sector – mass education	66
2.19.3	Funding.....	67
2.19.4	Restructuring of the HE sector	68
2.20	Societal theme	69
2.20.1	Problem development	69
2.21	Summary.....	70
3	Chapter 3: METHODOLOGY	73
3.1	Clarification of purpose	73
3.2	Introduction	73
3.2.1	Clarification of purpose	74
3.3	Classification of paradigms.....	76
3.3.1	Positivists.....	76
3.3.2	Interpretativists	77
3.3.3	Research strategy.....	79
3.4	Summary.....	112
4	Chapter 4: FINDINGS	113
4.1	Introduction	113
4.2	Qualitative	114
4.2.1	Interviews with academic, industry and professional experts	114
4.2.2	Data characteristics of respondents	115
4.2.3	Qualitative Commentary.....	115
4.2.4	The views of English experts.....	125
4.2.5	Commentary of profession institution interview	134
4.3	Summary.....	148
4.4	Quantitative	150
4.4.1	Part A.....	151
4.4.2	Part B	152
4.4.3	Areas of non agreement.....	169
4.5	Summary.....	171

5	Chapter 5: ANALYSIS AND DISCUSSION	173
5.1	Introduction	173
5.2	Power, marketisation and knowledge	174
5.3	Global role	177
5.4	Authority	179
5.5	The role of the global market place	187
5.6	Barriers and quality	191
5.6.1	Bourdieu – field and habitus	191
5.6.2	Quality	194
5.6.3	Complexity, uncertainty and conflicts	197
5.7	Future	208
5.7.1	Education	208
5.8	KQ1 What is the potential impact of the government’s White Paper on the provision of construction education?	213
5.8.1	Purpose of education	213
5.8.2	Marketisation of HE	214
5.8.3	Professional education	215
5.8.4	Progression of the HE sector	216
5.9	KQ2 How will the CI sector’s key stakeholders react to the changes introduced by the government’s White Paper, particularly with respect to the education and training of the professional QS?	216
5.9.1	Funding	217
5.9.2	Private providers	217
5.9.3	Part-time study provision	218
5.9.4	Barriers to entry	218
5.9.5	Restructuring of HE	219
5.9.6	Role of the professional body	221
5.9.7	Behaviour of sample	223
5.10	KQ3 What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes?	225
5.10.1	Analysis	225
5.10.2	Fees and the involvement of the individual	226
5.10.3	Involvement of employers and professions	227
5.10.4	Structure of the HE sector	228
5.10.5	Answering the aim set for this documentation	229
5.10.6	Lessons to be gathered from the Australian study	230
5.11	KQ4 What strategies will be adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper, and will they result in effective education and training for professional QSs?	231
5.11.1	Funding restrictions	231
5.11.2	Government policy	233
5.11.3	Purpose of HE	233
5.11.4	Future provision	234
5.12	Summary	235

6	Chapter 6: CONCLUSION AND RECOMMENDATIONS	236
6.1	Introduction	236
6.2	“What is the potential impact of the Educational White Paper 2011 on Higher Education and professional construction education, and more specifically professional quantity surveying in England?”	236
6.2.1	The key questions are:	236
6.2.2	Objectives are:	237
6.3	Findings related to the main question	238
6.3.1	Impact of the HE White Paper 2011	238
6.3.2	Purpose of HE	239
6.3.3	Funding	240
6.3.4	Community of Practice	240
6.3.5	Quality	241
6.3.6	Knowledge	242
6.4	Anticipated outcome	242
6.5	Original contribution to knowledge	244
6.6	Limitations of this study	246
6.7	Recommendations	246
6.8	Future research	247
6.9	Effect of the whole research project on professional development	247
7	REFERENCES	249
8	APPENDIX	262

1 Chapter 1: INTRODUCTION

Over the entirety of my professional career I have been fascinated by the educational dichotomy between technocratic and strategic education (Tribe and Tribe 1995) that besets chartered surveyors. There is a desire to elevate the profession by acquiring strategic knowledge and skills, but a demand at grassroots level for technocratic knowledge and associated skill sets. The most recent publication from Perera et al (2011) on behalf of the Royal Institution of Chartered Surveyors (RICS) underlines this position, with employers requiring a fully trained Quantity Surveyor (QS) with a focus on knowledge (the technocrat) and the institution which favours a functioning and adaptable skill-based Surveyor (the strategic). This points to a possible disconnect between the institution and the professional practitioners' demands of surveying education.

These points apart, there is a noticeable tendency within the professional body to move to a set of higher educational qualifications than was previously expected for membership (DLE 2000, Quantity Surveyors Research Group 1992). In a recent set of professional examination interviews held in November 2011, I encountered four candidates who had all entered with the aid of a masters degree. This in itself is noteworthy, but the fact that all these candidates had not got a surveying or similar undergraduate degree was more striking. An important issue of knowledge that needs to be tested during these interviews was dressed up in the guise of competencies. These competencies are assessed by a panel of experienced surveyors who ascertain if a required level of ability has been met in an assessment of professional competencies (APC) reissued by the RICS in 2011. There is nothing unusual in this method of admitting potential professional surveyors to chartership; other professions, such as accountancy and the law, follow this route too. A noticeable shift has been the move to strategic-style education over that of the technocratic route favoured in the previous century (Simpson 2010a).

It would be simple to focus upon the age-old and rather entrenched arguments of which route is best, but this would add little new to the debate and merely reiterate the familiar circular discussions (Thompson 1968). However, the move to focus on the role of the knowledge worker within the service sector is worth pondering (BIS 2009a, BIS 2009b).

In this area two main issues occur: the role played by cultural and social capital, and the application of education. To address the role of knowledge in the workplace (Brinkley 2010) both professional and educational needs (Helyere et al 2011) must be aired, and the philosophical context of capital in relation to social and cultural fields requires exploration. The identification and delivery of this professional knowledge is at the heart of this research (Young and Muller 2014). Subjectively, I found this to be a significant topic and have discovered that the surveying educational dialogue is muddled, confused and rather superficial. My role, defined by industry and the profession, is as an educator, which is about skills, knowledge and a fair amount of forward vision to predict the future of the profession (Simpson 2010b). This in reality is perceived to translate into continuing debate on training versus education where all the ills of the industry are laid at the door of educational institutions, followed by finger pointing after the event at the alleged weaknesses of education.

It is within this context that I work to reconcile these conflicting demands in my role as programme leader and lecturer for BSc Quantity Surveying. The main question arising is how to best equip the undergraduate surveyors I educate for the marketplace and their future role as professionals. This mirrors the debate about education that Carr (1995) suggests occurred between Sneddon and Dewey (Dewey 1916; 1980, 1966) in the early 20th century relating to those who lead and those who are led; a debate which was later carried on by Garrison (1995) and Drost (1967). The debate can be traced back to the seminal text produced by Newman (1852) in a set of lecture notes about the purpose of a university education, which has become a pivotal argument on which the worth of education is debated and exonerated. In a manner of speaking I am a product of this style of technocratic education, having been a student and now a provider of both masters and undergraduate routes in my employment as a lecturer. Subsequently, to steal a quote from the NHS ad campaign (2012) ‘Am I Doing it Right?’

A simple and alluring approach would be to argue for the place of both training and education within the context of Higher Education (HE), drawing on the discussions of Clifford and Guthrie (1990). Should professional education take place in universities or should training be the favoured method of attaining specialised knowledge within the work context? On examination there is a more complex situation here, due to the social demands placed by professional recognition (RICS 2011) and legal requirements enforced upon the

role of a professional (Ashworth and Hogg 2007). All of the aforementioned concerns and subsequent issues do not exist in a vacuum; HE has not been left in limbo – it has been, and continues to be, affected by political, social and economic factors (Scott 1998, Maton 2005).

One of the main influences on the HE sector in recent years has been the introduction of the Educational White Paper 2011, commonly referred to as the Browne Report (BIS 2011). The approach therein signalled governmental retreat from funding the HE sector, which over the previous 50 years had been the prevalent source of finance (Scott 1998). On the surface the main discussion has concerned the funding and financial implications for future students and the providers of the HE sector, largely universities (Collini 2011, McLachan 2009). Another far-reaching aspect of the Browne Report is the opening up of competition by new private providers (Browne et al 2010).

Obviously this change to HE has not occurred in political isolation. As Williams (2009) writes, the changes in the political landscape under the New Labour governments of Tony Blair in 1997 and Gordon Brown in 2007 have had a considerable impact on the funding of mass education. She highlights the move from individualism to determinism in the provision of post-school education. This is evidenced by the introduction of student fees, and the change from state to individual responsibility for finance. In 1998 a fee of £1000 per year was introduced; later, in 2004, this was increased to £3000 per year, and this was then followed by progression to the individual fully bearing the burden of finance of study in 2012. This has been referred to as a market-led approach to HE by Collini (2011), resulting in a fee of about £9000 per year. TES (2011) states that the sciences, engineering and medicine will require – and should attract – more government funding. It therefore becomes obvious that there is a paradox within the White Paper, where certain subjects will still attract government funding (Williams 2009). This subsequent change to funding, and its potential impact on professional undergraduate education as described by Jarvis (1985), has been investigated by this doctoral research with particular emphasis on provision for Quantity Surveying.

A point raised by Collini (2011) is the sea change surrounding the very purpose of HE: for whom is HE provided? In the past the government have used HE to augment the state's economic plans, a point first debated some two centuries ago during the industrial

revolution (Newham 1852, Sneddon cited in Drost 1987, Dewey 1916; 1980, 1966). More recently, the same phenomenon can be witnessed in the great expansion of education which started in the 1960s (Scott 1998). Education, and particularly knowledge, is cited as economically advantageous by Scott and Bernstein (1996). Again in the 1990s the rise of the knowledge worker and the subsequent management of this capital, together with a tightening of patenting and ownership of knowledge, can be observed (Ball 2007, Young and Muller 2014).

The present 2010–14 Conservative-led coalition government have introduced the market-led forces of consumer choice to the provision of mass HE. This saw a change from state-influenced education provision to the invisible hand of Adam Smith's economic market theory (Smith 1776; 1998). Whilst on the surface, offering more individual choice of what to study is laudable, it is the removal of the consideration for the future of the whole of society that raises concerns, especially where societal good is seen as less important. According to Scott and others the fundamental purposes and principles of a university are to work for the benefit of society (Scott 1998, Veblen 1918 cited in Collini in 2011).

Historical trends may be seen to point to the impact on educational and societal changes in the 21st century where mass education has become de rigueur across all of the European HE system (Clark 2000). Differing styles and forms of educational systems have over time diversified, amalgamated and evolved through the later part of the last century. Part of these changes has been the involvement of professional education and its place in the HE sector (Scott 1998, Thompson 1968). Professional education emerged in the 19th century, alongside debates about education for slaves and free men (Newman 1852, Milward 2006), led and leaders (Carr 1995, Drost 1966, Garrison 1995 Dewey 1916; 1980). Over the last 100 years the 'products' of professional education have come to be seen not so much as white collar workers (Thompson 1968) as knowledge workers (BIS 2009, Alavi and Leidner 2001, Nonaka and Von Kogh 1991). The state values this type of knowledge economy which can be described as cultural capital for the individual. But there is also a dialogue surrounding knowledge as currency proposed by Bernstein (1996), Ball (2007) and expressly discussed by Young and Muller (2014, 4), where governments prize the global income generated by HE.

“Knowledge itself is being reconstructed as a commodity in the marketplace that can be traded like any other commodity in the global economy.”

In 2009 BIS issued a report on the future of universities in which it suggested that universities should make a bigger impact upon the economy in the 21st century through knowledge acquisition and dissemination, a process described by Brady (2013) as the *university knowledge economy nexus*. Bourdieu (1984) discusses the role of cultural capital within the European context and suggests it is through the study of habitus that differing forms of capital, both social and cultural, can inform their subsequent identifiable impact on professional education. The emphasis in this area of philosophy (Powell 2001) is on the worth or capital that occurs within innate rather than explicit knowledge, and it also focuses on the benefits felt from these cultural relationships. This approach identifies the professional class as the service class (Goldthorpe 1982), whilst Schön (1980) has focused upon expert knowledge (Clegg 2000) which trades on the access to this knowledge that others do not have.

The UK economy has most recently focused upon the provision of services (Hanlon 1998, Garrison 1995), moving from the agricultural and manufacturing base during the last century. The importance of the service sector of the economy has risen, and some of these services can be classified as professional. Dr Adam Posen, who has held the position of Houbton-Norman Senior Fellow with the Bank of England since 2006, makes clear the distinctions regarding services in economic terms and has highlighted professional services as a part of that economic data set (Posen 2012). It would follow that the present government policy of individual choice over that of state provision will in time have an effect on the service sector; there will be an impact upon the economy and its growth. It can be argued that as an identified professional grouping, quantity surveying is a service class (Goldthorpe 1982) which has duties to society (Thompson 1968, North 2010) whilst benefiting from the Bourdieuien idea of cultural capital (Mangez and Hilger 2012, Krul, Colantonio and Otsuka 2004), in this instance as a group of knowledge workers (Young and Muller 2014).

There are three main threads which weave their way through the provision of professional HE: economic, political and societal. It is mainly the interpretation of these three topics

that colour debate and forge policies around the provision of HE and its subsection of professional education. It is sensible to study these areas further to give context.

As the Browne Report had yet to be implemented (this study commencing in mid-2012), several questions are raised around the impact of this future act on the provision of professional education. To further describe the research the following question was proposed:

“What is the potential impact of the Educational White Paper 2011 on Higher Education and professional construction education, and more specifically professional quantity surveying in England?”

To aid the process of identifying a specific and manageable piece of research this topic was adopted to satisfy the interest in predicting the future shape of professional education in the early to mid-part of the 21st century in England. The purpose of this research is to explore the potential impact on QS undergraduate provision in particular, but it is suggested that other professional education will be affected in similar ways, and thus using QS educational provision as an exemplar may point to future trends in the education of the wider service class.

With reference to the service class (Goldthorpe 1982) and professionals (Downie 1990, Hanlon 1998), a little background information on the emergence of the QS profession is required. Surveyors have been noted since the Domesday Book as persons who measure, record and allocate land and stock. Quantity surveyors arose like phoenixes from the ashes of the Great Fire of London in 1666 when a huge rebuilding programme was undertaken and new methods of designing and procuring works introduced (Thompson 1968, North 2010). Architects opted at this point to concentrate upon design and not the quantification and estimation of works, and so these functions came to be undertaken by surveyors of quantity – hence the arrival of the modern QS.

The practice of surveying struggled for a long time to reach the levels of professional status enjoyed by lawyers and doctors. However, in 1881 the profession achieved its royal charter elevating the practice to the professional middle class. The main purpose of the QS remains the procuring and costing of construction works (DLE 2000). Hence, the role of

the QS is found firmly in the lap of the Construction Industry (CI). The UK CI is a vital contributor to the national economic welfare of the country. At present the contribution made by the CI is about 11 per cent of GDP (NSO 2011, BIS 2013), although in 2012 there was a double recession, as defined by the *Farlex Financial Dictionary* (2012), within the sector.

A recession is defined in differing ways, but the most common definition is a lack of growth in three consecutive periods (NBER 2010), with the year divided into four equal periods. A double-dip occurred in the last two quarters of 2012 (NSO 2011, BIS 2013), something that was initially brought on by a lack of access to funds (referred to as the credit crunch) and conditions have been more recently aggravated by the Euro crisis and subsequent shrinkage in European markets (Eurostats 2012). These events indicate how seriously the UK CI is affected by global events. At present the British economy, and the CI in particular, is having a hard time, and from informal discussions it is safely anticipated that the present adverse economic climate will have an impact on industry views of educational changes and challenges.

There was a need to hone the research topic down from a general discussion of technocratic versus strategic education based upon the premise of undergraduate professional education delivery at university level to a more manageable and focused core. To this end a decision was made to examine the narrower aspect of the political impact upon the provision of professional education (Jarvis 1983, supported by the later work of Young and Muller 2014), by the adoption of the HE White Paper 2011. The focus will be on professional education within the English HE sector and the use of the White Paper as state *instrumentalism*. Similar educational reviews took place in Australia during the 1990s, and it was thought prudent to investigate the impact these have had on professional education and in particular the QS undergraduate route. It is anticipated that the Australian experience will inform the discussion surrounding the potential impact that the Browne Report will have on an undergraduate QS education in England. The comparison would be based on the similar CI and education system structures that operate in both the UK and Australia.

The outcomes and discussions resulting from the research has provided interesting material with which to assess the potential impact of the Browne Report. To generate a consensus

of opinions amongst recognised experts and informed professionals a Delphi-style approach was adopted to form a view of future developments.

1.1 Research aims

The overall aim of this research was to review the potential impact of the White Paper on the provision of professional undergraduate education, with particular emphasis on examining the QS.

To achieve this, a number of stages in the research were needed. First, it was necessary to describe the present state of QS undergraduate education within England (the White Paper confines itself to England and Wales thus excluding Scotland and Northern Ireland from consideration). In this instance there is only one provider of Welsh QS undergraduate education, and so research has been limited solely to England.

Having investigated the present educational provision, the second phase involves examining the role of professionalism, its differing forms and how they impact upon the QS. These are issues relating to culture, ethics and other drivers of change to the professional role (Downie 1990, Hanlon 1998, Fong and Choi 2009); it is anticipated that the QS, as a recognised knowledge worker, will experience these key influencers on knowledge and skills sets, strengthening the relevance of this study for the future provision of professional QS undergraduate education. This section of the research includes discussions of technocratic and strategic education. The importance of the knowledge worker and the impact of cultural capital will be linked in this discussion as the actual context will have an impact on the topic, as suggested by Young and Muller (2014).

Interviews were undertaken with industry professionals to identify the perceived impact of the White Paper on QS undergraduate educational provision. These interviews formed the basis of a discussion on the possible changes likely to occur. Additionally, a study of the progression of the Australian experience of similar changes was developed through examination of the literature and interviews, particularly with QS academics. The Australian study was chosen because historically Australia has had a similar industry structure to that of England; Australia has also had comparable HE provision and has recently experienced similar changes to those currently affecting the English HE sector.

These considerations form the basis of a comparative analysis, which may point to the future development of professional education in England. Strategies will be proposed through reflection on the critical analysis carried out in the previous stages, and these strategies will form the basis of the Delphi process. The resultant consensus should point towards potential impacts of the White Paper on the provision of undergraduate QS education within England.

1.2 The outcome of the study

aims to develop an understanding of the resulting changes to the provision of undergraduate professional education in England, its curriculum, the types of demand and patterns of these demands, enabling programmes to be structured to accommodate professional education as a result of implementation of the White Paper's recommendations. This will be set in the context of the overall professional formation of chartered QSs in England.

1.3 The key questions are:

1. What is the potential impact of the government's White Paper on the provision of construction education? (KQ1)
2. How will the construction industry sector's key stakeholders react to the changes introduced by the government's White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor? (KQ2)
3. What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes? (KQ3)
4. What will be the strategies adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper 2011, and will they be seen as resulting in effective education and training for professional quantity surveying? (KQ4)

It is anticipated that a strategic response to the findings can be synthesised from responses by interested parties. The impact of cultural and social capital on the knowledge worker in the 21st century will add an extra dimension to the research. The uniqueness of the CI must be acknowledged; an important concept is that of the role of uncertainty. Contextually, for the study to achieve validity in this sector it needs to encompass uncertainty. To address uncertainty in the research the lens of critical realism is used to analyse findings. In addition to the social dimension of philosophy, the impact of politics and economics will

be reviewed. It is expected that the originality of the qualitative method of investigation, alongside the investigative tools employed, will add to the body of knowledge surrounding professional education.

To this end the following undertakings have been used as a method of establishing the context of the Key Questions:

A literature review of secondary sources and some preliminary pilot interviews to triangulate and identify issues that have not as yet entered the literature base was carried out to investigate the following topics:

- The current status of professional undergraduate education
- The ethos and culture of professional quantity surveying
- Influences on future professional education
- Proposed changes as a result of the White Paper on professional education
- The Australian experience of change in the HE system

The next phase was to consolidate the data gathered and seek stakeholder opinion with the objective of collecting primary information on KQ1 and KQ2. To this end interviews with key actors/stakeholders and experienced professionals in academia and industry were carried out; it was felt that interviews allowed a more flexible approach to questioning, giving more scope to the interviewee and interviewer to pursue emerging lines of enquiry. From this data-gathering session the interviews were analysed with the use of discourse analysis to identify stakeholders' thoughts and positions.

Running in parallel to the above was the development of a study of Australian quantity surveying programmes with regard to recent changes in the framework of HE and its subsequent effect on professional education; specific attention was paid to the formation of the professional QS at undergraduate level. Informed by a literature review and interviews with key players a study will be developed from the results of this data-gathering exercise. The purpose of this is to address KQ3.

Finally, to unify and achieve convergence of previously collected data, forecasts using collective intelligence through the Delphi Technique were made after seeking expert opinion on the changes that will result to professional quantity surveying courses in

England brought about by the recommendations of the White Paper; this will also help to evaluate the effectiveness of future strategies for the provision of professional education. From here the anticipated contributions to professional education knowledge will become transparent. This part of the research relates to KQ4.

The outcome of the Delphi exercise relating to the changes to QS education and training stemming from the White Paper in England was compared to that of the QS Australian study, reflecting experiences and observations concerning similarities and contrasts between the two. The Australian experience acts as a benchmark set within a similar context to that of England.

Whilst the focus is qualitative in nature it is supported by mixed methods to address the concerns of confidence, reliability and validity; this takes a form of triangulation as described by Jick (1973).

1.4 Data representation and analysis

In earlier work I have employed both discourse analysis (Creswell 2007) and a statistical analysis package (SPSS 2010), and would expect to use these methods again. I would anticipate the development of studies and the further use of narrative to investigate the interviews (Cohen, Manion and Morrison 2009) which would take place (Benz and Shapiro 1998). Drawing on the work of Miles and Huberman (1994) a realist approach will encompass mixed methods to give confidence to the qualitative nature of this phenomenon. There will be an emphasis upon quality of population rather than quantity. To analyse the data gathered the use of thematic analysis was employed as suggested by Brown and Clarke (2006); this employed a mix of a priori knowledge and the reiterative operation used by reflexivity (Hammersley 2013, Aleson and Skoldberg 2009). The basis of a priori knowledge was based around the concepts of PESTLE (Porter 1980) and then developed into themes through reflexivity.

The data set is both qualitative and quantitative in nature; the quantitative data is displayed through descriptive statistics and the qualitative through discourse analysis and thematic development. Both sets of data are employed to address the key questions raised.

1.5 Summary

In this first chapter there is argued a need to investigate a phenomena that has been identified by observation, whilst carrying out the daily activities of an academic in a post 92 Higher Education provider of vocationally focused undergraduate education. It can be cited that there is a flux occurring within the Higher Education sector with the application of the new White Paper in HE 2011. The interest in this policy is in how, if any, the provision of technocratic HE provision will be affected. Additionally, should there be an effect on the HE provision of technocratic education, what would be the best manner of handling this and would the Australian experience of the early 1990's be a benchmark to use. Lastly would all undergraduate provision experience the same pressures and outcomes? With this in mind, a particular focus upon the provision of vocational-facing undergraduate provision for quantity surveying has been adopted. The next chapter will examine the existing literature in order to provide a background to the purpose of universities, a review of how the profession of the Chartered QS came to be, and to identify important recent HE policy changes.

2 Chapter 2: LITERATURE REVIEW

2.1 Introduction

During the process of investigating the available data in the form of printed matter (Hart 2008), a systematic approach was adopted, firstly to widen the scope of the research and then later to narrow down the information into relevant manageable chunks. There were three main themes identified: instrumental, philosophical and societal and these can all be applied to the topic areas of education, profession and politics. Subsequently, the following areas were identified that would aid in collating data to help define the study:

- Current status of professional undergraduate education
- Professional quantity surveying ethos and culture
- Influences on future professional education
- Proposed changes as a result of the White Paper 2011 on professional education
- The Australian experience of change in the HE system

This chapter focuses upon certain topics and themes which aid in addressing the above stated areas of investigation. These topics are identified as politics, education, construction related education and societal impacts and relate to the researchers experience and the study's focus upon the White Paper.

2.2 Structure

The literature review has been divided into three sections – topics, themes and problem development.

2.3 Topics

Politics and development of policy

This enables an exploration of the politics of government with a particular focus on the White Paper and the relevant government educational policies which led to its publication in June 2011.

Perspectives on education

In this section an investigation was carried out into the background of HE (the university sector) and its historical development, especially focused upon a review of the debate

relating to generalist or specialist education and their place in the university sector. It is here that the type of accepted knowledge used in the HE sector and its recognition are discussed.

Provision of construction education

Here an investigation into the provision of professional education is undertaken and the discussion between strategic or technocratic education explored. In the course of research a historical review of documentation on the QS and the profession's emergence was carried out; a subsequent discussion on skills and competencies in the 21st century is produced.

Societal perspectives

Under this section the context of the English professional and the changes that have occurred between the 20th and 21st centuries is explored. Identification of English stakeholders in professional Quantity Surveying education is made, reviewing key players (including employers, industry, government and society in general) and their influence.

2.4 Themes

Instrumental

Within this heading the role of the White Paper 2011 is explored in terms of the provision in England for professional education in HE institutions. The rise of the phenomenon investigated in this study is sketched out and viewed through the impact upon the provision of professional quantity surveying undergraduate education.

Philosophical

Discussions of Bourdieu and Bhaskar in relation to power, cultural capital, complexity, the role of knowledge and beliefs are reviewed, with particular attention paid to the role of professional education.

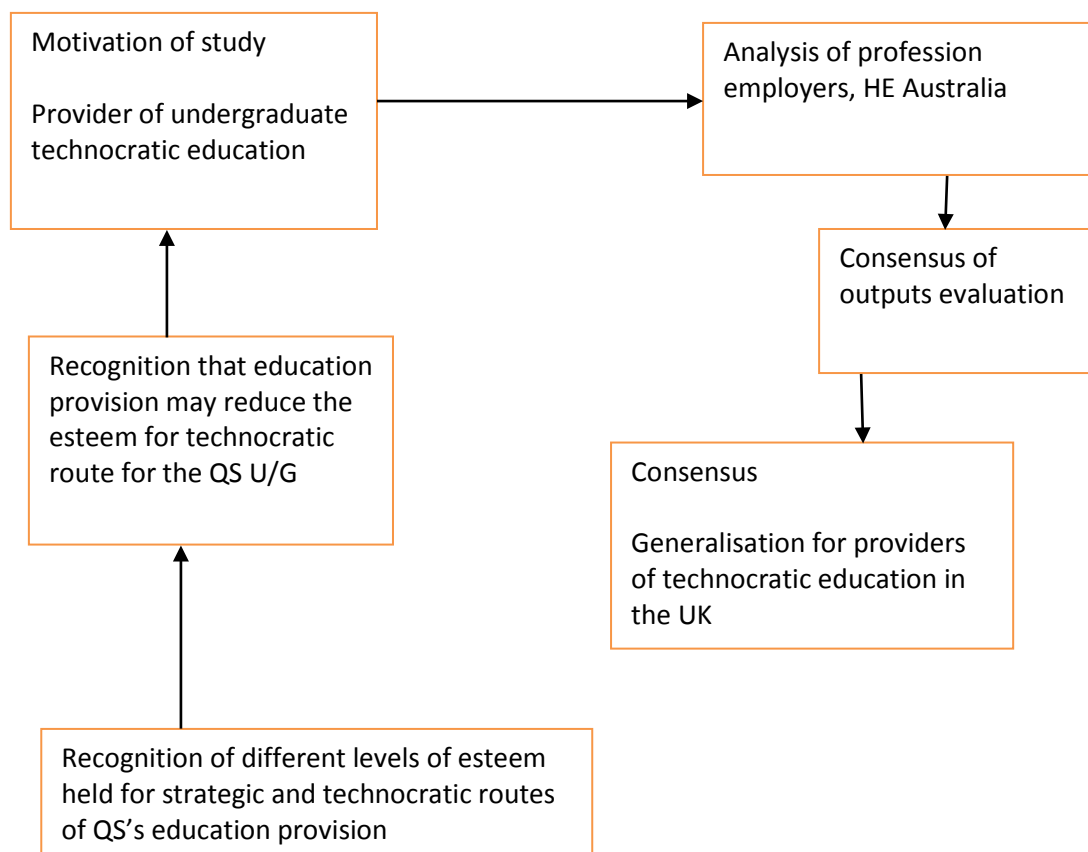
Society

A review was undertaken of the wider societal context of the 21st century in the UK and an assessment made of how past events have shaped the present, in particular legislation and the rise of neo-liberal values. The role of the global marketplace and its effect upon professionals and their subsequent educational needs was also investigated.

2.5 Development of problem to be investigated

HE is currently responding to the latest instalment of the move to commercialise the sector. There are in place a number of instruments which restrict the operation of the sector, through the Higher Education Funding Council for England (HEFCE) control over student numbers, the availability of funding and how the funding finds its way to universities. This change to a focus on the individual has taken the CI – including the quantity surveying sector – by surprise. There is also the creep of neo-liberalism which quantity surveying has yet to identify and marry to its traditional professional values. This is the area in which causality is to be investigated. The aim is to review the impact of the White Paper on professional undergraduate education provision using quantity surveying as an exemplar.

*Figure 1. Problem Development adopted from Evans 2013
Implication of the HE White Paper (BIS 2011): England*



2.6 Development of the Key Questions:

Note: given the constraints of the study the following Key Questions should be read in the context of England only.

“What is the potential impact of the White Paper 2011 on Higher Education and professional construction education, and more specifically professional quantity surveying in England?”

1. What is the potential impact of the government’s White Paper on the provision of professional construction education? (KQ1)
2. How will the construction industry sector’s key stakeholders react to the changes introduced by the government’s White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor? (KQ2)
3. What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes? (KQ3)
4. What will be the strategies adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper 2011, and will they be seen as resulting in effective education and training for professional quantity surveying? (KQ4)

2.7 Development of the objectives

1. Review the current status of professional undergraduate education in England in the construction sector. (O1)
2. Examine the professional ethos and culture of the professional QS in England and its key drivers. (O2)
3. Identify key influences on future professional education including knowledge and skills. (O3)
4. Investigate the impact of the proposed changes in the White Paper on undergraduate professional education and its provision in England. (O4)
5. Compare the present Australian quantity surveying undergraduate experience to that likely to result from changes that will emanate from the implementation of the White Paper recommendations. (O5)

6. Propose and evaluate future strategies for the provision of professional education that reflect these changes. (O6)

2.8 Search strategy

The following search engines were employed: Swetswise, isurv, Google Scholar and Google and iSurvUK a surveyors specific dataset. Research was also undertaken through the library resource centre online, the use of Athens to access databases and borrowing hard-copy texts through interlibrary loans and the British Library. Where it proved difficult to locate a particular paper cited in other papers, an email requesting a copy of the publication was sent to the main author.

The search terms used were: quantity surveying education, professional education, Higher Education, Universities, Critical Realism, Bourdieu, Cultural Capital, skills, competencies, government HE policy, and Australian funding changes. The published data identified using these search terms was interrogated for further sources from the references section and relevant items were duly followed up.

Initially, a time frame of ten years was set for this literature review; it was felt that this would capture the most relevant information. Whilst this approach brought the benefit of a timeline that was close in proximity to the phenomena actually being studied, there were difficulties in locating relevant texts and some sources originated well before the ten-year cut-off point. In most instances the sources were published in the 20th century, and the majority of the literature was originally written in English or in some cases translated by a recognised author into English. As quantity surveying is found in most countries that form the Commonwealth or were previously part of the Commonwealth, the favoured written language was English. The literature was systematically checked against an analytical framework as suggested by Rees (2003). This approach was used to satisfy the requirement to be critical of the sources and data being reviewed; this structure can be seen in Appendix E.

The search of the literature enabled a dichotomy of research methods to be identified, and it transpired that these differences were dependent upon the origin of the literature (Hart 2008). In professional education a qualitative approach was prevalent, whilst in papers

originating from the CI authors employed more empirical methods of gathering data ~~and~~ which tended to lean to the quantitative.

2.9 Overview of the literature

There is very little written material in the arena of quantity surveying education (Ashworth 1994, Seeley 1983), even on widening the scope to professional education within surveying or the CI; Tovey (1995), Tribe and Tribe (1995), QS Division RICS (1992), Construction Taskforce (1998), Atkinson (2003) Abudyyeh, Russell, Johnston and Rowings (2000) were consulted, but locating other publications proved difficult. The research for relevant literature was widened to include Schön (1983, 1987) and Eraut (1985, 1995, 2000) and to include knowledge and skills. The debate around the political and practical impact of the government's change in its stance on who benefits from HE and who should shoulder the financial burden is currently developing, with criticism from the anti neo-liberal camp (protection of the state university (Holmwood 2011, Universities UK 2011, Westwood 2013) and support from neo-liberal proponents (Cable 2011, Cable and Willis 2012, Ross 2011).

When focusing on the CI (CHOBE 2010, BEAR 2010) and the surveying sector there is very little discussion on the implementation of these educational changes (RICS 2011, 2012, Lees and Ashworth 2005). This lack of information prompted the need to investigate the surveying sector, and in particular the QS's view on changes to the HE sector and how quantity surveying will respond to those changes. This forms the basis of the claim to originality for this research.

2.10 Politics and development of policy: governmental views

Education has, since the 1960s, been state provided (Scott 1989), the essential purpose of which has been to aid economic development (OCED 2004). There has been an accepted wisdom (Ainsley 2004) that increasing access to education will provide growth (Dearing 1997); indeed Mandelson (DBIS 2009b) stresses the importance of education leading the UK out of the economic recession. The increased access policy of the Blair government (Williams 2009) resulted in a growth in the HE sector; it was proposed that 50 per cent of students capable and able to attend university should do so; to meet this demand for places a growth in investment was needed. Traditionally, the education provided by the HE sector was seen as meeting the state's expectations for economic growth and as a provider of engineers, doctors and other professionals. The novel idea of the knowledge economy (Bernstein 1998, Olssen and Peters 2005) has been developed where HE is viewed as

possessing its own economic value as a service industry. This is apparent in the DBIS (2010) where it is stressed that the role of the university sector is as a service sector and income generator of importance to the country. This importance of the UK service sector to the country was highlighted by Dr Posen of the Bank of England (Posen 2012) in a talk to universities. The term “university – knowledge economy nexus” was coined by Brady (2013). Critics such as Collini (2011), Kus (2006) and Swain (2010) recognise this approach to the HE sector as neo-liberal. The global economic market has defined the position of neo-liberalism as commercialisation of the global markets. Originally, the liberal school of economic thought within the UK arose from Adam Smith with his concept of the ‘invisible hand’ (1998) and the move to an industrial economy. Friedman and Friedman (1980) discusses monetarism and rejects outright the role of the state. From this stance Margaret Thatcher engineered her government policies, introducing concepts focused upon “the commercial” benefits, “the market” and “the economy” to drive through a political ideology. The term neo-liberal was attached to this economic ideology from this period, and it can be argued that it has been used to form policy around the public sector university system (Collini 2011, Swain 2011, Kus 2006, Ainley 2004). This market, should it exist, works in an imperfect manner and government instruments which are in place hinder the operation of a free market. An example would be that whilst opening up of competition to private providers is introduced in the White Paper 2011 but so too is the regulatory role of the HEFCE in quality of provision also the subsequent uncapping of student numbers, whilst opening up the places available for AAB students. Brown (2010) and Furedi (2011) refer to this as a quasi-market, and Ainsley (2004) suggests the use of the term “market state”.

2.11 Policy – White Paper 2011

The HE White Paper 2011 is popularly thought to have sprung from the Browne Report (Browne 2010), a review carried out in 2010. However, it is noticeable that the White Paper’s origins can be found in a number of earlier initiatives framed around the provision of HE in the UK, including the Dearing Report carried out in 1997 (Dearing 1997) under Prime Minister John Major. Subsequently, the recommendations of the Dearing Report were implemented by Tony Blair’s government in 1998 in the guise of the Teaching and Higher Education Act 1998 (HMSO 1998). There were several initiatives introduced by the 1998 Act, most noticeably the introduction of universal loans for all students; the

establishment of General Teaching Councils for England and Wales; and the introduction of time release for young students who study part time (DBIS 2011).

Figure 2.1 summarises the changes which have occurred since the 1990s.

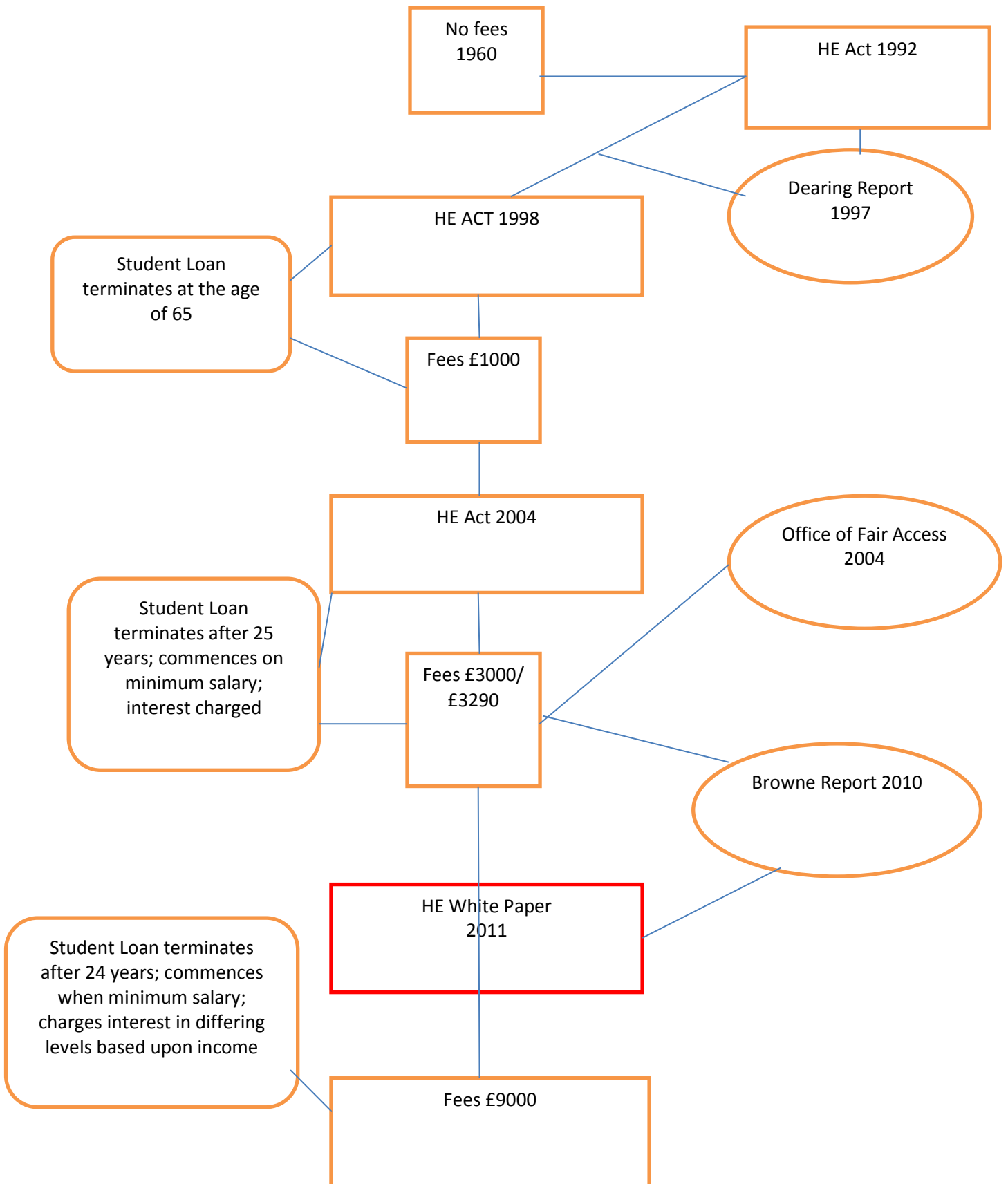


Figure 2.1 Flowchart of HE Acts in the UK from 1992

The background to the changes in the HE landscape has roots which stretch back to the 1960s (Scott 1998), but in relation to the recent past the more pertinent time period is that of the 1990s post-Thatcher period. It is from this period that the demands on the systems of HE morph to fit the present day political and ideological focus on the provision of HE. There has also been a move to consider the UK HE sector as a service industry competing in a global market as an economic asset for the UK (Mandelson 2009 BIS).

The aim as stated by Williams (2009) of the Labour government of the late 90s was to widen participation in the HE sector, by increasing the university-educated portion of the population. A growth in the student population of nearly 50 per cent occurred between 1985 and 2005 (Williams 2009), an increase from Scott's (1998) figures where from 1984 to 1995 the numbers grew in the UK from 14.6 to 27.8 per cent. The goal of enabling all potential students who were capable of attending HE to do so is still alleged to be at the centre of the Browne Report. This is reiterated by Vince Cable, the Secretary of State for Business, Innovation and Skills (2012) in an article defending the 2011 White Paper. Prior to this there had been a call by universities (Universities UK 2005; 2009) for funding to cover the sector's expansion that would be compatible with government's intention to focus on HE as an economic benefit to the state. It was under the Labour government of Tony Blair in 1998 that fees were first introduced and free education to all withdrawn, much to the dismay of some politicians, notably the then mayor of London, Ken Livingstone (Williams 2009), and the Liberal Democrats (Williams 2009) as a party.

The universities have argued (Dearing Report 1997) that an increase in financial support was required to achieve the objective of increased student numbers – mass education. The HE sector also argued that to stay competitive globally (Rammel 2005) there had to be increased investment. Both the Dearing Report and the government of the time recognised that funding needed to be procured, but it was *how* to fund the system that was the focus of the 2011 White Paper.

In 1998 fees became payable by the student within the English HE sector. At this time the universities set a maximum of £1000 per academic year allowed by the then Blair government and as proposed in the Dearing Report. Since 1997 three fee rises have been introduced; in 2004 the maximum fee was increased to £3000, a figure backed by the

Organisation for Economic Co-operation and Development (OECD 2004), and in 2010 the fee was capped at a maximum of £3290; as of 2011 this was increased to £9000 per year.

Both the HE sector and government advisers (Universities UK 2005, Driscoll 2003) acknowledged from the inception of the Dearing Report that more finance was needed to enable the sector to deliver education to a greater population of students in the coming decade. The focus at the time was on mass entry to the HE sector, but under the then new Conservative-led coalition government of 2009 there was a move to emphasise the marketisation of the sector (Brown and Carasso 2013).

In 2009 there were further calls for an increase in fees to meet financial deficits within the HE sector, fronted by Universities UK (2009) and backed by HEFCE (2009). The government initiated a new review in 2009 under the chairmanship of Lord Browne, which published in 2010 under the title *Students at the Heart of the HE System*. The Browne Report has faced most scrutiny around the noticeable change in emphasis to a deterministic approach to the provision of HE. A view that emerged from the Blair government's attitude to the role of the individual within HE is seen to reflect individual advantage (Williamson 2009). The Browne Report purports to give choice to the student but arguably, through various mechanisms such as costs and fees to be repaid, it actually imposes restrictions on choice (SU TES 2011). Debt tends to focus the future student on employment prospects rather than learning opportunities. Restrictions can also be seen in the present coalition government's implementation of the White Paper where restrictions are placed on some HE players through funding mechanisms, particularly the quota imposed on institutions can offer and to whom (Kulig 2012).

The Browne Report looked at a number of issues including the student experience and the funding structure (Mcguire 2012). Vince Cable (2010) emphasises that the student should be at the heart of HE and that this was the purpose of the White Paper. However, critics (Andrews 2011, Brown 2011) argue forcefully that the White Paper is a mechanism for changing the funding burden, enabling the transference of cost from the state to the individual (Holmwood 2011), something which may lead to social inequalities (Swain 2011). This view can be supported by the gradual creep of funding increases through the mechanism of fees after the initial introduction in 1998, as illustrated in Figure 2.1 above. There is an expectation that individuals will bear the financial burden in some form for the

their learning with the means tested fees introduced by David Blunkett, Secretary of State for Education and Employment 1997–2001. Williamson (2009) noted that from 1997 under the Labour government the focus changed from a moral responsibility for widening participation through legislation to an emphasis on a duty to pay for your own learning. The Browne Report supported this move, but surprisingly a cap of £9000 was the maximum fee charge set by the coalition government of 2012 – originally the Browne Report recommended no cap on fees but this was amended in the White Paper 2011.

In a recent article about student recruitment numbers in the HE sector (Morgan 2013), the figure were found to be varied and dependent on perceived rankings of institutions. This can be seen in the results of the post 92 universities in the +Million group, which were on average 12 per cent down. Institutions which are members of the Russell Group were seen to have had a net increase of three per cent in recruitment figures. These figures raise the possibility that the purpose of education may have changed, something that warrants further investigation.

Over the last 30 years the state-funded HE sector in England has acknowledged the presence of the HE market and that it competes on a global scale (Fanshawe 2011). The universities themselves have used this argument to secure funding and in so doing the sector has clearly and willingly entered a free market (*Daily Telegraph* 12 10 2010). Streeting (2009), the then National Union of Students president, has pointed out that a market-focused HE sector will see poorer students priced out. Interestingly, in recent years HE commentators and vice-chancellors have come to see HE as a commodity for sale in a marketplace (Streeting 2009). There was talk by Mandelson (DBIS 2009) that HE is now a source of international competition, and this position is presently backed by Cable (TES 2012) and is also described as a source of income from international markets (Plaitt 2009). This appears to be an accepted evolution of the HE sector as witnessed by the argument made by the Browne Report that funding has to increase for HE to remain competitive in the wider international market.

Another challenge identified by critics (Tlupova 2009, Andrews 2011, Ball 2007, Thompson and Bekhradia 2012) is the entrance of private providers of HE to the marketplace and their subsequent access to public funding. The withdrawal of state funding of mass education originating in the 1960s, resulted in a change in the role of the

individual in securing funding for HE studies. From this, economic, legal and political questions arise alongside moral and value-driven approaches to the current and future position of HE in England; the position is particularly acute with regard to undergraduate provision.

Reviewing the last 60 years of the history of the HE sector in England shows a state-controlled mechanism for mass education (Scott 1998, Ainley 2012) and state ownership of economic investment in the country. There is a recognition of knowledge advantage in statistics from the Organisation of Economic Co-operation and Development (OECD 2004) which show that there is a relationship between HE and economic performance of the country, albeit the impact is delayed. It has been suggested that the current financial structure introduced by the White Paper is driven by the fiscal needs of the country brought on by the financial and economic crisis that left the government bailing out most banking institutions. Collini (2010) identifies how the negative impact of the debt borne by the government was used in the recession to bring its political ideology into a strategy for managing the HE sector.

From an instrumental viewpoint the White Paper sets out to formalise and consolidate previous HE Acts. Its key purposes have been: to widen market participation within the HE sector; introduce new providers; and restructure the funding mechanism and increase social mobility. The White Paper has put in place a mechanism to facilitate the funding allocation framework until at least 2015. The main outcomes which have surfaced from this Paper, which has yet to be formalised in an Act, are the redefinition of the purpose of a university, internal competition and funding restructuring.

2.11.1 History of the White Paper 2011

2.11.1.1 History of white paper developments

Is the change to state controlled HE radical or has it been progressive?

Reengineering the finance involved in the HE sector has been progressive commencing in 1991, when under New Labour, fees were introduced alongside an expansion in the HE sector through “widening access” (Williams 2009). This has been evident through the universities clamour for more money to meet this demand and to expand the sector in line with world class provision (UUK 2008). At this present stage (2016) the emphasis had

been to increase individual responsibility and using the Private Financing model offload the public debt to the private sector by transferring the debt portfolio to the financial markets (BIS 2014). Therefore the present model is based on previous models employed by the Blairite government (1997-2010). The main difference is the size of government financial withdrawal from funding of students and the subsequent financial support to the HE institutions directly. Laying the debt squarely on the shoulders of the student, which is estimated to be in the area of £45000 for a three year undergraduate programme (2014). On reflection the focus of HE has progressively changed over the last two decades (see Figure 2.2)

2.11.1.2 Changes in the HE White Paper 2011

The HE White paper 2011 has introduced a radical reversal of government involvement in the provision of Higher Education within England. Some would refer to this provision of HE as essential to economic and social development of a country and its subsequent place in a global marketplace (OECD 2004, GuildHE 2012). The placing of Higher Education under the auspices of the Business, Innovation and Skills (BIS) indicates the political stance that envisages HE is a subset of the department for BIS. It has been suggested by Heap (2012) that the instrumental approach emphasized by the present coalition government is that of HE serving the economy and preparing students for employment. This Heap argues is counter to improvements for society at large, where there are activities that do not attract an immediate economic benefit but rather add to the community in a holistic manner.

Why the radical change? This radical change can be witnessed through the lens of ideological and political stances which are then augmented by politicians using an economic argument. The recent coalition government discusses the economy in terms of balancing the books in a manner similar to a household budget. This approach in a time of austerity, limits future investment in the economy, and whilst the government endorses the Robbins (1963) principles, where university places “should be available to all who were qualified for them by ability and attainment” these are “subject to expenditure constraints” (Heap 2012).

2.11.2 Government – ideology, politics and economic ideology

2.11.2.1 Ideology

The global economic market has defined the position of neo-liberalism as commercialisation of the global markets (Offer 2008, Olsen and Peters 2005). Originally, the liberal school of economic thought within the UK arose from Adam Smith with his concept of the 'invisible hand' (1776:1998) and the move to an industrial economy. Friedman and Friedman (1980) discuss monetarism and reject outright the role of the state. From this stance Margaret Thatcher engineered her government policies, introducing concepts focused upon *the commercial* benefits, *the market* and *the economy* to drive through a political ideology.

The term neo-liberal was attached to this economic ideology of the 1980's, and it can be argued that it has been used to form policy around the public sector university system (Collini 2011, Swain 2011, Kus 2006, Ainley 2004). This market, should it exist, works in an imperfect manner and government instruments which are in place hinder the operation of a free market. An example would be that whilst there is an opening up of competition to private providers introduced in the HE White Paper 2011 these would companies would compete in a market where most universities operate as a not for profit charity. Therefore private providers would not be subjected to the same legislation and financial restrictions. And a new role for regulation is in place for the Higher Education Funding Council for England (HEFCE) surrounding quality of provision of HE which is contradicted by the subsequent uncapping of student numbers in certain scenarios. The HE White paper 2011 has opened up the places available for AAB students to a capped level of 20000 student places, seen to be an uncapping of student quotas. These indicate a move towards marketization but with government control exerted on existing HE providers. Brown (2010) and Furedi (2011) refer to this as a quasi-market, and Ainley (2004) suggests the use of the term "market state" to describe the framework now in place.

The previous conservative faction of the UK government is following what can be described as a "Thatcherite approach" to governing the country and heavily endorses the privation of public goods and services. In this instance the provision of HE has been opened up to alternative providers. The movement towards a neoliberal approach to state expenditure has been apparent since the coalition government has been in power with a tendency to privatise state expenditure and services such as the previous student debt portfolio and possibly the new student debt portfolio (BIS response 2012). This ideological

approach is at odds with the initial introduction of a state controlled HE sector in the 1960's as described by Scott (1998). The focus upon elite universities and their traditional student types is very much evident in the works of GuildHE (2012) , Heap (2012), the Church of England Education Board (2012) and Ainsley (2004). The move to introduce fair access (Office of Fair Access, OFA) over that of widening access serves to further emphasize the present preference for elite traditional undergraduate programmes for bright 18 year olds.

A further indication of the ideology held by the present government was witnessed through the introduction of marketplace competition to the HE sector. This approach could be viewed as in line with the ideology of privatisation of a state provision. That the then coalition government had indicated, The HE sector will now enter the marketplace and support through the public purse and student fees mechanisms, private institutions, would be provided. Not solely those with charitable status but “for profit” institutions too. A point made by Heap (2012) which reinforces this observation, that claims of efficiency and economy are made but with little empirical evidence offered as proof of a benefit.

2.11.2.2 Political intention reflected in the rhetoric

The overall implications of the white paper has indicated a lack of willingness to invest in the HE sector, at the same time as acknowledging the increased costs necessary to invest and run a state controlled system (Browne report 2010) . There is a desire to improve standards and remain in the global marketplace for an HE product but these are “subject to expenditure constraints” (Heap 2012). Contradictions are apparent between state investment in a future generation and that of the present reductionist approach to the state expenditure. BIS sense that demand for HE will at present reduce naturally by 8% p.a. (BIS response 2012) indicating a shrinkage in demand for places. Placing higher education under the auspices of BIS indicates a political will to subjugate education to that of Business. This indicates that a belief in Business or commercial activities as the demand leader for education reflecting a neoliberal approach to the economy.

2.11.2.3 Economic stance underpinning the provision of HE

The changes proposed by BIS (2012) have certainly been at odds with core principle of putting students at the centre of the system. Processes such as the relaxation of AAB+ core and the introduction of 20000 margin places actively work against opening up the marketplace and can be seen to limit choice for students in the future as courses on offer

are reduced in number due to the exertion of market forces, such as *extra over costs*. It is feared that the diversity of different types of providers (GuilHE 2012) will narrow as the HE market sector shrinks and more elite institutions will expand due to relaxation on student numbers they are allowed to recruit. The economic principles behind this possible development is based upon that of *economies of scale*, but the processes employed to introduce this effect also indicates a preference for a traditional style applicable to a traditional programmes at an elite university.

The discussion and identification of student loans as a “student debt portfolio” and its subsequent rolling up and selling on to the money market reflects an approach to ensuring public expenditure has left the government accounts. This has been referred to as an “off book” accounting approach, favoured by recent UK governments.

The issues raised above reflect the political, ideological and economic influences on the HE system, but the regulations and their application to the HE sector should also be considered. There is also the specific relevance of the White Paper to the provision of Quantity Surveying education at undergraduate level. The main two points of Funding and Key performance Indicators are identified as holding the most impact upon the provision of technocratic education..

2.11.2.4 Funding

Funding for professional education is no longer in the majority taken from HEFCE full time students as there is now also part time funding available under the HE White Paper. Traditionally, part time study has been treated as an “extra over cost” based upon the full time undergraduate fees collected from the government. In this manner, the part time route and employers were indirectly subsidised. Typically a part time student would study five years and pay around 60% of the fee of a full time home student. When compared to full time overseas students this would reduce to about 20% (UoG, 2010). Under the HE 2012 White paper this has been revised and the flow of monies, follow the student and as such the fees for part time students now are on par to a home undergraduate student who undertakes a three programme of study.

These changes in financing of HE has implications for the funding sources for part time professional programmes, especially the employers of these types of students. Such employers have to firstly be informed and then select an approach which suits their business case. As the HE sector is struggling to come to terms with the implications of the

HE White Paper 2011 and the purpose that the coalition government has designed for HE through this instrumental approach, the question which emerges is whether or not employers of non-traditional students are aware of the changes and subsequent impact. Employers need to be aware of true costs for HE programmes, as in the past there has been a lower cost attributed to part time courses, mainly as the institutions do not know how to charge for the facility of part time education. This has changed as now each student brings with them the fees as if they were privately funding their studies. The HE White Paper 2011 offers funding of fees for part time studies and while payback commences at year 4 of a part time course, most are 5 years long. This exhibits a disconnect between funding and repayment of part time degrees and would indicate that a full time model is still considered as being the norm.

2.11.2.5 Key Information Statistics

When responding to Key Information Statistics (KIS) which have been put in place to map government specific outputs in HE, otherwise described as benchmarking, professional programmes do not fare well against more traditional programmes. Recruitment to the first year full time professional quantity surveying programmes from the UK is such an example. Most recruitment of undergraduate QS's will take place directly into second year and normally onto a part time route. The student typically will not have A level grades, instead having BTEC equivalence and be older than 20 years of age. The only KIS that records well for this type of programme is the employability criteria, however part time students are not included in this dataset at present. Overall the present data collection sets used to inform potential students of the quality of the programmes discriminates against this type of programme. It is apparent this is not a like for like comparative scale nor that this "one size fits all" approach is helpful in responding to the changes imposed.

Each of these issues will be addressed within the following section.

2.12 Universities: historical perspective

2.12.1 The role of higher education

Reviewing the literature (Newman 1835; 2013, Sanderson 1972, de Ridder-Symoens 1992, Scott 1998, Haskin 1923; 2002) on the rise of the university sector and the provision of HE, it becomes obvious there is a schism on what the purpose of HE should be. Most of the literature reviewed is based upon the European structure, and so contextually it can be

placed in a time and location and within a dominant philosophy – this can be categorised under the heading of the zeitgeist. Newman’s (1835) idealistic view of education for free men and women rather than for slaves, is one of the strongest arguments for liberal education. The other later argument is that education should fit the person for employment (Sneddon cited in Drost 1967, Dearing 1997, DBIS 2010); this view does not challenge Newman’s ideal but suggests an outcome giving credence to the causal relationship between the economy and knowledge.

Many scholars, including Dewey (1916a, b, c), Carr (1995) and Collini (2011), quote Newman’s ideal and form their arguments from this stance. This same ideal of liberal education forms the basis of the opposition to the neo-liberal approach to the provision of education in the university sector. This neo-liberal approach has been labelled the “university knowledge economy nexus” (Brady, 2013). However, the counter argument to a liberal education has a grounding in the history of what subjects were taught by universities. The main topics, as suggested by Haskin (1923; 2002), that were taught in the emergent universities of Europe were religion, rhetoric (philosophy), medicine and law, and a little later architecture. It follows that the origins of the university, its purpose and role should be investigated with a particular eye upon the role of professional education.

2.12.2 Purpose of education and the HE White Paper 2011

Surprisingly, the biggest disconnect between HE providers in all their forms and the HE White Paper 2011 is the purpose of education. Whilst HE representatives such as the GuildHE (2012) and the Church of England Education Board (2012) emphasis the UK’s need for a mass education system and widen access to all parts of society. Some would refer to this as egalitarian in approach as discussed in the Robbins Report (1963). The HE White Paper 2011 is focused upon a select “few traditional high achieving school leavers” (GuildHE 2012). The discussion on the White Paper has been based upon the present system of widening participation, where in a mass education system the traditional school leaver is marginally in the majority (52.6% HESA 2008/9). The focus of the HE White Paper 2011 and the subsequent implementation and monitoring systems installed, has on the whole ignored the non-traditional student. This is evident in the KIS selected as indicators of quality and information and as the source of future policy decisions.

2.12.3 The university and how it came to be

The Unversidaus (University) can be said to have its origins in the setting up of the oldest European universities of Bologna and Paris, both founded in about 1200. The physical presence of buildings, scholars and students as suggested by Milward (2006) is a definition which gives a solid grounding to its structural existence (de Ridder-Symoens 1992). But as defined by Haskins (1923, 2002) the purpose of a university is to exchange learning, the resulting end product is that the student should be able to act as a scholar. This view is supported by the presence of the *Licence* in the French HE sector where the licence to practise as a scholar is still conferred, hence the term *Licence* rather than its equivalent in the English system *Degree*. De Ridder-Symoens (1992), when referring to the Parisian example, suggests that a university is a guild of scholars and students, and then goes on to give examples of the way that a university need not necessarily be tied to a physical location.

2.12.4 European philosophical basis

knowledge is based on gathering ancient knowledge and the subsequent storage and access to that knowledge (Pedersen and North 1997). Politically and economically powerful individuals and organisations often control this knowledge, earlier examples being the king and the church. The philosophical (rhetorical) norms of the period also suggest the style of dissemination and of what is acceptable knowledge. Pedersen and North (1997) offer a timeline of the origins of the European university, based around a core idea of who controls the knowledge – that is, storing and disseminating it. Originally, the philosophical stance was the romantic version of Greek knowledge where the humanist philosophical approach was developed by Aristotle and Socrates. Mostly this knowledge was not written down at the time but was captured later in written form, Greek society at the time relying upon spoken narrative for dissemination. These teachings were collected in part by the Romans who were also reliant upon the oral tradition of those such as Pliny the Elder (23–79 AD). Following on from this was the Christian, pluralist view of a higher authority. Pedersen and North (1997) note that the same information is now viewed differently by the humanist and the pluralist. The Christian church took on the role of collector of existing and ancient knowledge from Greek and Roman archives. To these sources it added Arabic knowledge (such as mathematics). This knowledge has come to be rewritten through the philosophical lens of the pluralist. Pedersen and North (1997) have suggested that this was an impoverished era for knowledge where the pool was small and no new knowledge was added. The essential use for knowledge by the Christian church, as highlighted by St

Augustine, was to educate and train monks to spread Christianity, and the establishment of schools to teach languages; thus it will be seen that religion was paramount in this period of history and adopted a pluralist stance. There is no mention of universities as such in this period of time, only schools.

As the second millennium advanced there was a recognition by the isecularl power – the king and then subsequently the state – of the economic advantage of hosting universities (Haskins 1923) (2002). Protection was afforded to scholars and students which allowed the two schools of thought, humanist and pluralist, to continue as the main lens through which knowledge was interrogated and passed on (de Ridder-Symoens 1992). Subsequently, within the UK the universities of Oxford and Cambridge emerged, institutions based upon religious grounds and hence pluralist in nature, but which were able to offer knowledge and learning without a profession in mind (Rothblatt 1997); as Rothblatt describes, this constituted an elite social experience. With the arrival of the industrial revolution and the rise of middle-class industrialists, the state became increasingly involved with the HE sector. At this point in time there was a move to replace the church and pluralist views with a secular education (Young 1992). This is most evident in the setting up of the University of London as a secular institution, brought about in the main by Jeremy Bentham (Young 1992). It replaced church with state and introduced a Unitarian philosophy which undertakes science and exploration. Milward (2006) suggests that the science and exploration approach facilitates the discovery of knowledge under the surface, whilst the humanistic approach uses observation and adopts a surface approach to knowledge. The context at this juncture in time is that of the emergence of the scientific-empirical approach to knowledge gathering and development. To meet the needs of the industrial revolution, experiments and inventions were rewarded, and investigation and new knowledge was developed through research located in universities. The universities were recognised as seats of learning (Milward 2006, Collini 2011, Young 1992) and places for the discovery of truth (Rothblatt 1997), from which they produced specialist knowledge. There is cultural capital embedded within the HE sector, and it can also be argued that “knowledge as economic nexus” has been apparent alongside the development of the university sector from the 18th century onwards. Newman (The National Institute for Newman Studies 2007) now enters the discussion with a well-thought-out plea for liberal education; indeed it is very difficult to defend the view which argues against the virtue of freedom and the freedom of learning proposed by Newman where he suggests the

education of the person as a whole. This argument is directly opposed to state-controlled Unitarian functions as the prescribed route for knowledge, where there is a set menu of knowledge rather than the à la carte version (Rothblatt 1997).

2.12.5 The role of the university

Rothblatt (1997) states that universities find truth and are places where universal knowledge is taught. Milward (2006) contends that universities are not only seats of learning but also places of growth where research underpins the specialised knowledge enshrined within. Collini (2011) describes the university as a place to conserve, understand and extend intellectual, artistic and scientific heritage. These aims are in synchronisation with Milward's (2006) aims of a university which are to gather and produce knowledge and to pass these onto the students through learning. Milward makes the assumption that only theoretical knowledge is gathered and taught in the university sectors, a point contested by Carter (1985), Schön (1983) and Eraut (2000). In fact, Haskins (1923) updated by Lewis (2002) and de Ridder-Symoens (1992), provides a historical narrative of the original European use of universities in the last millennium which was to educate professionals such as doctors, lawyers and the clergy. Additionally, Pedersen and North (1997) discuss the role of a university as one of exchange of knowledge; the knowledge itself has been salvaged, copied and taught and this forms the exchange from master to student. The difference that the HE sector now brings, Milward (2006), Collini (2011) and Scott (1998) suggest, is the production of new knowledge through research. The question is now raised as to how this knowledge is produced and legitimised? Theory and practice, it is argued by Carter (1995) and Eraut (2000), are juxtaposed in a modern university. Lewis (2002) – through Haskins' texts – has chosen to show that very little has changed in the university or HE sector; there is, he suggests, a cyclical pattern to the subjects taught, the manner of teaching and how this learning is acknowledged.

The economic purpose of a university cannot be ignored, and there is substantial literature on the creep of neo-liberalism and market economics within the university sector (Plait 2009, Brown 2010, Furedi 2011, Brady 2013, Brown and Carasso 2013). It is easy to ignore the fact that until the 1960s within the UK, entry to the HE sector was for an elite and was on the whole privately paid for. The state therefore took steps to provide free places to study at universities in the HE sector; this was seen as a democratic entitlement

(Scott 1998). Scott suggests that there was an acknowledgment through the post-industrial period that there was a link between attendance at universities and economic and social well-being; indeed this view is further supported by the statistical data issued by the European Social Research Council (ESRC, 2004). Scott has also argued that the European university has had its greatest age in the last 60 years, with increased numbers of students attending institutions, a view discussed in the section on policy implementation. Due to the emerging importance of the *knowledge society* (where knowledge itself has intrinsic economic value) rather than being a service industry which specialises in knowledge with economic benefits to the society surrounding, the university – described as traditional and stable (Scott 1998) and the purveyor of truth (Rothblatt 1997) – will have to change in a postmodern age. The role of globalism in a postmodern economic system has underpinned changes in the HE sector (Scott 1998). Collini (2011), Scott (1998) and Rothblatt (1997) all believe the HE sector to be in flux in the 21st century, an unstable situation brought about through state instrumentalism and the rise of individualism. From these points research into the change to the provision of professional Quantity Surveying undergraduate provision was formed and KQ1 and KQ2 generated.

KQ1 What is the potential impact of the government’s White Paper on the provision of construction education?

KQ2 How will the Construction Industry sector key stakeholders react to the changes introduced by the government’s White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor?

2.12.6 Types of education: generalist or specialist

2.12.6.1 Knowledge types – general

A key question was asked by Robert Lynd (1936) – “*Knowledge of what?*”; this debate was taken up by Eraut (1984, 1995, 2000), Schön (1983, 1998) and Carter (1985), where emphasis is placed on different types of knowledge gathering. They argue that beyond the Aristotelian stance on knowledge, there is a purpose to knowledge and judgements made as to the value of this knowledge. In the present system Eraut (2000) refers to the development of knowledge as normally classed in three headings: codified, published and public; he then argues that there is also knowledge derived from practice.

What is missing from this argument is the context of such knowledge. Who are the recipients of this knowledge and how do they learn? The exchange of knowledge cannot be passive, it must involve some learning. How this exchange is managed is of importance as “one size does not fit all”; this is widely noted as there is a great awareness of different types of learners (Redmond 2009) and their needs. Therefore Lynd’s question can be added to, becoming “*Knowledge of what and for whom?*” Eraut (1995) suggests that acquisition of knowledge can take explicit and implicit forms. Carter (1995) joins this debate and argues that legitimate knowledge not only occurs in the HE sector but also in the workplace. There are barriers to this knowledge exchange which can be impervious; theory can be produced in a form unsuitable for application by practice, and vice versa for professional knowledge and academia. The HE sector treads a fine line between differentiating knowledge it deems fit to disseminate and developing new knowledge (Carter 1985). Different types of learner, the skills and knowledge sets that these learners bring to the exchange at degree level are often not acknowledged by the HE sector. There are many theoretical publications around this subject, but in an ironical mirroring of life, these theories are often not transmittable or applicable to the process of teaching within the sector. The purpose of education is a thorny subject, but as seen in the earlier section the debate can be divided into two camps: for general knowledge – generalist; or for employment – specialist. In the UK there is a blurring of these two positions with the Newman (2007) argument being the favoured purpose – a liberal education for the sons and daughters of free men. This is a very emotive sentiment, and one that at the present time is constrained by political and economic forces of the neo-liberal market, discussed in the section above. In the vocational education market sector of HE the main emphasis is on employment and the provision of professional education; this is discussed in the next section.

2.12.6.2 Types of specialist knowledge

Knowledge is an important currency in the professions: it is what they use to sell expertise and services (Tovey 1995, Bourdieu 1973, Schön 1985). Knowledge is also what differentiates one professional from another (Downie 1990, Hanlon 1998, Fong and Choi 2009), and it is this differentiation that is much in demand by clients (Chan et al 2002). The differentiation of knowledge and hence service offered, is afforded a market advantage to those professional bodies which offer a conservative style of service (Jarvis

1986, Simpson 2010a); for the purposes of this study the Royal Institution of Chartered Surveyors was considered.

Knowledge in the HE setting is traditionally viewed through the lens of learning and the acquisition of prescribed knowledge. Carter (1985) suggests that knowledge is traditionally recognised as “wholly cognitive” within this context. He does go on to argue that there are three different types of knowledge: there is experiential and factual knowledge and these two facilitate the third – social development. It is the combination of the three levels of knowledge which is essential for the operation of professional practice as suggested by Carter. Eraut (1985) endorses this and discusses the cross-fertilization of knowledge between practice employed by the professional and theory used by academia.

Knowledge in the professional context can be viewed as professional and codified (Goldthorpe 1982), and further to this Eraut (2000) adds that the nature of this knowledge can be implicit and explicit. The discussions around competencies which address the explicit nature of certain knowledge have been addressed in a previous section. It is the manner in which society rewards the implicit nature (Chan et al 2002, Bowen, Cattell, Distiller and Edwards 2008, Simpson 2011) of the professional surveyor’s knowledge. It appears clients value the personal tailored service rather than a standard one-size-fits-all approach. Eraut (1985, 2000) introduces the concept of tacit knowledge where learning is realised through doing, watching and listening, without the conscious effort to acquire. This may be the value of experience, or as described as a holistic approach, which has no formal guide to measure the learning acquired. There is a drive to make implicit knowledge as explicit as possible to enable interrogation and measurement (Carter 1985, Schön 1983, Hoxley 2000). Ellis (1995) discusses this transformation of action-based learning into measurable competencies and expresses a desire to demystify the route to professional knowledge. This can be seen as a neo-liberal attempt to open the marketplace (Offer 2008, Olssen and Peters 2005), or as a idea of cultural capital and in particular symbolic violence (Bourdieu 1993). The main drivers in this arena are political, ensuring more transparency and accountability within the professions, and thus reflecting the political will of the neo-liberal concept of education to fit graduates for the market.

In the above review of professional knowledge it becomes apparent that there is a debate over the style of education to be offered; there is the liberal education approach proposed

by Tan (2003), Atkinson (2003) and Dewey (1916), and the vocational education route highlighted by Carr (1996) and Garrison (1996). This debate needs to be reviewed anew by reflecting upon the political implications of a neo-liberal approach to the provision of professional education within the HE sector. Bourdieu (1979) might have referred to the implementation of the White Paper in the terms of symbolic violence, and Bhaskar (1978) may have referred to it as a generative mechanism which has triggered a social phenomenon. Thus the debate gives rise to the following key question:

KQ1 What is the potential impact of the government’s White Paper on the provision of construction education?

2.13 Provision of construction education

CI professional education

Most literature on the provision of construction professional education is centred on the older more established professions of architecture and engineering. These professions have long formed a programme of education and training, with undergraduate programmes and extensive pupillage, indenture periods (Nethercot 1999) followed by a professional examination or later professional assessment (RIBA 2013, ICE 2013). These educational requirements and training periods have also been adopted in the profession of surveying (RICS 2013d). These are the same requirements as in Table 2.1.

Table 2.1 RICS professional examinations

Quantity Surveying educational structure Pre-1980	Quantity Surveying educational structure Present 2010
Indenture, professional training Test of professional competence	Academic test (undergraduate or postgraduate degree) Structured professional experience Assessment of professional competence

A review of professional construction education in non-English speaking countries such as China (Chan, Chan Scott, and Chan 2002, Shirong 2001) and Japan (Tan 2003) found educational systems which echo the UK professional educational approach. In Japan there has historically been a similar approach to the Oxbridge system of elite education. Where there is a stratification of elite intellectuals who are first educated and then trained, the UK

system has in the last part of the 20th century adopted this form of HE provision for professional education. Atkinson (2003) notes this trend in regards to QS education; he refers to this as a division between cognate and non-cognate degree holders (Simpson 2011). Following Bourdieu's proposal that there is a difference in education for wealthier students, Atkinson (2003) proposes that there will be a trend to educate for self-fulfilment. This exhibits an intrinsic value of education, for future benefit rather than extrinsic value and immediate benefit, say in the workplace. However, Atkinson has only looked at the educational routes offered in the traditional full-time manner and has not recognised the impact upon the majority of students who study part time. Here then KQ2 arises:

KQ2 How will the Construction Industry sector key stakeholders react to the changes introduced by the government's White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor?

In the region of 20 QS undergraduate degree courses in England (RICS 2013) are offered in part-time mode; there is a grouping of students who study part time and are financed by their employers rather than wholly by the state or themselves. The White Paper has moved the financial burden completely onto the shoulders of the individual students and hence to the employer if the student is sponsored.

2.13.1 Professional education – what is a profession?

A professional within the context of the UK is a person who supplies a service at a standard that society can rely upon. This can be seen, for example, in the legal system with a "Duty of Care" used as standard for professional duties, and a recognition of professionalism by both the Crown, which may grant a charter, and the government which holds a list of those recognised (BIS 2013). Hanlon (1998) describes the professional as a service class with duties to uphold the public interest by applying accurate judgements based upon knowledge, skills, expertise and experience. Downie (1990) concurs with this stance discussing professionals in terms of service providers. Goldthorpe (1982) defines the service class as homogenous and conservative in their approach. Thus the discussion in the 20th century largely focused upon professionals and professionalism. In the late 20th century and early 21st century, however, there has been increased fragmentation of the professional class due to increasing pressures of commercialisation, itself due to neo-liberal creep. Within this research the term neo-liberal creep could be used to describe the

encroachment of the neo-liberal political stance on ways of life and subsequent workings. Neo-liberalism has been identified as an extreme form of monetarism developed by the state to deregulate markets (Offer 2008, Olsen and Peters 2005). The politics of the state are advanced through the use of terms such as accountability, transparency and value for money as shown by the publication issued by the Committee on Standards in Public Life (Nolan Report, 1995). Poon (2006) and Pheng and Ming (1997) argue that professional standards have been affected by the demands of the 21st century, changing further the professional. Evans (2007) describes a new form of professionalism – demanded, prescribed and enacted. Evans feels that there is a schism occurring between the received wisdom of the professional (demanded) and the expectations of society (prescribed) and the commercial reality of the delivery of what the client wants (enacted). Goldthorpe (1982) discusses the poor performance, practices and operation of a closed professional shop. The criticism made by Gartner (1970) is of elitism, monopoly, class bias and restrictive practices, a stance that might be supported by Bourdieu (2008). There is a market advantage to the professional which is attained through the use of professional ethics, integrity, duty of care and knowledge. The profession will have commonalities as described by Downie (1990) – five years of training, a set of ethics, an annual conference, provision of professional supervision, qualifications and a set disciplinary code. Nethercot (1999) would add within the UK a form of accreditation; in this study of Qs that would take the form of the Charter granted by the Crown. The knowledge required is specialised in nature to fulfil the requirements of the title of professional within the UK. The construct of that knowledge can be investigated from different angles; there is specialist knowledge and skill sets, and generalist knowledge and skill sets. These are looked at in other sections.

2.13.2 Education – strategic and technocratic

This study has focused upon the professional education of the Chartered QS, and has followed the educational route which ends in professional accreditation; this can be viewed as technocratic in nature (Simpson 2011). The work of the Chartered QS has been classed as a profession (Simpson 2010a, RICS 2013, DTi 2009).

In other sectors of professional education provision, such as teaching (Clifford and Guthrie 1990) and healthcare (Flores-Mateo and Argiman 2007, Forsetlund et al 2012), there is a plethora of publications, but within the world of the surveyor the literature is

very limited especially in the category of professional education. The issues around the provision of vocational (work specific) education within the HE structure of universities are similar to all professional education, even 100 years after the first professional teaching courses were introduced. The fit of technocratic education within the HE sector has been debated ever since Henry Newman published his papers on the purpose of education to educate free men and women or to educate slaves (Newman 1865). The debate takes form again in the USA between Dewey (1916; 1980) and Sneddon (as cited in Drost 1967), and in the UK by Tan (2003), Tovey (1995) and Tribe and Tribe (1995).

There has been a lengthy debate on the purpose of professional education (Dewey 1916, Lodge 1947, Atkins 2003, Carr 1995, Garrison 1995), and the notion of strategic education for future use or education for work. What is evident is that professional education struggles with the notions of an applied education rather than the generalist or strategic approach to knowledge. Professional education sits uneasily within the HE sector (Clifford and Guthrie 1998) and it seems at odds to the professed purpose of universities (Rothblatt 1997, Milward 2006). Garrison (1995) explains that Dewey believed that education should be differentiated but training should be left with the trainer and education should take the form of the generalist approach.

In the 20th century the rise of professional education provision can be plotted against political will and the economic demands of society at given times (Carr 1995, Garrison 1995, Dewey 1916). The role of the QS changes to suit the demands of society (see the following section), and the educational route has subsequently reflected this over time. The QS educational route sits firmly within the technocratic camp, however, mirroring the UK HE sector of the late 20th century and early 21st century in which there is an amalgam of technocratic and generalist educational routes adopted to reach the chartered status of the QS. Arising from this amalgam is an inherent bias to differentiation which can be seen as class differentiation (Bourdieu 1973, 1983, 2001) where there is a perceived difference in status and work opportunities. This point is of interest to this study and has given rise to KQ4:

KQ4 What strategies will be adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about

by the White Paper, and will they result in effective education and training for professional QSs?

2.14 The surveyor and the profession's historical context

In this section some context will be given to the QS through an examination of the historical development of the role, its discipline and business environment. An explanation of the roles undertaken by the QS will indicate the nature and diversity of the profession. The route to membership of a chartered profession will be mapped, and an example of the rise of a UK-based profession shown.

2.14.1 Historical context

2.14.1.1.1 Evolution of the QS

Surveyors, set in the context of mainland Britain, have been evident through their works since the 11th century, when William the Conqueror ordered the drawing up of the Domesday book in 1086 (CGP, 2013). There are earlier indications of the use of surveying equipment and tools in Greece and Rome (Lewis, 2004). Lewis also alludes to the use of surveying equipment in Egypt as does the Royal Institution of Chartered Surveyors (RICS 2013a; our members). However, by referring to Vitruvius a Roman architect, Lewis (2001) has introduced the concept of the surveyor in Britain during the Roman period. This is commonly attested by the straight roads of the Roman settlers – Watling Street and Ermin Street, for example.

In the period after the Romans left Britain there was little evidence of the surveyor, and it was not until the arrival of the Normans in 1066 that the impact of surveying manifests itself in the Domesday Book. Domesday was compiled 20 years after the invasion of England with the purpose of acting as the basis for raising taxes. The work centred on the recording and measuring of land and built assets – a cornerstone of the surveyor's work. The greatest interest of the Domesday Book is that it measures and records all levels of English society, and as such it is one of the most important documents from medieval England.

The Domesday Book records a rural society where agriculture played a central role. As the centuries passed society changed from one based upon peasants and the feudal system to a system based upon economic exchange. After the plagues of the 14th and 15th centuries (CPG, 2013) the old system could not be sustained due to the shortage of labour that these

events caused, and the villeins as feudal tenants became free men who paid rent. The surveyor had a central role in the measuring and valuation of these arrangements (Thompson 1968). This work was to be the main income for the surveyor in Britain until the end of the 17th century. North (2010) highlights the role of the surveyor in the reign of Henry VIII during the dissolution of the monasteries and the acquisition of land and assets by the Crown, a role which was reprised after the Civil War when Crown land and assets were sold on behalf of the state.

Throughout these events the development of theory and the practice of the professional surveyor can be seen as evolving through a practical approach due to changes in the economic systems of the times.

2.14.1.1.2 Out of the ashes

The Great Fire of London occurred in 1666 and started in a bakery on Pudding Lane in the City. The Fire raged for three days and destroyed the old Roman walled city and resulted in much rebuilding. There were, however, economic and legal problems arising from the Fire that had to be solved before rebuilding could take place; the issues of who owned what land and where needed to be addressed. The introduction of a Fire Court between 1667 and 1672 enabled construction to commence. In a relatively short period of time the Court ruled on who should rebuild and who would bear the cost; this was based on the ability to pay (Thompson 1968).

After the Fire the many designers, such as Christopher Wren and John Evelyn, put forward ideas for a city plan. Whilst none of these plans were adopted, new styles of design and building were introduced. St Paul's Cathedral was one of the first buildings to be built in the now normal style of foundations first, before walls and then roof; essentially, the footprint of a building is set first. As Thompson (1968) suggests Inigo Jones pioneered the process of designing the building completely before commencing construction.

These events can be seen to herald the beginning of the role of the surveyor as developing together with associated theory and practice. Further evidence for this development is provided by the publication of two textbooks around the practice of surveying: the first by Thomas Clay – *Treatise of Valuations* in 1653 and then the *Faithfull Surveyor* in 1658 cited by North (2010).

2.14.1.1.3 Construction methods change

Faced with a massive building programme in the aftermath of the Great Fire and compounded by new construction methods, increasingly complex construction began to appear. Writers suggest that “measure and value” as a method of procuring construction work was evident just before the Great Fire (Thompson, 1968, Cartlidge 2006). This manner of working was to procure trades and then measure and value the works that they undertook. Prior to this method of payment Thompson (1968) suggests that the client simply bought the materials, land, labour and finance. With these changes a new level of complexity was introduced requiring an understanding of the trade charge for construction and the value of what was produced. There was a requirement to manage, monitor and value the work of the trades associated with the building. It is from this set of circumstances that a role for surveying the quantities and valuing the work arose; later the architect devolved these roles of measuring, quantifying, procuring and valuing the construction works to an individual identified as the QS (North 2010).

2.14.1.1.4 The QS is evident

Thompson (1968) suggests that the role of measurer was apparent from the early 18th century and alludes to texts such as *The Compleat Measurer* by William Hawney (1717) and *Marrow* by Mandey's (*circa* 1727). In the aftermath of the building works carried out in the City of London, there was a quieter period in construction works until the outbreak of the Revolutionary Wars in 1793. Under the supervision of the Barrack Office, a government department, large-scale construction of accommodation for the military was commenced (Thompson 1968, Cartlidge 2006, North 2010). It is here that we find strong evidence of the surveyor's role in measuring, costing and procuring the construction projects. This evidence is cited by Thompson (1968) and is taken from 1806 Parliamentary Papers concerning a public *Commissioners of Military Enquiry, 4th report 1806/7146,299,301,305*. Interestingly enough, the investigation was into value for money in the construction of these barracks.

2.14.1.1.5 Construction organisations change

It is in the 19th century that the role of the builder changes from individual tradesman to builders or contractors. These newly styled builders agreed to carry out building works in

their entirety and the subletting of works to other tradesmen fell under their remit. This style of contracting was called “contracting in gross” (Thompson 1968, Cartlidge 2006; 2013). Until the end of the 20th century this was the prevalent method of securing a construction project. As the method of procuring a building changed so too did the manner in which it was measured and costed.

2.14.1.1.6 Architect–Surveyor

During this time the role of the surveyor evolved and expanded; measuring the works in situ for fair payment continued but estimating costs and materials to be procured when “contracting in gross” also became part of the job. It is at this point in time that there was recognition of the Architect–Surveyors who fulfilled these duties. Mostly they were employed by client bodies, such as government departments. A key event in the division of architecture and surveying was the awarding of the new design for Parliament to Charles Barry in 1836 (Thompson 1968); Barry used the services of the surveyor Henry Hunt to produce the estimate. Barry is cited in Thompson (1968) as stating that it was not unusual for architects not to be involved with the costing of building elements. The documentary evidence mentions bills of quantities, used in particular for the construction of a grammar school in Birmingham and from which pricing practice, the cost of the new Parliament building was estimated.

The Architect–Surveyor (a predecessor to the QS) grew in importance and assumed a professional role in the Victorian period, a process fuelled in particular by the demand for housing by the newly expanding middle classes (North 2010). However, a schism between Architects and Architect–Surveyors occurred with the arrival of the Royal Institution of British Architects (RIBA) in 1834. Architects in the UK had to be full members of RIBA. The title is protected by charter. RIBA made the decision to expel any member who measured, valued or estimated works to be undertaken by a building contractor, and it was at this point that QSs divorced themselves from architects and turned to join other surveying professionals in amalgamating into a distinct surveying profession.

2.14.1.2 The founding of the Royal Institution of Chartered Surveyors

The RICS is very specific about how the wide and diverse roles of surveyors were drawn together during the industrial period of the 19th century and subsequently reinforced in the

urbanisation of the 20th century (RICS 2013a – our members) into a single entity. The institution itself was founded in London in 1868 and received its charter in 1881, prior to that it was the Surveyors Club established in 1792 (RICS 2013b – History and Mandate). In the subsequent expulsion from the RIBA many Architect–Surveyors found a home with these other surveyors within the RICS.

The ideals that the institution adopted were as cited in North (2010; 26) Building a Name:

“1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of surveyor, vis the art of determining the value of all description of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of admeasuring and delineating the physical features of the earth.

2. To promote the general interests of the profession and (3) to maintain and extend its usefulness for the public advantage.”

During the Victorian era and on through the Edwardian period the British Empire expanded globally and the role of the surveyor was employed in these events mainly through the Government Office of Valuation that was part of the Inland Revenue. Around the period of World War One (WW1) surveyors were mentioned in a number of Statutory Acts – the Finance Act 1910 and the Defence of the Realm (Acquisition of Land) Act 1916 as cited by North (2010, 53).

Once the Royal Charter was granted in 1881 the institution’s ideals were rewritten with its main objective as follows:

“To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a surveyor, to promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.” (Cited in North 2010, 32)

2.14.1.2.1 The QS in the post-WW2 period

The period immediately after WW2 witnessed a revolutionary change in the role of the state in the provision of health, education and housing. This was brought about through

growing unrest throughout the 20th century with poverty in the United Kingdom (The National Archives 2013). The impact of the *Beveridge Report* (HMSO 1942) was far reaching in the post-war period with the introduction of the Welfare State. The National Insurance Act 1946 (HMSO 1946) and the subsequent National Health Service (NHS) Act 1948 (HMSO 1948) changed the shape of health provision with the emphasis transferred from the individual to the state. The 1944 Education Act (HSMO 1944) introduced compulsory education to age 15 and provided free secondary education. The provision of council housing started with the introduction of the Town and Country Planning Act of 1947 (North 2010, Thompson 1968); 300,000 new homes were to be built and owned by councils. Prior to that, the New Towns Act 1946 (North 2010, Thompson 1968) had authorised the construction of new towns such as Welwyn Garden City and Stevenage. A grand construction programme was initiated to provide the facilities to support these Acts of Parliament. The role of the QS re-emerges in the subsequent period as auditor, forecaster and procurer of construction projects, perhaps most importantly monitoring value for money that was a requirement imposed by Parliament for any state expenditure. To underpin this mammoth swing in post-war Britain towards a more involved state, Keynesian economic policies emerged (Hillebrandt 2000, Myers 2004), most evident in the nationalisation of transport and energy sectors. The Marshall Aid policy of 1948 employed the principals of Keynes when it was perceived that the then government needed to intervene to make the UK market work under the capitalist system (Open University 2012). The arrival of the Welfare State brought together Keynesian values and a large investment programme in state-supplied services. This in turn demanded a large and sustained construction programme for the UK.

2.14.1.2.2 The CI and quantity surveying

From the middle to the end of the 20th century, the CI saw a boost in activity and the function of the QS expanded into a variety of roles undertaken on behalf of the state in the construction of housing, healthcare facilities and education (usually schools). Where there is state investment there is a requirement for accountability. This can take the form of value for money (Seeley 1983) or economic efficiency and effectiveness (Simpson and Dye 2009). The QS measures the actual works for auditing purposes, but new methods such as changes in technology add to the set of professional knowledge and holistic

practices. Thus ensuring that acquisition of construction know how and the involvement of innovation in design and construction is facilitated.

2.14.1.3 Global impact and quantity surveying

Quantity Surveying is not a well known or a universal profession (Ashworth 1994). In Europe it has made inroads since the entry into Europe by the UK; however, whilst the name and profession were not known the duties were carried out by different construction-related professionals as explained by various Construction Industry Research Information Association (CIRIA) country reports published in the late 1980s. The profession is well known in countries previously under colonial rule and here the profession flourishes (North 2010). RICS discusses its global relations and highlights the role of the surveyor within economies (RICS 2013d). China at present has shown an interest in the practices of the UK CI and in particular the processes of procurement and costing of construction projects (Lee 2012).

Construction is seen by a number of developing and emerging economies as pivotal to competing on the world stage. Investment in infrastructure and welfare facilities attracts interest from foreign investors and banks. In a modern 21st century climate the cost and acquisition of these built assets requires monitoring and it is here that Qs are employed. Acting as an independent agent the principle of *fair valuation* is employed; as described by RICS (2007) the current principles guiding the profession are:

“RICS is an independent professional body originally established in the UK by Royal Charter. Since 1868, RICS has been committed to setting and upholding the highest standards of excellence and integrity – providing impartial, authoritative advice on key issues affecting businesses and society.”

2.14.2 What is a QS?

The main competencies outlined by the RICS (2010 QS competencies) for its chartered QS members are to cost and procure the built asset. In breaking down these two points there are activities which will aid the QS in carrying out these competencies: measuring, forecasting, valuing and procuring (Seeley 1983, Ashworth 1994, Cartlidge 2013).

Reassigning these activities to subject knowledge areas there is a need to know about, in the context of construction, technology, law and economics. To supplement this knowledge a set of particular skills is required – communication, interpersonal, critical appraisal and problem solving (Simpson 2010a). It becomes apparent that over the last millennium the surveyor has evolved and morphed in terms of the services offered; the driving factor is that it is a service which is offered for a price. In the transformation of the QS to the professional the emphasis began to change to one of public servant, and, as Simpson (2010b) suggests, this is a service class. This process began at the start of the 20th century for the QS. Post-WW2 there was a focus on the state as provider and so the role of the QS turned to that of public servant ensuring accountability to taxpayers. Post-Margaret Thatcher's run as prime minister in the 1980s the majority of the QS's workload in the UK came from the private client (Ferry and Brandon, 1991). Subsequently, the style of work produced focuses on that of professionalism and some might argue 'professionalist' (Simpson 2010b).

2.14.2.1 The educational pathway to quantity surveying

Following on from the section about the arrival and subsequent development of the QS and their role as a professional some consideration of education and training can be undertaken. The learning of the surveyor was undertaken at the master's knee, often in the form of an indenture or articles, the process whereby the family would pay the employer to educate and train the person – a method used for many centuries (Thompson 1968). Thompson states that after a period of time the employer would agree that the said employee had reached a level of expertise, and this would suffice to practise the trade. Once the charter was in place examinations set by the institution were required to meet the requirements of the charter. The first professional institution exams were set in 1881, and once the exams were passed the status of chartered surveyor could be granted. This status of chartered surveyor was soon a requirement for promotion, or to work within government bodies including the armed forces (North 2010). The social mix that entered the profession of surveying was still largely upper middle class and the RICS actively supported educational courses with scholarships based in Oxford and Cambridge that focused on agriculture, forestry and economics. These scholarships were provided at undergraduate and postgraduate level. In 1900 the professional examination introduced another level of specialist examination for those who had passed the general exam; these

special diploma examinations were divided into five areas of specialist knowledge: forestry, rating, land surveying, agricultural valuations and sanitary science (North 2010). In 1919 two educational initiatives were undertaken: a full-time undergraduate degree at Cambridge University commenced (this can be considered strategic education (Garrison 1995)), and the College of Estate Management was launched attracting institutional support – this can be considered a technocratic educational route (Garrison 1995). During the 1970's the RICS introduced an additional step for degree holders to gain full membership, this was a Test of Practical Competence (TPC). The graduate had to undertake a period of training then sit a 48 hour open book exam. In 1993 there was a move away from examination of technical knowledge and the introduction of testing of competencies in the professional entry examination, known as the Assessment of Professional Competency (APC). Undergraduate degrees, which were accredited but delivered by HE institutions, are now the norm; this system was mainly driven by administrative choices and the increase of student and graduate members of the RICS. By this time entry to the RICS training programmes, APC and chartered status was at graduate level only, and was driven by the need to reduce the expense of administering a professional education route. In the 1990s there was a surge in postgraduate entry to the Quantity Surveying training route (Atkins 2003) by non-cognate degree holders (Simpson 2011), with conversion courses or accredited postgraduate degrees which on successful completion enable the training period (normally of two years) to be recognised and entry granted to the APC.

In this section the history and evolving role of the QS has been explained and illustrated, which has gone some way to explaining the fundamental nature of the QS, although a single definition is difficult to identify, as witnessed by a speech given by the Duke of York in 1928 about the mysterious activities of the surveyor: the surveyor “touches the life of the public at innumerable points, more perhaps than the lawyer or the doctor ... He is, in fact, almost with us from cradle to grave” (cited in North (2010, 59). The education of the surveyor has followed a training and educational path, something which is at the centre of the debate surrounding educate for general purposes (Newman 1835, Dewey 1935) and education for employment (Sneddon cited in Carr 1995). At times the profession has exhibited a positional dichotomy on the issue of education, and this moves the research on to ask what will be the future preferred educational pathway.

It can be argued that the philosophical view of Bourdieu can be used to analyse the role of the professional surveyor, especially the topic of capital. The use of the professions in habitus, field and power can be engaged to view the role of education of the QS. The use of capital in the forms identified by Bourdieu – particularly cultural capital and the use of symbolic violence – seem particularly relevant to the role of the professional QS.

At this point KQ2 may be raised:

KQ2 How will the Construction Industry sector key stakeholders react to the changes introduced by the government's White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor?

2.14.2.2 Competencies and skills

In a previous section there was a discussion about knowledge, the forms it takes and the nature of professional knowledge with an emphasis on explicit and implicit knowledge as explained by Eraut (2000), Fong and Choi (2009) who add non-formal and deliberative knowledge to Downie (1990) expression of the advantage of professional knowledge. The majority of the educational publications within the CI focus upon the hard, technical skills and knowledge that is the currency (Bourdieu 1993) of the professional in the workplace. An overview of similar professions such as accounting (Tribe and Tribe 1995) and law (Hanlon 1998) reflects a similar approach to educational discourse. It is not surprising that these professions favour quantitative approaches to research as numeracy is valued in these professions. The publications can be divided into four subdivisions: skills, knowledge, education and competencies. In this section skills and competencies will be discussed.

Skills comprise the ability to carry out tasks well (*Oxford English Dictionary* 2013), and in this case specific skills are used to carry out quantity surveying works. Professional skills can be classified as generic or specific, as suggested by O'Donnell, Karallis and Sandelands (2008). There is evidence that the literature splits, with the RICS (1992), Poon (2006) and Eraut (2000) emphasising specific skills, whilst a general view on employability and personal skills is proposed by Willkie and Giddy (2003), Doidge, Parnell and Parsons (2000). Evidence of skills for quantity surveying is gathered from the Quality Assurance Agency (QAA 2008) benchmark statement publication on *Property, Construction and Surveying*; interestingly within this document there is an emphasis upon a mix of skills, both generic and specific. The RICS refers to specific surveying skills in

the term competencies (APC Assessment Guide 2013), similar to the description used in National Vocational Qualifications (NVQ), where the measure of success is on a pass/fail result and can do or cannot do activities. These are identified by Ellis (1995) as action-based competencies, highly visible actions which are either successful or not. Generic skills within the realm of construction professional education are described by Doidge et al (2008) as communication skills, dialogue and presentation. The RICS views these skills as basic level 1 competencies alongside customer care, people skills and ethics. These skills are recognised as distinct from technical skills but there is an awareness of the requirement for composite skills (RICS 1992). Generic skills, as highlighted by Eraut (2000), which are relevant to the profession of surveying are analysis, appraisal, communication, documentation, evaluation, management, quantification and synthesis. These are reflected within the QAA document published in 2008, where it is argued that skills are necessary in both generic and specific forms to successfully underpin the education of a quantity surveying undergraduate.

2.14.3 Societal perspectives: demands upon professionals

2.14.3.1 Demands on professionals in the 20th century

Historically the QS has strived to establish the discipline as a profession, with the associated public standing of a recognised professional and acknowledged expertise (North 2010, Simpson 2010). These works are classified as services and the other associated professions in the sector of construction are civil engineering and architecture. The common basis of these professions is that they are members of the service class and follow their founders' footsteps in adopting a conservative approach of providing services to society as described by Goldthorpe (1982). In 1881 the RICS obtained its charter and undertook to self-regulate the profession of surveying by policing entry to the profession and regulating the practice of its members, thus producing a homogenous grouping (Goldthorpe 1982). A Victorian paternalistic approach was dominant, as seen in the ideals advanced by Clutton and cited by North (2010, 26): "We ought to have a proper regard for our profession, and the society to which we belong." This traditionally conservative stance of knowing better and therefore instructing those who didn't know, had been expected by society; society was – and is – reliant upon those who know disclosing information for the good of society. Winston Churchill suggested as cited by North (2010, 53) that "a love of

justice and equity and a firm resolve to deal with every issue on its true merits without fear, favour or affection, are inseparable from the rightful discharge of a surveyor's duty." The service class as defined by Hanlon (1998) exhibits a duty and upholds the public interest by applying accurate judgements based upon knowledge, skills, expertise and experience.

Derived from this stance of the professional are expectations of integrity, independence and expert knowledge (Simpson 2010). Standards of behaviour have been imposed through the mechanism of self-regulation. Arguably, this can result in the employment of cultural capital as symbolic violence, acting as an impervious barrier to movement for the social grouping of the profession. Another view, introduced by the economists known as monetarists (Friedman and Friedman 1980), is that of restrictive practices employed by professional groups which work against the free market mechanism. This view was particularly prevalent in the 1980s under the then Prime Minister Margaret Thatcher, whose government introduced legislation to increase competition (CCT 1987) CCT was subsequently replaced by New Labour in 1999 under the Best Value Act. The emphasis in this act was to look at economy, efficiency and effectiveness rather than solely focus on initial costs. ; these measures applied to professional tendering. What became apparent in the end of the 20th century is that the basis of a 19th century professional struggled to meet its ideals in the commercialised economy of the emergent 21st century. The neo-liberal commercialisation of the market results in the commercialisation of the professional. There is a move away from the self-regulation of the professions to legislative regulation. The aforementioned CCT (HMSO 1987), which affects the principles of the best service for the particular client and contract, will not change between expert professionals in that field. The enforcement in law of the duty of care of the surveyor to the public is made explicit in Merritt versus Babcock (HoL 2002) which resulted in case law. The use of legislation and the law is undermining the profession's ability to self-regulate its members.

2.14.4 Demands upon the 21st century professional

2.14.4.1 Changes in 20th century provision and 21st century provision

There is dichotomy between the traditional conservative approach of independence of the professional surveyor and the legal, legislative and political manifestations which aim to

control this service class. This economic and political aspect of neo-liberalism is at odds with the service class and its expectations to act with independence, integrity and for the benefit of society as a whole.

In the early 21st century the demands on the quantity surveying professional are now reflected in an instrumental manner through external regulation, but oddly the expectations of society still hark back to yesteryear. Quantity surveying professionals are valued for their training, ethics, professional judgement and their ability to add value to the construction process (Simpson 2010). Some of the major challenges to the QS are the constraints of accountability, transparency and explicitness of learning whilst the value of the service is found in delivering expert advice and professional judgement in a tailored approach for each client's needs (Chan et al 2002). The global market has opened up opportunities and challenges for the QS; there has been an increase in client demand for standardisation of quality, increased innovation and the explicit management of risk. There is also increased competition particularly around the provision of expert knowledge in this global marketplace.

2.14.5 Stakeholders views – employers, industry, government, society in general

In the past QSs identified their duties in three ways: duty of care to client, to employers and employees, and to society in general. A wider view of the profession's stakeholders now follows as interested parties who may be affected by the works and advice given by the QS. Thus under the general heading of duty of care, there are employers, clients, industry, government, society in general and other third parties such as future users or owners. To cover these stakeholders legislation has been extended to ensure the rights of these parties, an example would be the Rights of Third Party Act 1998. This is a clear case of the external regulation exerted upon the professional classes. There is a creep of control through legislation, the demand of explicit processes and requirements of transparency which work against the implicit (Eraut 2000), holistic (Schön 1978) expertise employed by the professional QS.

The professional quantity surveying ethos and its culture have evolved over the last two centuries, but there is now a clear disjuncture between the commercial demands of the 21st century and those of the late 19th century. Society has moved away from the paternalistic

approach to that of the neo-liberal “the client is always right” position, but the guiding principles of the profession remain the same – to act as a servant class (Simpson 2010b).

2.15 Community of practice

Chartered quantity surveyors come together to provide a homogenous service which is differentiated from other providers of similar services by an umbrella organisation and a set of adopted practices. These adopted practices have been formalised into a charter to which all chartered surveyors sign up to (symbolic capital). The overall gain is that a certain quality level is offered to the public as a whole and is expressed as a minimum standard of service to be delivered. In addition to the visible agreement of a charter there is evidence of invisible agreement to cooperate; these can be identified as communities of practice (CoP). A definition is given by Etienne Wenger-Traynor (2007; 1): “Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.” CoPs are places where activity happens in the form of problem solving, asking for assistance and exploring others’ experiential learning to adapt to similar issues. There are three levels on which a CoP operates: the shared space – the *domain* where experience is valued and shared; the *community* where interaction occurs between members; and the *practice* where over time stories, experiences and tools are shared (Lave and Wenger 1991). The CoP uses interaction to seek to learn from each other in a practical way and employs informal learning techniques to resolve identified issues.

Chartered surveyors could be identified as a CoP, where the members identify problems to be solved and then set about gathering experiences and generating solutions to issues raised. In this study this can be seen in the impact of the HE White Paper on the provision of chartered quantity surveying undergraduate education. The party with the most experience and tools to solve the problem are elevated to the role of master – in this scenario this will be the academics. The informal learning that occurs is not explicit but carries with it social capital and is captured for the benefit of the grouping (Wenger 1998).

2.16 Instrumental themes – instrumental impacts

The use of instruments by government through formal statutory instruments and through external agencies is investigated in this section. In the earlier section of this chapter the evolution of the White Paper was plotted and the emergence of legislation impacting on the present HE sector covered. The enforcement of the policy document is reviewed and this will examine the quality control systems that have developed and are implemented in the universities operating in England presently. In particular the focus will be on the vocational undergraduate providers.

2.16.1 Vocational programmes

There are three types of institutional bodies which have influence over the quality standards offered at university level on vocational-facing degrees. Using a classification system taken from Harvey (2002) seven such bodies are identified and classified (See Table 2.2 below). Harvey's system uses three classification terms: Independent, Statutory and Non-Statutory. Independent in this study is classified as a QUANGO operating in the UK and across Europe; Statutory institutions normally take the form of professional bodies; and Non-Statutory institutions are those universities that employ self-regulation procedures and those that are sector-wide regulating bodies.

Table 2.2 Classification system for quality standards used on RICS-accredited undergraduate programmes – Adapted from Harvey (2002)

Independent	Statutory	Non-Statutory
HEFCE Higher Education Funding Council for England	RICS Royal Institution of Chartered Surveyors	UUK Universities UK
QAA Quality Assurance Agency for Higher Education		GuildHE Standing Conference of Principals
ENQA European Network Quality Agency		HEA Higher Education Academy

From the 1960s the UK government was the biggest funder of the HE sector, and to fulfil a requirement for accountability quality was measured. Currently, the outputs from the Quality Assurance Agency for Higher Education (QAA) are the main mechanisms the government uses as measures of quality. The QAA uses eight levels of national descriptor

levels (Kinchington 2009) which are very similar to the model adopted by the European Parliament Council in 2008. The purpose of the European Parliament was to develop a pan-European framework for qualifications (EQF). The model developed attempted to satisfy the Bologna Requirements 1998, where transparency, visibility and comparability were key benchmarks across European HE (The Danish Evaluation Institute 2003). Quality assurance is undertaken by the European Network Quality Agency (ENQA). HEFCE (2009) produced a study on the future arrangements of quality assurance in England, and some of its findings were echoed in the HE White Paper. These bodies have been classified as Independent when applying Harvey's descriptions.

Under Harvey's Statutory classification, professional bodies such as the RICS were included in Table 2.2. This method of quality control is mainly implemented through the use of accreditation agreements bestowed upon universities through partnerships if they offer a range of programmes to be accredited or giving accreditation solely to specific undergraduate degree programmes. These bodies bring with them an additional dimension in a global approach to benchmarking vocational undergraduate education. A number of degrees are accredited overseas in countries such as Australia, Malaysia, Hong Kong and other members of the Commonwealth, but also in China and the USA. An issue raised by research carried out by Ashworth (CEBE 2007) is the prescriptive nature of the Statutory bodies' accreditation process and the subsequent impact upon the curricula. The Centre of Excellence for the Built Environment counter this with the suggestion that most respondents to their research believed there was sufficient width in this process to enable diversity within the undergraduate programmes offered. There is an issue of possible conflict raised by Hargreave and Moore (2000) who suggest that it is impossible to achieve an objective style of measurement which is based upon an approach favouring technical rationality.

The third classification of internal university auditing as suggested by Harvey is that of Non-Statutory bodies. Self-regulation is achieved through the use of the external examiners. It is normal practice to employ the experience of other academics outside the awarding institutions to regulate the standards of the awards delivered (Editorial 1998, MacBeath and Moos 2009). One definition by Harvey (2009) assumes the examiner is a person from another institution who monitors fairness and academic standards; this is adequate as a description but misses the use of the professional practitioner as an external

monitor. There has been a move within the education system to apply more accountability to the process of higher education and the subsequent awarding of degree classifications. Frazer (1998) states strongly that accountability is an absolute condition to enable autonomous behaviour in a university. He goes on to say that this accountability must include three parties: government, student and the labour market (industry). An external examiner brings with them experience of other institutional practices, developments in the sphere of education and an area of expertise, all of which add to the value of the degree programme. Additionally, there is a further advantage from this process which is the ability to maintain standards across the sector. This is facilitated by interviewing students, sampling scripts and student works; subsequently a report is produced, discussing findings and recommendations to teaching staff and the university and expressed as the external examiner's personal findings. Noticeably this takes the form of a subjective measurement. By applying the professional practice experience, using professional bodies' representatives, one of Frazer's concerns about accountability to the marketplace is addressed. There are the additional benefits of the knowledge and expertise that the external examiner can bring to the programme of study. There needs to be present within the institution an openness and willingness to exchange knowledge and expertise, and an overriding commitment to students.

There appears from this investigation to be a complex layer of requirements focused upon quality measures applied to the university sector. There is the changing educational ideology of the government, operating within the European model; a professional curriculum which operates in a global context; and a self-regulating benchmarking approach taken by the universities operating in the UK. In sum, this research describes a complex set of instrumental demands placed upon the provision of a QS undergraduate degree within England.

2.16.2 Philosophical theme

Professional Chartered Qs occupy a position within the CI and a position as a chartered professional in society. There are behavioural patterns which can be identified that would be ideal to study through the lens of Bourdieu and the cultural capital employed within a profession. The semi-pervious barriers which surround the chartered professional are played out in the educational route. Subsequently, the levels of knowledge and skills required and personal traits that are identified as necessary to belong to this professional grouping, can all be examined from the perspective of Bourdieu.

A key characteristic of the CI is uncertainty; risk and change are unavoidable factors in this sector, and critical realism can be used to examine them. This is a valid approach when viewing a construction process where changes occur, ideas are formed and facts must pass through peoples' perceptions to be applied to a project. This pathway is creative and often operates at the higher level of problem solving (Blooms taxonomy 2002). Within the CI the discussion of uncertainty is central to the entire building process. Bhaskar (1978) discusses these issues of facts, known, unknown and the context constructed at a particular time and can be applied to the study.

2.17 Bourdieu

2.17.1 Introduction

'Wha's like us?' (Auld Scots 'who is like us?')

In this section the possibility of employing the theories of the French intellectual Pierre Bourdieu is investigated, within research on professional undergraduate educational provision and its relationship with the White Paper. Bourdieu's ideas portray a dynamic model of how society works at differing levels, most of which are subconscious, or seem to be. How people tend to congregate around an idea, a way of being or a set of values. They are not theories of exact logic or factual outcomes and reflect the messiness that is a social world outside the laboratory (Bourdieu 1987, Thorley 2008).

2.17.2 Economics of Bourdieu

Bourdieu had an interest in economics (Bourdieu 1985) and expressed this in his interpretation of society. He felt that although capital is understood in the Western world as economic – property and money – there is little explanation for people's actual behaviour. The premise seems to say that people's choices and their expected economic decisions do not always match. Bourdieu concludes a wider definition of capital must be proposed:

“It is impossible to account for the structure and functioning of the social world unless one reintroduces capital in all its forms and not solely in the one form recognised by economic theory.” (Bourdieu 1983; 242)

His proposal is that capital is actually made up of four strands – economic, social, cultural and symbolic. However, this is not all that is necessary to observe human practice; in alignment with Bourdieu’s idea of an empirical investigation there is also the freedom of the individual. Reflecting the economic ideal of dealing with probabilities when using empirical data around human activities, an individual’s choice of action cannot be second guessed but the propensity for a certain set of behaviours or choices can be predicted. An example would be a fact about road deaths, giving statistical information on the occurrence but not being able to say who exactly will be involved, where and when.

Bourdieu suggests that economic probabilities do occur, but on further investigation more details surrounding a person may influence their behaviours and choices, and here he suggests the ‘field’ (Bourdieu 1993). The field is a physical position in time and place which also gives context to relationships. An example would be a child of the 1960s in the UK who would have a generational flavour unlike other age groupings. In addition to the field, he also introduces the concept of habitus – how we live, walk, talk and who we are. Indeed the socio-economic class and forms of social relations that exist and surround us give rise to products and processes that we will engage in.

To explain further Bourdieu’s (1986) attachment to empirical data he produced an analytical framework which takes the form of an equation:

$$[(\text{habitus})(\text{capita})] + \text{field} = \text{practice}$$

It is this prediction of practice which is of interest to most social investigations, the ability to predict a human outcome; otherwise why collate data? Bourdieu insisted that this was never the case for an individual, as all humans have the capacity for choice, but it may indicate a prevalent behaviour of a grouping of people.

2.17.3 Distinction

Bourdieu produced his most famous work *Distinction* in 1984; it uses taste as an example of class bias. Practice is an idea of core interest to this study; it can be tied into Bourdieu’s concept of taste. The other strand of Bourdieu’s thought to be utilised in this study is that of capital in all its guises: social, economic, cultural and symbolic. Economic capital is the

most easily quantified in material and mostly solid form – money, cars, houses, clothes and so on. This form of capital is most visible in the developed and globalised world as the output from the industrialisation of the Western world. There is an acknowledgement of social capital, and in addition cultural capital, such as good taste in art, which can be embodied, objectified and also institutionalised. So good taste can be defined in what you wear, eat, desire, and this can be recognised outwardly and internally thereby producing distinctions.

Distinctions are at the very heart of Bourdieueian practice (1984), and may indeed give rise to individualism and also membership of certain groupings. Who is like us? On three planes Bourdieu’s work aligns with this study: capital, power and reflexivity.

2.17.4 Capital

Bourdieu agrees that all people struggle to attain power and that the use of all forms of capital can contribute towards this state of being. There is evidence of conflict and power in current Western societies. The differentiation of power can be witnessed in wealth or culture which is in a more pleasant manner described as distinction. Why pay more for one particular person’s time than another? Loic Wacquant (2008) suggests this is a form of materialist anthropology and introduces the idea of symbolic violence.

2.17.5 Power

Professional practice within the UK shows prevalence towards two types of capital – social and symbolic. This can be evidenced in the form of the professions, charters and education particularly HE. Power as described by Bourdieu can be overt or take the more prevalent invisible form of expectations and the agreement to these expectations. These two forms of capital are shown in Bourdieu’s formula mentioned above, and they can be reconfigured in the following way to relate to this research.

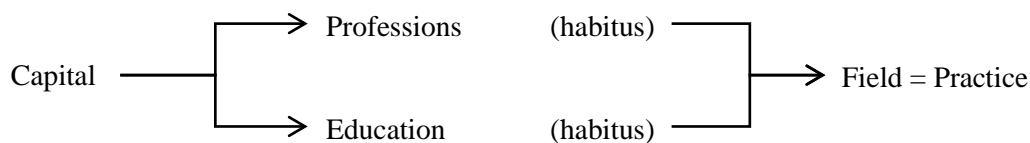


Figure 2.2 Bourdieu’s analytical framework of capital – Adapted

2.17.6 Reflexivity

Based upon the above formula, the reflexive approach is adapted to the issues surrounding the provision of professional education, and is based upon the role of social and symbolic capital and examined in a multi-layered analysis using a critical realist approach. Bourdieu's background is based in sociology but heavily reliant upon empirical evidence; he can be seen to belong to the school of thought that reflects structuralism. Bourdieu generates the idea of structures within a structure and then invites us to be reflexive in studying the concept and applying it to the social world. It is this social, peopled world that is of interest in this research. Logic does not aid us in this investigation as there are historical influences and cultural impacts which are hidden from the eye. Thus making a problem which taken purely at face value shows a half revealed and partially investigated piece of research. This is where reflexivity plays an important part in exposing other reasons and undercurrents not visible to the naked eye.

2.17.7 Some problems with Bourdieu's stance

A possible problem with Bourdieu's line of thinking when applied to UK-based research is that it belongs to another culture. Bourdieu's own nation, France, has a very different history, a legal system which is based upon Napoleonic codified laws and a cultural view of the middle class as the "bourgeoisie" – symbolising the oppression of the working classes. This research is located in England, and also addresses the provision of professional class education, in Bourdieu's terms education of the bourgeoisie. Politics then, plays a substantial part in the theories surrounding Bourdieu work. However, to round the square, the focus in the later years of Bourdieu's work was the creep of neo-liberalisation. This he saw as the enemy of the working class. It is also viewed by this researcher as the enemy of the professional class (Simpson 2010). The later focus on the rise of the economic form of neo-liberalism is a rallying cry which provides a basis from which to study the effects of the subsequent political changes. In this research the focus of this political change will be the introduction of the HE White Paper 2011.

Another issue of concern to this researcher is that all of Bourdieu's works were originally in French and this study is reliant on English translations, which are one step removed from the original source. Even relying on the original source material, the French use of vocabulary is often more extreme than the more reserved English style of describing the same issues. The use of the word *violence* would be such an example. Underlying this is

the ironic problem of “lost in translation”. Bourdieu uses economics as a sociologist employing empirical data to view society’s mores. He is considered to follow the structuralist school of thought emphasising the constructivist ideal. He is very much a French socialist; in later years he declared support for the workers and trade unions (Wolfrey 2000).

This work studies education with an emphasis on professional education within England. Politically the context employed is liberal, with strong Victorian overtones of paternalism. The study uses an interpretative approach to reach consensus of a future. In common with Bourdieu, this study identifies the effects of neo-liberal politics and the use of capital other than economic to explain the phenomena observed and the purpose of reflexivity employed to analyse the data.

2.18 Critical realism

Bhaskar has written upon the theory of critical realism and it is a sensible and pragmatic manner in which to analyse the data gathered for this study. His main point of interest and use to this study is based around a method of employing reflexivity.

Critical realism is an approach proposed by Bhaskar (1978) in his seminal text *Realist Theory of Science*, and reflects further on the journey made from positivist to post-positivist. Bhaskar added to this line of thought that causal outcomes cannot be absolute when dealing with humans, because we cannot see everything, reality is imperfectly apprehensible. The crux of this line of thought is that “what is” does not necessarily equal “what is known” (Concise Routledge 2000). Bhaskar contends that in the context of human beings, the sum of society is greater than the individual parts. Alvesson and Skoldberg (2009) classify this ability to express the relationship of the whole and the part as *synecdoche*. To Alvesson and Skoldberg critical realism offers a third manner of viewing data in systems such as politics and ideology in a *lifeworld* (2009). Critical realism has many different interpretations as discussed by Maxwell (2012); there is, however, a basic similarity as all reject the notion that there is any certain knowledge of the world. They also agree, according to Maxwell, that there are different possibilities of viewing phenomena and that “all knowledge is partial, incomplete and fallible”. It is from this basis of acknowledging that activities can happen without human input, but that human knowledge of the events can occur, that this ontology has been adopted as a basis

for this research. It is clear that three main ideas are proposed by Bhaskar, the epistemic fallacy, closed and open systems and the three domains of knowing in which activities occur.

The importance of the *epistemic fallacy* as described by Bhaskar is reflected in the design of the research undertaken here, as the subject being investigated should be central in this choice of design. The *epistemic fallacy* (IACR 2013) is centred on the nature of the object being investigated; rather than the traditional approach of the epistemology influencing the design of the investigation, the subject should take the lead role in this design. As cited by Maxwell (2012; 8) Frazer and Lacy have said “even if one is a realist at the ontological level, one could be an epistemological interpretivist Our knowledge of the real world is inevitably interpretive and provisional rather than straightforwardly representational” (1995; 182). There then follows, as stated by Bhaskar (Archer et al 1998), an acceptance that the systems in which the subject exists or operates are not closed but are emerging, evolving and open systems. This introduces the idea of complexity and uncertainty into the research which is more real in a social investigation.

Under the heading of critical realism lie several layers of knowing, three of which are specifically noted here. These are the stratified levels of knowing which cover the belief systems operating within society. To reach the level of reality referred to as the *domain of the real* by Bhaskar, there are two stratified domains identified as *empirical* and *actual*. The *domain of the empirical* covers the social contexts of those involved; the *domain of the actual* is how social constructs are made. All the stratifications of the event are required to be inputted to arrive at the *domain of the real*. The underlying issue here is that occurrences have a number of causes and influences, some known and others operating on a level of unawareness. As Bhaskar (1978 pg 124) goes on to explain, “agents are always acting in a world of structural constraints and possibilities that they did not produce.”

Table 2.3 Critical realism as described by Bhaskar 1978

	Domain of the Real	Domain of Actual	Domain of Empirical
Mechanisms	X		
Events	X	X	
Experiences	X	X	X

Critical realism has some commonalities with Bourdieu’s ideas; it explains the life view or world view in various layers of knowing. This too is not static and by its nature changes as new or more information is brought to light. Critical realism does recognise that the world will continue being whether we as actors are aware of it or not. Not knowing can be regarded as a state brought on by culture. As evidenced by the flat-earthers, before a boat sailed around the world the belief was that the earth was flat. This self-same culture will constrain and regulate behaviour – Greek sailors didn’t sail too far from land for fear of the consequences. It is easy then to see how knowledge and culture constrain and shape our ways of being, what we believe and also, as argued by Bourdieu, what we value. Is this also true for professional education?

This study identified a number of key topics which were used to analyse the data collated. The parameters described in Table 2.4 next are the main reference points for this study.

Table 2.4 Parameters identified for this investigation.

	Bourdieu Capital	Bhaskar Critical Realism
White Paper	Symbolic violence	Generative mechanism triggers social phenomena
Structures	Flat but in flux	Complex, 3 tiers, open systems
Continuum	Multidimensional	Real
Social interaction	Yes	Time, place, institutions
Boundaries	Lacks precise boundaries Unknown and subconscious	Lacks precise boundaries Knowing, open systems
Reflexivity	Yes – qualitative	Yes – qualitative
Beliefs	Yes – human	Yes – human
Knowledge	Capital	Facts
Social Phenomena	Yes	Yes
Conflict	Social capital, symbolic violence	Known, unknown
Power	Capital	Yes
Truth	Probability	Provisional
Lack	Social construct	Causality/Boundaries

2.19 Australia – the end of free HE

A study on the progression of the Australian experience of similar policy changes to those proposed in the White Paper 2011 has been developed through examination of the literature, interrogation of other sources such as websites and government material. The Australian study was chosen because the Australian CI has had a similar structure historically to that of England, coupled with similar HE provision.

This section will look at the similarities in provision of Australian and British undergraduate education for Quantity Surveying. An investigation into the transitional experiences of Australian-based quantity surveying provision in the HE sector will provide a basis to ascertain the worth of reviewing the Australian experience of change. A desktop research study was undertaken using the available literature. In the following section attention is given to possible similarities between Australia and England, also a review of the major elements identified in the HE White Paper 2011 – Funding and Private Provision. When reviewing anticipated future changes to the Australian HE sector consideration was mostly focused upon restructuring the sector.

2.19.1 Similarities between Australian and British undergraduate provision of quantity surveying education

To achieve the status of professional QS and membership of the RICS the pathways are the same irrespective of the global location of the candidate. As pointed out by North (2010) and Thompson (1968) the RICS set up an office in Australia in 1957. So as in the UK, an Australian candidate must complete an accredited degree – either undergraduate or postgraduate followed by a period of training and then successfully undertake the assessment of professional competence (RICS 2013d). This will then result in the award of membership of the RICS. The initials MRICS can then be attached to the candidate's name.

2.19.2 Investigation into the Australian HE sector – mass education

In Australia there was a decisive move in 1975 by the Whitlam Labour government to open up free education at HE level to all students who were able to study at that level. As the numbers of students attending institutions rose, funding this growth became an issue for the Hawke government in the mid-1980s and fees were introduced in 1989. This was similar to the approach taken by the UK Labour government in 1997. Thus the problems that arose in facilitating a rise in student numbers attending HE in Australia could be seen

as similar to those that occurred in the UK. There had been in Australia between 1960 and 2005 a tenfold increase in student enrolments whilst the population had increased threefold (DEEWR 2009). Hare (2012) suggests that this was due to aspirational motivation on behalf of the population. As in England the government wished to widen participation for all students to attend university and gain the perceived benefits of acquiring qualification at this level of study.

2.19.3 Funding

Prior to WW2 attendance at a university was funded either personally or through scholarships allocated by benefactors for use by universities. After the war the state undertook a more visible role in the HE sector, having established the University Commission in 1942. Subsequently, after the Murray Committee Inquiry publication in 1957, three of the proposals made around control and funding were adopted: increased state funding, the introduction of the Australian University Commission, and greater responsibility to be held by the Commonwealth government. By 1973 the Whitlam Labour government had abolished university fees for undergraduates, heralding an increase in state interest in the HE sector. The free education offered at HE level had an effect on the numbers attending universities and resulted in a large increase. By the middle of the 1980s this was seen by political parties as imposing an unsustainable financial burden. Fees were reintroduced under the Australian Labour government in 1989, and a support loan system was introduced, known as the Higher Education Contribution Scheme (HECS), where a standard fee was applied across all degrees. Further to this fee change the Howard government in 1996 developed a three-tier fee scale, where fees were to be charged on their perceived value impact upon salaries. Higher fees were charged for those likely to have higher incomes after graduation. Universities were allowed to take in full fee-paying students in addition to those who could access the loan funds. This action indicated the state's relaxation of control over student numbers within the HE sector.

To date the funding of the HE sector in Australia is the responsibility of the state under the Higher Education Support Act 2003 (Commonwealth of Australia 2013). A number of supported places are offered through the mechanisms of the Commonwealth Grant Scheme, Higher Education Loan Programme (HELP), the Commonwealth Scholarship and a range of other grants. The majority of students now access HE by the use of loans through HELP. HELP replaced the previous loan mechanism HECS (Australian Bureau of Statistics 2005), and since 2009 it has been administered by the Department of Education,

Employment and Workplace Relations (DEEWR) and the Australian Taxation Office (ATO). In 2005 university fees were deregulated and this allowed an increase of fees payable up to the maximum level set by the government in the national priority bands (DEEWR 2009a).

2.19.4 Restructuring of the HE sector

The development of the HE sector in Australia can be traced back to the mid 19th century with the establishment of the University of Sydney in 1850, swiftly followed by the University of Melbourne in 1853. By the end of WW2 Australia boasted six universities and two university colleges. By 1975 there were 19 universities offering undergraduate degrees which catered for an increase in demand by domestic students (ISSE correspondent 2007). These places were offered on a scholarship basis or by paying the fees privately.

Dawkins, the then federal minister for education, instigated a tertiary system which reduced the number of layers to two with the publication of his White Paper in 1988 (Dawkins 1988). This changed the face of HE provision in Australia and a number of new universities were formed to fill the requirements of governmental demands. The HE sector also saw the first private university gaining accreditation in 1989 – the Bond University.

Australian universities were and are self-regulating and self-autonomous in their operation within the state legislation set around funding. The introduction of the Tertiary Education Quality Standards Agency (TEQSA) in 2012 aimed to bring in more state control over quality and benchmarking degrees. Whilst it has become apparent that the state is shifting its position on intervention and the HE sector is in transition from self-regulation, there seems to be confusion over the role and purpose of the TESQA. It would appear that the confusion arises due to a lack of precise interpretation of the rules and the fact that the universities' own application of the framework varies.

By 2009 (Australian Education Network 2013) there were reported to be 41 universities in Australia – the majority were Australian state institutions, there were two private universities and two non-Australian universities. There are three other institutions which are self-accrediting. This increase in the HE sector can be explained by the perception that undergraduate degrees are necessary to compete in a global marketplace, as emphasised by the Bradley Report (2008) and the view of several university vice-chancellors cited by

Hare (2012). The Bradley review reported that there would be a skill shortage visible well into 2020, and for the state an important factor is the rise of the knowledge economy (Hare 2012), fuelled in part by a report from Skills Australia (Gostudyaustralia 2012) that states that by 2025 nearly one-third of jobs will require a degree. A deregulation of the student intake has led to an increase of students offered places by 5.5 per cent as at May 2012 on the previous year (Hare 2012).

These factors form the basis of a comparative analysis, which may point to the future development of English-based professional education as well as addressing KQ3 in this research.

KQ3 What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes?

2.20 Societal theme

2.20.1 Problem development

Whilst undertaking a role of an APC Chairman in the awarding of the charter to professional QSs, I witnessed a move from cognate – those with a technical undergraduate degree – candidates to non-cognate candidates – those who hold strategic undergraduate degrees (Simpson 2011). This was notable in the early 21st century. From this observation a recognition that the different education routes to achieve the professional charter may hold different values, esteem and expectations, arose. This then provided the motivation to investigate the types of education that are offered at undergraduate level for technocratic topics such as quantity surveying. However, after an investigation carried out in the preliminary phase (Simpson 2010a) into skills and traits, it became clear that there were similarities in the professional education routes of law and accounting. It is anticipated that this study may be of use to these professions offering similar undergraduate provision.

Analysis was undertaken into knowledge, with the emphasis upon generalist and specialist types of knowledge, and this identified relevant writers on the provision of professional education. The purpose of HE was also investigated; this included a documentation of the path that universities have taken within Europe. It became apparent that ideologies play an important role behind the styles of education favoured at given times in history. Ideologies

are often found to conflict and play out in the arena of HE; this is no different at present. The present government (as at 2013) have presented a White Paper which will have an effect on the provision of undergraduate technocratic education. There are underpinning ideologies to this White Paper which have resulted most noticeably in the increased role of neo-liberal economics in HE, evidenced by the increase of individualism. As has been suggested previously in this thesis, there are two conflicting ideologies in HE, the liberal education as described by Newman (1835), and education for employment as outlined by Carr (1985) and Downie (1990). It is difficult when emphasising individualism and the removal of state-financing of education to push an agenda of education for employment. There is evidence of the pressure to educate for employment coming from the neo-liberal changes in society.

A review was undertaken of the profession of quantity surveying and allied professions. This covered the globe and recognised a similar issue in Australia, while discounting the closer countries of Wales, Scotland and Northern Ireland, also other European countries. It was discovered that Europe and Wales, Northern Ireland and Scotland operated a different funding system to that of England.

As the White Paper has only been applied since 2012, there is speculation on the future outcomes; whatever emerges, the overall outcome will involve key stakeholders such as employers and the providers of HE professional education arriving at a consensus for future outputs. The outcomes will be of use to other providers of technocratic education through generalised application of this research data.

2.21 Summary

There is little directly relevant literature around the topic of professional quantity surveying education. Revisiting the history and background of the universities and professional body for quantity surveying has indicated a developmental path for both which appears to follow the dictates of the powerful of the time: only the victorious write history books. The purpose of education was investigated and revealed a dichotomy between liberal education and professional education. Following on from this there is a division between the types of knowledge which mirror the previous dichotomy – generalist education to satisfy a liberal stance and specialist knowledge which supports

professional education. Additionally, the powerful in society employ an ideology which legitimatises one type of education over another. The most obvious of these are the politics and subsequently the political instruments employed. In this research the HE White Paper reveals a change in the definition of the purpose of a university and the incorporation of neo-liberal policies by the introduction of an internal market through competition; ultimately, the individual has been repositioned with the responsibility to pay. This results in the occurrence of “individualism”, which in turn redefines the purpose of HE.

Surfacing out of the literature is the new idea of knowledge as an economic commodity. There is an acknowledgement of the *knowledge society* which then moves into the provision of a market for services; universities are considered to be part of this. Globalisation of the economy and the subsequent effect this will have on the HE services provided has caused concern about the advance of neo-liberal policies, and shows the university to be a knowledge economy nexus.

As with all research topics in a social setting there are no clear demarcations, something which results in the acceptance of messy boundaries. In the CI, in which the QS is situated, there is an understanding of uncertainty, and to acknowledge this fact critical realism has been employed in this study. As the QS is a professional and the use of expert knowledge or knowledge that can be defined as cultural capital, the ideas of Bourdieu have been used to investigate the rise of *individualism*. The QS has also been identified to operate in a Community of Practice (CoP); the manner of unstructured learning that takes place in any CoP has an impact on problem resolution for the professional body and may be seen to explain certain actions of the professional body.

The overall themes to emerge are instrumental – economic and legislative; social – 20th and 21st century changes; and philosophical – embodied in the idea of cultural capital. These all affect education and the professions, and all are underpinned by politics, as summarised in Figure 2.3 above. All of these factors will be considered in the following chapters.

Instrument	Economic legislation	E D U	P R O	P O L
Philosophy	Cultural capital	C A T	F E S	I T I
Society	20 th and 21 st century	I O N	S I O N	C S

Figure 2.3 Research framework developed for the investigation of this thesis.

3 Chapter 3: METHODOLOGY

3.1 Clarification of purpose

The expected outcome from the course of this investigation would be to uncover future trends for quantity surveying education at undergraduate level, and it was anticipated that a consensus could be arrived at. There is an underlying tension within the HE sector itself about where professional education sits and the overall purpose of professional education; added to this, recent changes in the social, political and economic landscape means that there is the instance of complicated rival interests. Bourdieu (1984) would classify this as the dominant sector in the dominant class.

3.2 Introduction

This thesis is an exploratory investigation into the impacts that the White Paper would have on the provision of undergraduate professional education, particularly with regard to quantity surveying. It adopted a mixed method approach (third paradigm, Hamersley 2013) to investigate what and how the impact of the White Paper was envisaged by interested experts working in the sector, from academia and industry. The work was investigative and follows the constructivist approach to review the outcomes. There were three methods employed: a documentation study; a set of interviews; and a Delphi Technique utilising two rounds of questionnaires. To address KQ3 a documentation review, described by Cohen, Manion and Morrison (2009) as a historical study, was designed, focusing upon relevant events. This was to address the impact upon the provision of Australian changes in state funding to undergraduate professional quantity surveying programmes. The interviews were semi-structured around KQ1 and KQ2; these were then analysed against prior expectations by employing thematic analysis. There arose some questions which, while relevant to the overall investigation into professional education, were outwith the prior expected outcomes. These were then investigated by using a Delphi Technique to arrive at a consensus. Using this approach KQ4 has been addressed.

KQ4: What will be the strategies adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper 2011, and will they be seen as resulting in effective education and training for professional quantity surveying?

The rationale for adopting these approaches is that in undertaking a Doctorate in Education, the main focus will of course be on education – in this case set in the context of HE universities. The interest behind this research has been in the provision of undergraduate professional degrees; in particular the development and delivery of these courses and possible future developments. In a study of this length and nature, personal interest also plays an important part. The aim of extracting some information which might be of interest to other similar educational programmes has been an important motivation. The adopted research theory for this research consists of a mix of critical realism and cultural capital. Critical realism describes the world as multi-layered with stratifications of interpretations dependent upon rhetoric and varying levels of understanding. Critical realism is necessarily qualitative in its approach; however, it required different investigative approaches to enable the required depth of analysis in the emergent phenomena. Cultural capital, as described by Bourdieu, looks at hidden power in society through social structures and using the terminology of economics. One of these forms of capital affects education including professional education. The paradigm which made the research coherent was the pragmatic approach of mixed methods.

3.2.1 Clarification of purpose

The expected outcome from the course of this investigation would be to uncover future trends for quantity surveying education at undergraduate level, and it was anticipated that a consensus could be arrived at. There is an underlying tension within the HE sector itself about where professional education sits and the overall purpose of professional education; added to this, recent changes in the social, political and economic landscape means that there is the makings of complicated nest of rival interests. Bourdieu (1984) would classify this as the dominant sector in the dominant class.

The work then will portray the landscape as it is currently, then move onto examine a future landscape through the gathering of research data. This data will be used to triangulate to other data to help guide the work towards a valid output. The data is analysed using a reiterative style. Different levels of analysis are employed to draw out the less obvious and often underlying currents of what is being said, not being said and the set of beliefs and assumptions the data sample makes. A theoretical stance, using Bourdieu and Baskar's (1978) ideas, has been adopted to add another layer of analysis to the work; this will help to uncover the sets of beliefs and values that the data sample contains. These

stages will address the human complexity of perceptions, and aid the researcher to identify a possible future construct.

To commence, the analysis was undertaken by coding the data against a set of a priori expectations gathered through the critical literature. At this stage of the analysis it became apparent that other topics were being produced in the data set. Thematic analysis was then employed to draw out the themes that were arising from the data set. Further data was gathered upon these researcher-derived themes from the sample of experts; these were then ranked and returned to the sample for further ranking to enable a consensus to be formed. Theoretical analysis was then applied to all the data sources and the research questions addressed to arrive at a consensus of the future provision of professional undergraduate quantity surveying degrees.

Essentially this work gathers various actors' views of the world, which is construed as a social phenomena and is distorted by personal worldviews and interpretations described by Bhaskar (1978) as beliefs (ontology). The research proceeded by using critical realism as a lens, and also by concentrating upon the role of knowledge in the guise of cultural capital within the provision of professional education for the QS. Some of the more pertinent points that are investigated are the purpose of education, types of knowledge required and the economics of the provision of professional education in HE.

The phenomenon lends itself to social interpretation by human beings, and the research seeks opinions and forecasts of future events and asks the respondents to compromise and reach consensus. The context of the study is bounded (Miles and Hubbermann 1994) not only by location (England) but also within the CI's claim to unique knowledge (Schön 1987). The CI itself brings expectations of styles of knowledge and knowledge-gathering techniques (Lowe and Leiringer 2005, Love et al 2002) and these tend to favour empirical data sets and quantitative methods. The scientific role of investigation is the norm within traditional professions such as engineering and architecture that are part of the CI, where the use of logic and causal links carries great weight and lend itself to the truth. However, the role of uncertainty has played an important part in re-examining these methods of gathering knowledge. The uniqueness of projects within the construction sector and the holistic manner employed to deal with uncertainty indicates a post-positivist approach. Supporters of the post-positivist movement tend to criticise the empirical approach. Here the cat is metaphorically chasing its tail, neither the positivist approach nor the inductive

approach satisfactorily address the issues of this phenomenon set within the context of the UK CI. The case can be argued that mixed methods are the most pragmatic paradigm in which to locate this research. In addition to this, the theory of critical realism can be applied to this study as uncertainty (Bhaskar 1978) is a key component to both the context and the theory. As it is professional knowledge that is being investigated, Bourdieu's use of social capital (1973) and his stance on mixed methods (Bourdieu and Wacquant 1992) point to the inclusion of his theory of social capital in investigating the social reality of professional knowledge within this study.

3.3 Classification of paradigms

A paradigm is a set of assumptions surrounding the nature of the research task, and includes how the research will be understood (ontology) and what the purpose of the research project is (Hammersley 2013, citing Kuhn 1970). The purpose of the research and the subsequent questions arising will then offer up a particular way in which to view the research paradigm (Hughes 2013). There are two main paradigms, positivist or interpretivist often referred to as a post-positivist stance (Creswell 2007, Cassel and Symon 1997). Both of these paradigms bring an approach to the nature of research, and while none are wrong none give a perfect fit on their own (Pollard 2010).

3.3.1 Positivists

The overall purpose of a positivist's approach is to quantify and measure data to ensure a logical approach and provide a causal link between the experiments and the facts (Cassel and Symon 1997, Creswell 2003, Bell 2008). The research normally favours large scale random data collection from a sample within a population. The data is collected in a structured manner and subjected to statistical interpretation. The originating data is usually definitive and draws a line under the investigation. The overall benefit is that of control, which enables the research or experiment to be carried out again (replication) and obtain the same results (Hughes 2013). Another benefit is that most data is numerical or given over to scales and/or ranking to give a factual basis for that number; this ties up any ambiguity on what exactly was being measured, i.e. state of mind – happy or sad. This approach has been employed in the ranking of questions and statements in the Delphi Technique data collection section.

Quantitative approaches bring with them precision elements such as reliable measurement, control which allows repeatability, and a logical explanation of causal links using facts. These approaches link facts to theory or hypothesis and will use statistics to underpin their processes. These are very seductive as they produce neat packages to explain research; however, as methodologies they are accused by Lincoln and Guba (1985) of not portraying the complexities of human interactions and the variabilities that accompany people. The main flaw is that universal truth does not prevail (critical realism); in fields of experimentation involving people they fail to deliver an absolute truth based on logics and facts. There is bias in all research, but if there is a human being present the quantitative approaches on the whole turn a blind eye to this by staking claims to an unbiased approach (Cohen, Manion and Morrison 2000).

3.3.2 Interpretativists

The interpretativist's purpose is looser and scattered around the interest of gaining an understanding of the undercurrents of the research topic, usually in the hope of providing insights to the topic by identifying trends which are not obvious initially. The research paradigm is generally focused on a small sample size because the depth in data is time intensive whilst giving a richer view of the occurrence being studied (Silverman 2011). On the whole this research approach favours unstructured interviews and the analysis is not statistical in nature. This is suitable for the interview method adopted to collect data in this study, especially as a small sample of nine was used. There is an acceptance that research holds good only for that sample being investigated and that making generalisations from findings is problematic (Hughes 2013). This highlights a difficulty with causality and applicability to other situations (Huberman and Miles 2002). There is often a recognition of bias by all parties involved in the process – interviewer and interviewee. The strength of this approach is that it recognises the contextual influences impinging on the research phenomena arising from these complexities and subtleties, something which would not be visible in a quantitative approach. The voice of the subject can be listened to and from this route relationships and causality can be found. Thus, this enables this paradigm to be a dynamic model in capturing data, rather than a static vehicle. The main criticism of this paradigm is that of a lack reliability and validity (Creswell 2007), mostly due to the difficulty of replication in the research as the contexts, interaction and people change. Another issue is the fact that the researcher has introduced bias by asking the question and being present at the data gathering.

Positivists' paradigms were a very prevalent method in the 19th century, and can be seen as scientific in style, reflecting as they do a closed system of experimentation. Within the CI this positivist style is adopted particularly by engineers where cause, effect and logic make absolute sense in building design which is mostly mathematical and representative of physical attributes of construction which need to be factual. An example would be the calculation of structures for a bridge. Another side to the CI exists which examines the social science of the industry and how people interact and resolve problems (Simpson and Dye 2009, Love et al 2002, Lowe and Leiringer 2005). Here, it is suggested that the paradigm of the interpretivist is investigated for use in this study.

It appears that neither paradigm will be perfect in carrying out the proposed research but a combination of the two would work for the following reasons. A more comprehensive picture can be gleaned by employing both paradigms and would employ the logic of triangulation. There will be the benefit of both structure and process being explored which adds depth to the research from both qualitative and quantitative data set production. By applying a mixed method approach to the research an additional benefit is that the task in focus drives that which is being investigated thereby fulfilling a third paradigm (Hamersley 2013). The idealist's view of research may favour the interpretative paradigm but the realist's position is that there must be an end output or product, which indicated a pragmatic paradigm for this study. More importantly, by employing mixed methods the evidence produced can help with the criticism of the lack of generality of the research findings.

This research benefits from a mixed methods approach; the fixed nature of the output (i.e. a Doctorate in Education) favours the quantitative approach and starts with the end in mind, whilst the topic involves people and the need to investigate to a rich level of data. A pragmatic approach needs to be adopted to address both conflicting stances. The population of Qs engaged in professional education is small and the resultant sample reflects this. Obviously with a small sample of just nine, rich data is of more value than statistical data. The research sample is at risk of being criticised as unreliable or lacking validity. To countermand this possible accusation a collection of quantitative data did enable some triangulation to occur, subsequently shoring up the qualitative data section. An interpretivist does not follow the logic of cause equals effect (Creswell 2007). The social aspect of the study introduces perception rather than logic as a link, so the facts are

interpreted by people who through their own perception give rise to the facts. Interestingly enough, this touches upon the ontology of the study and the belief sets employed within the context of this study and the importance of uncertainty of the construct (Hubberman and Miles 2002). Critical realism is proposed as a window from which to view the study.

In this study a phenomenon emerges from an interpretative model which emphasises a constructivist approach to examining the shared experience and creative imaginings (Ratcliffe 2008) of individuals with a selected sample. Most debates within the methodology section of a study will focus upon the assumptions, aims, theory and perspective resulting in a metatheory – theory about theory (Cassell and Symon 1997). Whilst the epistemological stance is very visible and would appear to drive most research, an alternative can be adopted by reviewing the mechanics of research methods. Bryman (cited in Cassell and Symon 1997) names the approach as “technical issues” and subsequently explains that the research question will form the shape of the style of research undertaken. This is referred to as a pragmatic approach.

From a “technical issues” perspective a pragmatic stance has been adopted for this study. It is the research topic that determines the research methods employed, rather than a rigid epistemological choice arising out of either the positivist or the interpretativist stance. In the present century there has been a movement to employ mixed methods (Creswell and Tashakkori 2007), seen as a pragmatic approach to gathering data for research, now referred to as the third paradigm (Hammersley 2013). It has also been referred to as the hybrid method (Love et al 2002), which employs whatever techniques or tools will answer the research question. This style will open up the data collection to both positivist and interpretativist perspectives and allow for triangulation of evidence giving rise to an investigation which is multidimensional. It is seen mostly as a post-positive view, which when adopted enables truth to be seen as fixed in time and place rather than being an absolute universal truth. As Love et al (2002) suggest to address the social goal of research a reflexive postmodern view should be adopted to inform the findings. This then acknowledges the presence of bias which is further discussed later in this chapter.

3.3.3 Research strategy

The mixed method paradigm engaged for this research is not evenly weighted; the majority of the data derives from the qualitative and hence inductive method. See Figure 3.1 below. Silverman (2011) suggests that there is a need for theoretical underpinning of works, a

view backed up by Alvesson (2012) who suggests that interview material would be viewed as “naive”. The three theoretical stances that have been employed in this work are social and cultural capital based upon Bourdieu’s investigations; critical realism based upon the ideas of Bhaskar; and professional education as proposed by Schön and Eraut.

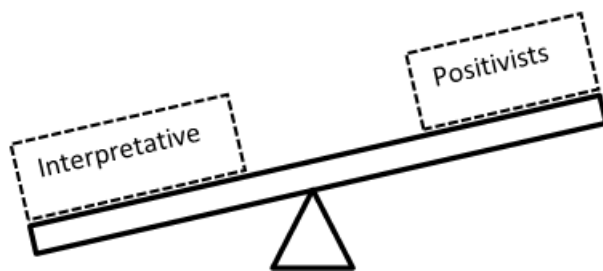


Figure 3.1 Diagram representing the balance of research methods employed

3.3.3.1 Research questions

The investigation was designed in a pragmatic manner utilising the mixed methods approach to address the what? and how? types of questions arising from the implementation of the White Paper 2011 on the provision of undergraduate quantity surveying education in England.

The key questions are:

1. What is the potential impact of the government’s White Paper on the provision of construction education? (KQ1)
2. How will the construction industry sector’s key stakeholders react to the changes introduced by the government’s White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor? (KQ2)
3. What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes? (KQ3)
4. What will be the strategies adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper 2011, and will they be seen as resulting in effective education and training for professional quantity surveying? (KQ4)

3.3.3.2 Research objectives are to:

1. Review the current status of professional undergraduate education in England in the construction sector. (O1)
2. Examine the professional ethos and culture of the professional QS in England and its key drivers. (O2)
3. Identify key influences on future professional education including knowledge and skills. (O3)
4. Investigate the impact of the proposed changes in the White Paper on undergraduate professional education and its provision in England. (O4)
5. Compare the present Australian quantity surveying undergraduate experience to that likely to result from changes that will emanate from the implementation of the White Paper recommendations. (O5)
6. Propose and evaluate future strategies for the provision of professional education that reflect these changes. (O6)

To address the research objectives stated above different data collection methods have been used, these reflect the most efficient manner in which to generate such data. A review of critical and pertinent literature was undertaken to address Research Objective 1 (RO1) following on from this interviews were undertaken to address the Research Objective 2 (RO2), Research Objective 3 (RO3) and Research Objective 4 (RO4). To address Research Objective 5 (RO5) a historical review of the documentation was undertaken focusing on the Australian experience of a similar experience. Finally to address Research Objective 6 (RO6) the Delphi Technique was used, its form was based on the interview data set and two rounds of a questionnaire derived from the interview analysis.

3.3.3.3 Sampling strategies

The topic is rather narrow and applicable to a small sample of construction-related professionals (RICS 2010): in industry QSs and engineers, and in academia deans, members of boards of governors and vice-chancellors. The choice of the sample was based on an ability to impact upon the educational process of Quantity Surveying students or

graduates. Those involved in the study were all approached by recommendation through a contact in the British Educational Research Associations (BERA) and industry. The sample represented a diverse spread from academia, industry and the professional body.

The sample that were approached operate in England. The use of a technique suggested by Miles and Huberman (1994), snowballing, was employed; interviewees were asked to suggest another person who would fit the sample criteria.

The participants were all qualified to undergraduate level and most to chartered status, and either employed in academia or in a capacity related to the CI. The majority had been employed in these sectors for over 30 years. There was a mix of male and female participants, the latter at 20 per cent reflecting the CI sector but not HE. For the purposes of this study this is accepted as normal. See Appendix B which describes the sample's characteristics further.

3.3.3.4 Ethics

This research acknowledges the importance that ethics plays in validating the task in hand. In accordance with the ethical guidelines (BERA 2011) issued by the British Educational Research Associations (BERA) five main points were addressed. BERA highlight: voluntary informed consent; openness and disclosure; right to withdraw; privacy; and a method of research which is fit for purpose. The questions were designed to investigate a phenomenon whose outcome would inform interested parties and other providers of technocratic undergraduate education. The information has been anonymised and then returned to the participants to enable a review of the group direction and thus enable the participant to validate the exercise (Silverman 2011). This, alongside the participant consent form and the project information form approved for use by the University of Greenwich Research and Ethics Committee, addresses the issue of informed consent (Silverman 2011, Bell 2008).

The selected sample have been approached by email or face to face, and been sent both the letter of introduction and the project information form. From the sample of 16, nine recipients replied and agreed to an interview. These recipients were then sent a participant consent form; these were duly signed and returned to the researcher. The participant consent form states that the interviewee may withdraw at any stage. The data was digitally recorded and processed using the software Nvivo 9. This data has been saved securely on a

private laptop with access through a password and also stored in a private and restricted data box called Dropbox on the Internet. The research has been designed using a mixed method approach and has been disseminated back to the interviewees in an anonymous manner. In this approach the main five points stipulated by BERA have been addressed. The main concerns arising from this particular research are confidentiality and anonymity. In addition to obtaining informed consent each person was interviewed separately; personal details were not recorded. The interviewees were made aware through the Delphi Technique of the views of others, but no individual was identified. It is important to feedback information so as to arrive at a consensus, in which case the subjects must be prepared to be influenced by the sample.

3.3.3.5 Triangulation

In carrying out of a mixed method study the subject of triangulation should be addressed. As simply stated by Bell (2008) triangulation allows cross checking of data. Jick (1979) suggests that triangulation is a metaphor to cover “multi operationism”, where more than one method for data collection would aid the substantiation of validity. However, these are rather simplistic views, and although multi methods are described the discussions seem blind to the theoretical basis for carrying out research. The theoretical base can be seen as the kingpin in the design of the methodology; therefore asking “what” and “how” questions leads to the designing of the methodology and subsequently the methods of data collection. Triangulation as suggested by Love et al (2002) is informed by a positivist view and may look at the form of methodology and its effect on the data sources or choices in an objective role. In this study an interpretivist stance has been adopted which is slightly at odds to the main description of triangulation as fixing and constraining data (Jick 1979), or that rational and predicable order can be determined as suggested by Alvesson and Deetz (1996). Interpretativeness is firmly found in the postmodern camp with the aim of exploring emergent themes. There must be an awareness of uncertainty in the findings and that causation does not, as Love et al (2002) describe, spring directly from fact but from perception which is then transformed into perceived fact. Triangulation can be useful in blending mixed method data sets such as those used in this study – questionnaires, interviews and a desktop study. There is merit in the triangulation of these different methods to facilitate critical analysis of the phenomena. This allows for testing of the emergent themes, which in turn aids the question of ensuring validity of the findings.

3.3.3.6 Data analysis

The data cannot be viewed in a simple single layer approach; the different levels of reality need to be revealed to meet the demands of critical realism and address the richness of the data. There is also the requirement to meet the demands of forecasting and the complexities of reaching compromise as seen in the Delphi Technique. In answer to this conundrum Alvesson's (2012) suggestion of reflexivity has a role to play. Hammersley (2013) concurs and proposes the role of reflexive analysis and as suggested by Silverman (2011) and Creswell (2007) which in this study these would include politics, history and context. A reflexive stance exposes the limitations of the research and the factors relating to this occurrence, which is suitable in this instance as uncertainty plays a large part. As a concept, uncertainty is well understood within the CI community, and the credibility and validity of the results would immediately be questioned should they be absent.

The role played by the research study needs to be continually challenged throughout the data collection and analysis stage. If the concept of the existence of multiple layers to the data is accepted because of the involvement of the interviewees, this must also be true of the interviewer. Creswell (2007) cites Wei and Fine (2000) and gives a list of seven considerations (see Figure 3.2) that need to be part of this style of research. These were employed within the reflexive and reiterate stages of data analysis. Further to these prompts on reflexive analysis in Appendix M contains the stance adopted for this research.

Should I write what people say or recognise that sometimes they cannot remember or choose not to remember?

What are my political reflexivities that need to come into my report?

Has my writing connected the voices and stories of the individuals back to the set of historic, structural and economic relations in which they are situated?

How far should I go in theorizing the words of the participant?

Have I considered how my words could be used for progressive, conservative or repressive social policies?

Have I backed into the passive voice and decoupled my responsibility from my interpretation?

To what extent is my analysis and my writing an alternative to common sense or the dominant discourse?

Figure 3.2 Reflexive and reiteration stages of data analysis – Wei and Fine cited in Creswell 2007

3.3.3.7 Coding and themes

Coding was undertaken to enable the emergence of themes from the data sources investigated. This was developed through the different stages of data generation, initially through the critical literature review and the preliminary interviews. At each stage the codings and classifications of the data were further investigated. As discussed in the following sections new themes emerged and consolidation of themes was carried out in an iterative manner.

3.3.3.8 Preliminary interviews

When this study was at its earliest stages two preliminary interviews were undertaken with respondents from industry and academia. The respondents were senior in their fields – one was a vice-chancellor of a Post-92 institution – VC – the other a director of a large construction company – DLCC – responsible for quantity surveying services. These interviews were undertaken in an unstructured format and allowed the topic to be explored

without boundaries. As the topic being studied was emerging and information about the Browne Report sparse this style of data gathering gave form to the Key Questions and an indication of the topics which were used as a basis to form the coding of subsequent interviews. Arising from these two interviews were three clear themes – economics, politics and society. Contextually, the area under study is located in education and so this too must be used as a point of focus. It was from this point that the semi-structured interviews were initiated in the gathering of subsequent qualitative data.

3.3.3.9 A priori coding

The use of a priori coding (Huberman and Miles 2002) was adopted as a starting point from which to commence the thematic analysis (Braun and Clarke 2006), and to meet the need for a predefined framework PESTLE and the five-forces model (both management tools based on a design by Michael Porter (Porter 1980, Grundy 2006)) were used. PESTLE is an acronym for Political, Economic, Social, Technical, Legislative and Environmental (CIPD 2013); these elements formed the initial coding framework and were used to inform the NVivo coding against which the interview transcripts were initially analysed. A large amount of the qualitative data was directly coded into the six topics. There were some new topics – such as knowledge and education – which were added; these were gathered from the critical literature review. The benefits of using PESTLE as a basis for grouping the theme are twofold. It is simple in nature but also enables the analysis to consider the meso as well as the macro effects surrounding the topic. This allows the context of the subject to be explored, not only the controllable events within reach of the parties involved but also the impacts of external forces outside the phenomenon being studied.

The PESTLE framework enables a generic basis to be established initially, which with the process of reiteration develops the topics to be further investigated into emerging themes. In this study, the term Political is taken to cover politics and ideology; Economics incorporates global and local economic impacts, and so the recession and the emergence of the knowledge economy were considered. Sociological aspects such as importance and society are covered by reviewing professionals and their place in society; Technology and its impact upon the phenomenon being studied drew upon the use of knowledge on the World Wide Web. Legal covers the basis of legislation as it stands presently, and the legal changes which inform the professional responsibilities to stakeholders. Environmental

covers the geographical and historical changes and demands that impact upon the phenomenon being studied.

The Australian data set employed a thematic approach without a preordained coding set. This ensured several stages of data mining resulting in the determination of themes (Gibbs 2013). This approach used the rich data and then took a reflexive approach to the information as it developed into themes. The rationale for the adoption of this approach was to identify any possible similarities between the Australian experience of funding changes in the HE sector and the English experience. These would not be exactly the same due to cultural differences, time lags and political ideology.

In addition, and by applying the ideas of Bourdieu and critical realism, the additional topics of conflict, power and boundaries were added to the coding process. The process of coding is reiterative, requiring a review of the coding and grouping of the topics (Huberman and Miles 2002), and this has resulted in three themes – instrumental, philosophical and societal – running through the topic of the political impact upon professional education provision. Table 3.1 below shows the coding themes from initial interviews that were generated to indicate a development of the types of data gathered under the first set of preordained codings. These are described as axial codings (Gibbs 2011), which then lead on to the selective coding stage (Ryan and Bernard 2003) which in this study is referred to as thematic analysis (Braun and Clarke 2006). The resulting main four themes can be summarised as marketisation, quality, knowledge and power, but another three emerging themes – uncertainty, neo-liberal creep and inequalities of the system – are also introduced.

3.3.3.10 Qualitative analysis

Interviews were carried out in several ways: face to face, through video conferencing using Skype and over the telephone. All the interviews were recorded digitally and saved to secure storage, a password-secured laptop and backed up to a private account on the Cloud using a Dropbox account. These interviews were transcribed following the order of the interviews which were semi-structured in nature. The same two questions were posed to each interviewee, KQ1 and KQ2(p9)

Once the interviews had been undertaken and transcribed, they were returned to the interviewee for further comment and correction. After this step, the transcripts were divided between the two KQs and imported into a word cloud programme. A basic software programme was used, and the software was adjusted to take out common words such as a, the, it and restrict content to the top 20 most used words. This gave a feel of the emphasis that each interviewee placed within the KQs posed.

Whilst it was interesting to examine each interviewee’s stance on what they viewed as most important to stress, there is no benefit in comparing one set of word clouds to another. There is, however, a benefit to be had in investigating which words were not being used. In this study, knowledge was noticeably lower on the word count than competencies.

This first question asked about awareness of the White Paper, and a clear divide was apparent between industry and academia. Industrial-based respondents were unaware of the paper and felt unable to comment, whilst academia were aware, and could make comments.

Table 3.1 Initials of respondents versus ranking of top ten words generated – KQ1

A1	A2	A4	I1	I3	I2	P1	A3
promotion	sector	traditional	aware	conversations		education	programmes
profession	construction	RICS	White Paper	position		industry	education
education	universities	quantity surveying	universities	react		QS	training
university	industry	accredited	visibility	White Paper		students	university
industry	students	route	business	ignorant		construction	industry
students	education	programmes	impact	changes		degree	students
degrees	sustainability	government	fees	education		university	vocational
surveyors	recession/boom bust cycle	degree	change	recognising		technical	think
White Paper	league	universities /polytechnics	structure	university		surveying	need

The outcome of these statements were as follows: the entire sample were in agreement to statements one, two and three, but there was no agreement with statement four (sd 1.85, rank 4).

3.3.3.11 Development of coding

To undertake the coding the use of PESTLE was developed from the unstructured interviews held with the two interviewees in the pilot survey undertaken at the start of the research. Using PESTLE after the use of a priori codings was recommended by Miles and Huberman (1994) for this type of study. It became apparent that respondents felt that some additional areas should be addressed and these were incorporated in the Delphi Technique, thus enabling consensus and identification of future forecasts in the research. Word clouds were employed to check word frequencies from the qualitative part of the study; these indicated the popular words restricted to the top ten that were used in the interviews and divided into the two Key Questions posed, KQ1 and KQ2.

Aside from the top ten words gathered from the word clouds of the interviews other words which were identified include collaborate, client driven (I1), communicate, engaged, reason and competence (A3), markets, legislation and employment (A1), consolidating and industry-facing (A2), integrated, collaboration, specialists (A3), polytechnics, taught programmes, QAA levels (SP), recruitment, apprenticeships (I3), recognised professional qualifications, skill shortages and frameworks (I1). These were examined with respect to the neo-liberal argument and more specifically through the lens of Bourdieu's perspective on cultural capital.

3.3.3.12 Qualitative

The interviews were designed to be semi-structured in format and address KQ1 and KQ2. The approach adopted was to initially use preordained codings to give structure to the research; the use of PESTLE as a frame was employed to satisfy this part of the analysis. Also undertaken was a responsive approach to the rich interview data generated; this used the stages of open coding, followed by axial coding and results in selective coding (a reductionist approach). Word clouds were generated to represent the top ten word frequencies for each of the interviewees (see Table 3.1, p83) these indicated a set of themes, and also the topics that were expected to be discussed but which were not. The missing themes were knowledge, the role of professional expertise and societal impacts.

During the second stage of coding – the process of axial coding (Gibbs 2011, Cassel and Symon 1997) – further themes emerged. The responses were divided into categories. As the interviewees had different positions in society, it was felt that grouping like-minded individuals with similar experiences would add value to a particular perspective, and so three categories were adopted: profession, academia and industry. As a key focus of the study is to look to Australia and identify lessons which may apply to future outcomes in England, it was decided to separate out the Australian academics from the academic interviewees. The approach adopted was to commence with a literal approach (Ryan and Bernard 2003) by using the word cloud (visual word frequency) and tabulate the words as they were recorded. In another approach, interpretation (Ryan and Bernard 2003, Robertson 2008) of the rich data set has been adopted to classify the data against a priori coding. The final stage employed a reflexive (Alveson and Skoldberg 2008, Gibbs 2011) approach to coding of the information to tease out the themes that have developed using a philosophical framework based upon Bourdieu and his theories of cultural capital (1973, 1986, 1993) and Bhaskar’s critical realism (Archer 2007). Phenomenon can be discovered from this later stage and it has been used in a pragmatic approach to uncover potential outcomes of the application of the White Paper.

3.3.3.13 Quantitative coding

Quantitative data was introduced to enable triangulation to take place and support this research study in its bid to achieve validity and reliability of methods and data. The Delphi Technique was enlisted to capitalise on the qualitative data gathered through the semi-structured interviews and to project a future forecast. The questionnaire asked the respondents to reach a consensus on the future of QS education based upon their own views, and it additionally asked about two other areas derived from the literature search - societal changes and knowledge, more specifically the rise of neo-liberalism and recognition of professional expert knowledge. The questionnaire can be seen at Appendix C. This approach enabled a descriptive statistical analysis to be undertaken indicating the respondent’s views of possible future scenarios.

3.3.3.14 Unexpected missing codings

The word cloud analysis in Tables 3.1 and 4.1 revealed that knowledge which features very heavily in the critical literature section does not correspond to the expected prominence in the transcribed interviews. From this initial and simple data collection,

further research was carried out using the Delphi Technique questionnaire. Knowledge was presented in different formats to the respondents of the Delphi Technique Questionnaire in Question 11.

Answers to statements posed in Part A will take the form of a Likert Scale 1–7, with 1 tending to a yes ranking and 7 descending a no ranking.

Q11

Will professional education promote extraordinary knowledge (Schön) through ?

Please rank by circling	tends to	yes	no
General knowledge			1 2 3 4 5 6 7 8
Technical knowledge			1 2 3 4 5 6 7 8
Implicit knowledge			1 2 3 4 5 6 7 8
Behavioural skills			1 2 3 4 5 6 7 8
Technical skills			1 2 3 4 5 6 7 8
Personal skill			1 2 3 4 5 6 7 8
Competencies			1 2 3 4 5 6 7 8
Other (please state)			1 2 3 4 5 6 7 8

The results show an agreement on good competencies but disagreement over the knowledge and skill sets. Behavioural skills generated the largest disagreement with a standard deviation of 2.37 within the cohort, but this was ranked at number 5 above General knowledge ranked as 7 with the next highest standard deviation of 1.90. This was followed by Technical knowledge with a standard deviation of 1.72, ranked 3.

Another area not represented was that of the recognition of neo-liberal or monetarist economic policies and their ideological impacts upon England. In this instance, to explore the changes in ideology to date a discussion around the role of the professional and the ethics of the more conservative education of the professional was introduced. Recognition that societal changes had occurred and the *rise of individualism* seemed lacking in the initial round of data gathering in the interview stage. To revisit this area using the Delphi Technique questionnaire, round questions were presented around societal effects and influences using Question 5.

Q5 Who are the future stakeholders of professional education?

Please rank by circling tends to yes no

Society 1 2 3 4 5 6 7

Government	1 2 3 4 5 6 7
Industry	1 2 3 4 5 6 7
Individual	1 2 3 4 5 6 7
Professional institution	1 2 3 4 5 6 7
Academic institution	1 2 3 4 5 6 7
Other (please state)	1 2 3 4 5 6 7

The outcome of this Q5 placed society as a choice by the sample with the largest range of disagreement, standard deviation of 2.26 and ranked at 5 for importance. This indicates a wide disagreement between the respondents.

Question 7 examined how QSs place themselves, their position and work in society in general terms; as Bourdieu suggests, an awareness of cultural capital it was expected, and in particular the value of being a professional – in habitus, field and capital.

Q7 How will the future value of professional education be measured by quantity surveying professionals?

Please rank by circling	tends to	yes	no
Safety to practice		1 2 3 4 5 6 7 8	
Expert practitioner		1 2 3 4 5 6 7 8	
Professional standards		1 2 3 4 5 6 7 8	
Knowledge base		1 2 3 4 5 6 7 8	
Skill set		1 2 3 4 5 6 7 8	
Duty of care		1 2 3 4 5 6 7 8	
Competencies		1 2 3 4 5 6 7 8	
Other (please state)		1 2 3 4 5 6 7 8	

The outcome indicates that there was disagreement on two areas – Expert practitioner (sd 1.93, rank 6) and Duty of care (sd 1.96, rank 5). These standard deviations indicate a wide divergence between respondents.

3.3.3.15 Unexpected coding

Other statements were made by the respondents during interviews which whilst pertinent to the subject being investigated were not central to the research. There were four significant responses in total and these were included in the Delphi Technique questionnaire, initially to incorporate the respondents' comments. These four questions added reassurance that the respondents' views were being gathered, considered and

incorporated in the study, but they also acted as a barometer against which to measure some of the later statements.

Answers to statements posed in Part A will take the form of a Likert Scale 1–7, with 1 tending to a yes ranking and 7 descending a no ranking.

Please rank by circling	tends to	yes	no
1	There is a role for professional (vocational) education	1	2 3 4 5 6 7
2	Professional education is provided to the required academic standards	1	2 3 4 5 6 7
3	The provision of professional education needs to change to meet future demands	1	2 3 4 5 6 7
4	Societal recognition is an issue in professional education	1	2 3 4 5 6 7

The outcome of these questions showed that all respondents were in agreement to questions 1, 2 and 3, but a disagreement was reflected in the outcome for question 4. The standard deviation indicated 1.85–2.00 as a divergent and the group did not return a 70 per cent or above consensus on this topic.

3.3.3.16 Delphi rankings

After investigation of the statistics on the returned questionnaires of the Delphi Technique, the study adopted descriptive statistics. The questionnaires used a Likert Scale, where the subjective value of an idea is given an objective value (Likert 1932). In this case The number 1 is taken as the highest and so indicates the most positive reaction to the idea proposed. Likert introduced the idea of quantifying subjective values in his paper “A technique for the measurement of attitudes” written in 1932 (Likert 1932). This seems easy enough to follow, but it is dependent upon sample size and overall expectations of the outputs there are a number of choices to be made in the manipulation of the resultant Likert Scale data.

For this study, descriptive statistics (Hansson, Keeney and McKenna 2000) were used to analyse the findings from the second round of the Delphi Technique questionnaire. When considering the use of ordinal and nominal values, as suggested by Hoxley (2008) in the construction of attitudinal questionnaire design the outcome and desired results need to be incorporated into the survey. As attitudinal outcomes are expected the choice of ordinal values to reflect the descriptiveness of the data to be generated is the selected route. The

use of mean, ranking and standard deviations was considered the best method of representing the data and enabling a coherent feedback mechanism for the following stage (Hsu and Sanford 2007). The participants needed an indication of the group results, thus enabling them to place their own views with those of the other participants. The overall aim of the exercise was to reach consensus rather than arrive at complete agreement (Hansson, Keeney and McKenna 2000).

To strengthen the credibility of the results the following statistical tests have been carried out: Cronbach's Alpha Reliability Coefficient; Factor Analysis; Kaise--Myer--Olkin Test; and Barlett's Test of Sphericity. It is stressed that sample size will affect the reliability of the data produced – the sample size used in this study is acknowledged as small.

Cronbach's Alpha Reliability Coefficient (CARC) is a basic first step statistical calculation (Gliem and Gliem 2003), and although some argue that it is not a statistical test (ATA 2/10/13) it is used to address the internal consistency of the data and their relationship to a latent variable. It can highlight if there is a basic relationship to the variable selected, should a suitable sized grouping of data exist.

Cronbach's α can be defined as

$$\alpha = \frac{K\bar{c}}{(\bar{v} + (K - 1)\bar{c})}$$

where K is as above, \bar{v} the average variance of each component (item), and \bar{c} the average of all covariances between the components across the current sample of persons (that is, without including the variances of each component). Wikipedia 2014 Cronbach's Alpha definition.

The benefit of using the CARC to substantiate the reliability of the data is that it excludes any errors before the data is analysed, although the calculation does not work for single items (Gliem and Gliem 2003). Following on from the CARC this exercise applied the use of Factor Analysis, a statistical procedure developed by Spearman in 1905 which enables the breakup of questionnaire data into themes and which can test if there is any significance in the relationship between them. It may be that only a number of items have an effect upon the variance, and these can be isolated and used for future areas of study. The variance data produced allows identification of the more important items in the data set.

To enable a Factor Analysis to be applied a number of assumptions must be made, such as normality and linear relationships in data. More importantly there must be some sizable correlations, and these would generally be investigated using the Kaiser–Myer–Olkin Test and Barlett’s Test of Sphericity. The result is that potential factors and any errors can be investigated and a link to underlying variables can be sought. Here the use of Eigenvalues will narrow the field of research as only the variables with the highest impact can be isolated. Those variables with low Eigenvalues are deemed to have little impact when compared to other variables. The overriding issue with Factor Analysis and CARC is that a sizable sample must be used. My research sample is small and the expectations of the output is to reach consensus. This results in questions over reliability for this data set.

A review of the Delphi Technique literature shows some studies using a means rated weighting for the data (Hasson, Keeney and Mckenna 2000; Wiener et al 2009; Rudolph et al 2009). This is a basic averaging of the Likert Scale divided by the sample size. Another method used is Average Index Analysis (AIA) as suggested by Al Khalil and Al Ghafly (1999) which identifies the degree of importance of response. In AIA there is a constant expressing the weight assigned to each response chosen with the frequency; this was adopted. This is then summed and divided by the number in the response sample.

$$AIA = \sum (a \times f/N)$$

Where: a = constant expressing the weight assigned to each response

f = frequency of each response

N = total number of responses

The outcome of the AIA highlights the most significant output from the data; this is of most use in statements such as those in Delphi Stage 2/3 Section A and Stage 3/3 Section A.

When interrogating the statistical data it became apparent that the sample size was too small to give a meaningful outcome. The sample was limited to key stakeholders who had over 30 years work-based experience, were educated to postgraduate degree level and were full members of their chartered institutions. They also had to be located in England and be in a position to have influence over the educational requirements and demands made by

their respective organisations. The sample members were approached to participate in this study, after which they selected themselves to undertake interviews and the Delphi Technique. The selection of the sample reflects the specialist nature of the profession. As the purpose of this exercise is to achieve consensus, a particular problem with the sample size is that it may or may not represent a normal distribution (Gliem and Gliem 2003). The standard deviations figures may suggest some correlation indicating validity but due to the sample size the reliability of the data is questionable in statistical terms.

The purpose of the Delphi Technique is to achieve consensus; the rate at which this is achieved is the researcher's choice (Linstone & Turnoff 2002) – in this study 70 per cent agreement was selected. After the application of Factor Analysis to reduce the number of variables to do this the following were undertaken: Kaiser–Meyer–Olkin Test,, Barlett's Test of Sphericity and the Cronbach Alpha Test for internal reliability. The results were not sensible mainly because of the small sample size. Consequently, the use of descriptive statistics was adopted to focus on the Delphi Technique questionnaire, thus enabling analysis of this data set. Descriptive statistics gave most meaning to the limited quantitative information derived and the restricted sample size employed. The use of AIA and the standard deviation seemed most suitable to the interpretation of these results.

In this instance the variance in the statistical data was not viable in the Factor Analysis, and could not be used as a basis to interpret the sense and meanings behind the answers given into a meaningful pattern. The data was best used to give an introduction to the qualitative approach adopted in the second section of this study, and thus underpin the research rationale of adopting the use of descriptive statistics. This especially works in the Delphi Technique section where the main aim is to reach consensus rather than have a definitive outcome.

To reach the third and final stage of coding (which was reductive in its approach) selective coding was employed together with axial codings. In this study the themes developed from this section were ones of marketisation, quality, power and knowledge. Uncertainty, neo-liberal creep and the inequalities inherent in the system also surfaced.

In this section the phenomenon has been examined by collecting rich data through semi-structured interviews and qualitative methods. This pragmatic approach had looked to future studies (Radcliffe 2008) to enable a forecast to be made by gathering a consensus of

expert opinion from a group of expert stakeholders who have an interest and the power to affect the implementation of the phenomenon. To supplement this, rich data has been mined from Australian academics; their contribution might point to future challenges and directions for the English HE sector. For the purpose of analysis, marketisation has absorbed the *neo-liberal creep*. Uncertainty and complexity have been separated, and conflict has been introduced which will cover the inequalities of the system. This further reiteration of themes has the benefit of facilitating a reflexive approach, in particular the role of power in the reproduction of social order.

3.3.3.17 Data collection techniques

As discussed earlier, three main data collection techniques were employed – interviews, a desktop study and questionnaires. There follows an explanation of these techniques and the rationale behind their choice for application to this study.

3.3.3.18 Data collection through interviews

As this study focuses on a restricted ethnographic population, and subsequently derives a small sample from which to draw, a qualitative approach was best employed. Deep and rich data (Creswell 2003, Silverman 2011, Cassel and Symon 1997, Huberman and Miles 2002) needs to be gathered to give a meaningful output; interviews were therefore selected as the pivotal method employed. Interviews have the advantage of providing a rich and deep data set. The interviewee self selects his or her own association with the research, which results in a high level of interest in the overall topic. There is a resultant understanding of the complexities and contextual impacts that surround the topic from the human relationship with the issues under consideration (Cohen et al 2009, Jick 1979, Huberman and Miles 2002). The biggest disadvantage is bias from both interviewer and interviewee; however, as long as this is accepted and acknowledged as impossible to negate, this is the best that can be offered. An interview is a human interaction which inevitably causes contamination but also produces the best data available to address the research topic. The activity of interviewing is time consuming and involves the generous gift of time from interviewees. A double-edged sword appears at this point, as those with most interest in and knowledge of the topic are often the least able to contribute the necessary time. An underpinning strength of this approach is that interested and expert individuals who give of their time consider the research important, something which adds

value to the task. The interviewing approach was informed by using documentation as an investigative technique.

3.3.3.19 Use of questionnaires in data collection for study

Questionnaires generally have the benefit of producing a quantitative data set from a large sample, and with the use of closed questions a quick response to a task can be produced. The problem lies around the human interaction with the set questions as a barrier to the understanding of the research question is introduced through this medium. There is no opportunity to interrogate any oddities that occur or rewrite the questions should there be any anomalies in the data output after the pilot stage. It is cheap and a quick way to gather data within a tight, constrained spectrum of preconceived answers. It does not investigate theory but tests previously designed theory.

In my research questionnaires were employed in establishing a consensus within the group of nine interviewees. Questionnaires are quantitative in nature, and with the use of standard questions and closed questions can arrive at a conclusion. Questionnaires have been criticised for their lack of depth; however, in this research, space was allowed for recipients to make additional comments. This adds a qualitative dimension to the method; in this instance it enabled clarification of ranking that the sample chose to select. As the questionnaires were used as a part of the Delphi Technique, to achieve consensus it was important to gather as much information as possible to enable clarification of choice, by leaving space for comments and clarifying remarks made by each of the respondents. This was then fed back to all participants anonymously, and each person was asked if they could reach a consensus; obviously this might mean changing their stance on a given topic. Questionnaires were an ideal manner in which to convey this information and seek consensus on the perceived course of future events. These future events may well turn out to be areas of study and importance.

3.3.3.20 Mechanics of the process

Employing the mixed method approach (Cresswell 2003, Hammersley 2007), or the third paradigm (Hammersley 2013) use was made of a number of methods of data collection; subsequent interrogation of the inputs resulted in some outputs. Cassel and Symon (1997) highlight the fact that this methodology has a technical aspect which governs how data is collected; this is influenced by the research questions which are being investigated. Within

this study both qualitative and quantitative methods are used. The work has employed techniques of best fit by using critical literature, historical documentation study of the Australian response to similar changes in HE, interviews and the Delphi Technique to arrive at consensus.

3.3.3.21 Interviews

Following the adoption of the third paradigm, a decision was made to undertake interviews to enable a rich data set to be produced. Interviews are qualitative in style and enable the topic to be explored in either breadth or depth as the situation dictates. As the possible population of the sample was small and restricted by location and discipline, the most appropriate method of data collection was thought to be one-to-one interviews. The use of quantitative data in this case would not give a significant response as the sample was too small.

The interview style selected for this study was based on a semi-structured format, which follows a version of constructionism as described by Silverman (2011). This, Silverman suggests, is a mutual exchange, agreed and constructed by both the interviewer and the interviewee. This view is supported by Haigh (2008), who states that interviews in the built environment can be a result of a negotiated partnership. The purpose of this study is to gather data in an open-ended manner, but in a way that provides context to the topic of education in the built environment and the legislative impact of the 2011 White Paper. The pragmatic paradigm was identified as appropriate for this study, looking to use both qualitative and quantitative approaches to data gathering. The data was anticipated to be rich, and so the approach adopted discarded the closed question approach and focused on two questions: the “what” and the “how”(KQ1, KQ2, p9) as suggested by Silverman (2011).

The interviews were conducted in a semi-structured manner (Creswell 2003) and then transcribed. The transcription was carried out by an administrator, and checked over by the interviewer prior to the interviewee viewing the transcript. The transcription was then returned to the interviewee for comment (Cassel and Symon 2005). In two cases the interviewee made comments and changes to the transcript. In the other cases, comments were made about the flatness of the transcripts. This is an issue; all parts of the discussion were typed which does produce the flatness complained of; however, analysis is aided by the use of digital tapes to identify further nuances of speech. The transcripts were

introduced to the NVivo version 9 data analysis software programme. This programme offers filing and coding facilities and the ability to move data around by introducing new nodes and classifications. The classifications and nodes were set prior to the interviews, and, as has been explained, PESTLE was used as a framework. In addition to this framework the researcher used thematic analysis (Braun and Clarke 2006) to identify those topics which fell outside the prior framework. These then formed the basis for the questionnaires to follow in the Delphi Technique section which follows.

Not all interviews were carried out face to face; a mix of telephone interviews and video calling was used. However, the structure of all the interviews remained the same. After an initial period settling in using warm up conversations to achieve rapport, the interview structure followed an introduction to the study topic by the interviewer and a request to commence the interview. The interviewee was invited to introduce themselves, after which KQ1 was asked. When this topic was exhausted KQ2 was presented. The interview was not bounded in any other manner than the loose structure indicated above. The aim was to collect rich data as suggested by many authors advocating the use of qualitative methods (Creswell 2003, Silverman 2011, Cassel and Symon 1997, Huberman and Miles 2002).

A pilot interview (Silverman 2011) was carried out to test the appropriateness of the data collection method and some level of analysis followed. This gave an indication of the themes which could arise, and enabled a matching of expected themes arising from the literature research and problem definition stage to be undertaken. This pilot interview aided in the construction of a priori topics which were then used for the initial round of analysis. This pilot interview also upheld the decision to use mixed methods as the data was rich but needed to be compared to other data sources to give context and insight to the information gleaned.

Nine interviews were carried out with expert stakeholders, who have interests in the spheres of education and quantity surveying. The sample was made up of academics, practitioners and academic managers. The interviews lasted in the region of 40 minutes. The technique of snowballing was used as this fits well with the focused and unique area of quantity surveying education. Huberman and Miles (2002) suggest that this is appropriate in a qualitative study as it identifies people who know people who know the topic area. In this instance, the sample also selected peers who are recognised as experts and those experts self-select themselves or suggest others who know the topic. This then

produces stakeholders who are interested and able to influence certain educational approaches and outcomes.

The appropriateness of the selected experts has been assessed upon a number of criteria. They are senior personnel who hold managerial or strategic roles within their own institutions or companies. The samples have identified themselves as having a role to play in the development of education strategies both at company or institutional level and also at professional level. It is from this basis that appropriateness can be exhibited, as this sample can be considered a suitable basis for extension and replication in other cases (Denzin and Lincoln 2008). See Appendix B.

As Silverman (2011) states, the context for carrying out this rich data collection method needs to be considered. The information is set in a time and place, to which all participants bring their own cultural knowledge. Interviews cannot be viewed as neutral but must be seen as a negotiated partnership (Haigh 2008) and although the data is rich it is an account of the interview interaction (Baker 1996, cited in Jones 2008). There is an acknowledged stratification of meaning and knowledge in the process as described by Archer (2007). It is this stratification that gives rise to the view that critical realism is suitable for this analysis.

Finally, the decision to cease gathering data in this manner once the same information began to reoccur was adopted (Hall 2012). Towards the end of the interview the interviewee was informed of the Delphi Technique, and asked if they would be interested in partaking of the next round. Only those who agreed were included in the subsequent round of data gathering.

3.3.3.22 The Delphi Technique

“We have measured the past, surveyed the present now we need the confidence to explore the future” Ratcliffe (2008, 218)

The rationale for using the Delphi Technique is that it underpin my argument that consensus will indicate a likely outcome, or indeed create new possibilities as yet unconsidered; this will address KQ4 (p9).

As suggested by Irvine and Martin (1985, cited in Ratcliffe 2008) consensus can be created on future directions and policies. The purpose of which, as described by John Ratcliffe (2008), is to harness the human capacity to imagine future outcomes. As in the recent past,

research is based upon past experiences or knowledge – this is referred to as back casting (as highlighted in the Futures Academy based in Dublin (Ratcliffe 2008)) and has given rise to the discipline of future studies. The principle is that this informs of what has been, not what is to come. The novel principle which underlies this new approach of future studies is that the future can be influenced or shaped (Handy 2002). It also relies on the belief that imagination and wisdom have a role to play in creating future solutions to present and future issues. Ratcliffe (2008) states the importance of “our interconnectedness with all things past and future”. It is this link to the ontological stance adopted in this research of critical realism which assists placement of the Delphi Technique in context.

The purpose of the Delphi Technique has been taken to research “what should or could be rather than what is” (Miller 2006, cited in Hsu and Sandford 2007). The Delphi Technique has been described by Linstone and Turoff (2002) as a method for group communication enabling the whole group to deal with complex issues. It is, however, not a single tool but a family of techniques (Underhill 2004) for achieving consensus in a group. As Skulmoski, Hartman and Krahn (2007) point out in their review of postgraduate works, there is no one or typical method but a technique which is adapted to suit the research task and the situation.

The Delphi Technique sits across the quantitative and qualitative research paradigms, and reflects the third paradigm of mixed methods (Hammersley 2013) or the pragmatic stance (Simpson and Dye 2009). It is this flexibility to span the different approaches and enable interrogation of data to mirror the pragmatic approach adopted in this research which makes it suitable as a data gathering tool. The benefits to be derived are similar to those of the Nominal Group Technique (Underhill 2004) in that complex decision making and creative problem solving are facilitated. This occurs in the context of selected and interested experts; the data is gathered at a distance enabling considered and equal participation (Underhill 2004). Practically, the group never meets but are fed back group trends and asked to review the outcomes with the overarching goal of reaching a consensus. The attraction of using this technique is that qualitative data can be gathered but also be displayed in a quantitative manner which enables consensus to be reached through a ranking of the derived data. This fits in well with the pragmatic approach adopted in this research.

Whilst the Delphi Technique is heavily used in the medical field (Hasson et al 2000, Wiener et al 2009, Rowe 2012), it has also found its way into postgraduate research in the widest possible manner across many disciplines. As Skulmoski et al (2007) explain, it is the adaptive possibility of sample size and selection, and the potential use of different statistical analysis that makes it suitable for the research undertaken for this thesis.

3.3.3.22.1 Choice of Delphi Technique for this study

The selection of the conventional Delphi Technique suggested by Linstone and Turoff (2002) was deemed appropriate for this research and the method is outlined in Table 3.2. The rationale for this choice was the obvious fit with the selected methodology and applicability to the research sample size.

Conventional Delphi Technique

Table 3.2 Table used to select method: The Delphi Method Group Communication Techniques

	Conference Telephone Call	Committee Meeting	Formal Conference or Seminar	Conventional Delphi	Real Time Delphi
Effective Group Size	Small	Small to Medium	Small to Large	Small to Large	Small to Large
Occurrence of Interaction by Individual	Coincident with group	Coincident with group	Coincident with group	Random	Random
Length of Interaction	Short	Medium to Long	Long	Short to Medium	Short
Number of Interactions	Multiple	Multiple, necessary time delays between	Single	Multiple, necessary time delays between	Multiple, as required by the individual
Normal Mode Range	Equality to chairman control	Equality to chairman control	Presentation	Equality to monitor control	Equality to monitor control or group control and no monitor.

A multi-stage approach to the Delphi Technique was adopted. It consisted of the qualitative interviews which were analysed against prior expected outcomes. The cross analysis of themes and a priori codings, and also the use of in vivo codings which arose within the transcripts, highlighted topics which were raised uniquely within the interviews. Once these points were highlighted the next stage was to employ the quantitative element of the Delphi Technique. These points were then abstracted and reframed as 11 questions

and four statements, and structured into a questionnaire; allowance was made for comments to be made in clarification of a participant's stance, should they have wished to do so. The questionnaire was pilot tested and deemed to take 20 minutes to complete. Alongside the questionnaire was an email in letter format explaining the research so far and how the questionnaire had been arrived at. The experts had all self-selected themselves to partake in the exercise, but they were informed that they were free to withdraw from the study at any time. The participants were not aware of the other experts' individual views but were aware of trends. The anticipated outcome was that some divergence would appear and so another round would be necessary to reach consensus. The date set for the return of the questionnaire was ten days from receipt of the email attachment for the questionnaire. A total of nine questionnaires were sent.

The format of the questionnaire was given careful consideration, and the use of the Likert Scale was used for responses to the four statements so that interest in the importance of those topics could be assessed. The remaining 11 questions had statements or options attached to them which were required to be ranked against one another. This was to measure the group's movement on consensus of the importance of these points and then any subsequent change in the next round of consensus gathering. There is some room to look quantitatively at these outcomes. One of the criticisms of the Delphi Technique as suggested by Hasson et al (2000) is that peer pressure can be put upon the grouping should a perceived expert make known a stance. It can be countered by highlighting that the purpose of the Delphi Technique is to reach consensus not agreement (Linstone and Turoff 2002) and consensus can be achieved if there is a majority in agreement (Dalkey, cited in Linstone and Turoff 2002). Another counter argument to the spectre of peer pressure is that although the group consists of self-selected experts they receive feedback as anonymised data, which neutralises this concern as suggested by Hsu and Sandford (2007) and Underhill (2004).

The questionnaire and feedback sheet can be found in Appendix C. The questionnaire was distributed by email to each participant's specified email account, alongside a feedback sheet on the initial, generalised findings of the interviews. There were some instructions on how to use the questionnaire, and a reminder that they as participants were free to withdraw from the process at any time. A time limit of ten days was set and as that date

arrived a follow-up email was sent to prompt the returns. The last questionnaire was returned four weeks after it had been sent out.

The questionnaire used the Likert Scale to enable ranking. The Likert Scale is, of course, a favoured method within the design of questionnaires and fitted the criteria of ranking for the Delphi Technique employed. Before the questionnaire was sent to the participants it was tested in the field by one academic and one professional. In response to their queries and suggestions changes were made to the content, structure and wording of the original questionnaire.

3.3.3.22.2 Delphi process Stage 2 of 3

At this stage of the data collection exercise questionnaires eight out of the nine originally sent out by email were returned. These were then subjected to a weighted average index and then ranked using the results. The data was inputted into SPSS (2010) where calculations on standard deviations were undertaken. Descriptive statistics were used as suggested in a number of research papers such as Hasson et al (2000), Wiener et al (2008), Rowe (2012) and Rudolph et al (2009). The use of the statistical analysis is further discussed earlier in Chapter 3 and commentary provided in Chapter 4. The feedback of the statistical outcomes provided to the participants can be found in Appendix D.

After consideration of the comments added to the questionnaires, two changes were made: first, if there were additional comments to the ranking selection or another classification – this process occurred in five of the 11 questions; secondly, where a participant requested further definitions of the terms used – this occurred in four instances. The amended questionnaire can be found in Appendix D.

A decision was made to incorporate these changes and the entire document was returned to the participants, thus facilitating the opportunity for them to revisit their choices. The time period for this stage was six weeks. Participants indicated that the questionnaire took in the region of 30 minutes to complete. The original letter which accompanied this round of data acquisition requested a two- week turn around; the last questionnaire was actually received four weeks after being sent.

The final round of questionnaire-based data acquisition was collated and sent by email to the respondents, alongside the statistical results of the previous questionnaire results; the

respondents' own choices were returned to enable each participant to identify their position within the data set.

3.3.3.22.3 Delphi process Stage 3 of 3

The final round of the questionnaire was returned in full by five of the eight respondents. The remaining three were offered the opportunity to stand by their original choices made in Delphi process Stage 2 of 3; of these three participants, two agreed to this and confirmed their choice by email.

The returns were then subjected to the same procedure as in Delphi process Stage 2 of 3, the use of descriptive statistics was continued and analyses of the findings were generated. The data generated from this statistical basis was then used to triangulate the rich qualitative data harvested from the interviews. A flow diagram was created to indicate the stages involved in this research process; this is found in Appendix R.

3.3.3.23 Data analysis – coding interviews and questionnaires

The route selected for analysis of the interview portion of the study followed the thematic approach as identified by Braun and Clarke (2006). This is called thematic analysis. Practically, there are four main stages that data analysis is taken through as described by Miles and Huberman (1994); these take the form of data collection, data reduction, data display and the drawing together of a conclusion. These stages are not linear, although certain pinch points in data collection need to be observed to enable completion of the research.

The data collection for this study is discussed under the heading of interviews and also under the section on the Delphi Technique; this collection of data is referred to as the data corpus (Braun and Clarke 2006). For practical reasons, the data was reduced to a manageable and applicable body; Braun and Clarke (2006) refer to this as the data sets – essentially, this is the data selected for an identified analysis. Miles and Huberman (1994) see this in the actions of writing-up notes, abstracting, simplifying and collating data; Yin (2011) describes these stages as “compiling, disassembling and reassembling”. It has been adopted here in identifying the importance of this data that has an effect on this process. The researcher makes a choice of allowing themes to appear or matching the data to the questions being researched in the study. This is rather an “either/or” choice and does not fit well with the constructive and critical realism approach. This is where the role of thematic analysis will enable the study to make use of themes, but also address the questions set in

the introduction. Braun and Clarke (2006) agree that there are hidden assumptions that the design of the study and the researcher bring to the table. This, they believe, must be made explicit when undertaking analysis of the data.

The display of data was based around the construction of a consensual response to the questions set; there is a stratification of meaning to be found in the interview data which a critical realist approach will bring, more so than a single level to the analysis. The use of propriety software enabled coding and nodes to be gathered and stored together. This software displays the information on selected texts, word clouds and word tree formats; it also enables the tracking of changes and development of data classification and subsequent cross tabulations; these are saved as computer files. From these activities themes were identified, and it is these that will be discussed and investigated to answer the questions set and suggest other unknown outcomes surrounding or impacting on the study. Miles and Huberman (1994) recommend a final stage of drawing together a conclusion and further evidencing the outcome by using the data collection and display stages to shore up the conclusions. They believe that validity of this style of study is confirmed by “plausibility” and “sturdiness”. A certain amount of reflexiveness is required to review the data corpus, as is highlighted by Hammersley (2013), Braun and Clarke (2006) and Alvesson and Skoldberg (2009). This is the skill and creativity that the researcher brings to this study.

Within this analysis coding was used around the a priori PESTLE topics which appeared to fit in with the pilot interview. Once coding was completed, another review of the data was undertaken and this gave rise to new points which were investigated further. The analysis went on to look at professional education, knowledge, conflict, power, uncertainty and societal expectations.

3.3.3.24 Consistency and bias

There can be no claim made to an unbiased and neutral stance. Bias and neutrality are apparent in all cases of social science research. Using the philosophical stance proposed by Bhaskar (2009), critical realism rejects neutrality. The approach inherent in critical realism differs from the positivist approach in that it is based upon the fallibility of human knowledge which it (critical realism) sees as based upon a set of changing assumptions and ontology (belief). This research approach for this thesis used a selected group of experts for interviews; thus the sample was biased on a number of levels – the willingness of the sample to take part and the interest of the parties in the topic being investigated. As

experts' opinions are required for this research, the sample necessitates the selection of a sample to fit this criterion and so the selection is based upon the criteria set by the researcher. In this instance the academic interviewees were approached at an educational conference held by CHOBE – the Chairs and Heads of the Built Environment – in Birmingham. The industry interviewees were selected by asking for suggestions from industry contacts; these then suggested other contacts, a process sometimes referred to as the snowball method (Jones 2009, Creswell 2007). The second bias is the self-selection of the interviewees; those interviewed agreed and volunteered to be part of the research. To continue to the next stage of implementing the Delphi Technique the interviewees were asked if they would be prepared to opt in.

Consistency occurs in the methods of gathering the data, where two set questions were asked. This data was then captured on a digital recorder and saved to a secure laptop and backed up on USB key. The data was then transcribed and returned to the interviewee for comment. The typed interviews were then run through the software. Thematic analysis as suggested by Braun and Clarke (2006) was employed and certain patterns and themes were harvested. The aim was to bring reliability to the process through a consistent and documented process of analysis and data gathering exercises (Creswell 2007). Analysis cannot be meaningful unless the themes were checked against those arising in the interview data. The opportunity to generate themes and codes (King 1997) enabled further analysis to progress.

3.3.3.25 Data display and interpretation

In the following chapter the interviews are separated into four sections, namely Australia, Academics, Industry and Professional Institution. The backup quotes are found in the appendices. Following the commentary section the data from the Delphi Technique method questionnaire using descriptive statistics is displayed in table format. In Chapter five the data from Chapter four is employed to enable discussion of the findings, through the lens of works by Bourdieu and Bhaskar to address the four KQs identified in chapter one.

3.3.3.26 Validity in the study

Validity is an important facet in carrying out research, and differs in form depending upon the paradigms selected for the research task. Lincoln and Guba (1985) suggest that the

trustworthiness of research is measured by its ability to exhibit validity and viability. On reviewing Cresswell's (2007) approach to validity it transpires that he states that within the qualitative paradigm validity takes the forms of honesty, depth, richness and scope of data alongside the objectiveness of the researcher. In the quantitative paradigm, data validity would be paramount and relies on the sampling of data, the instruments used to gather this data and then the subsequent statistical handling of the data. Further considerations highlighted by Cresswell are honesty and truth. In carrying out the research for this task these thematic analysis (Braun and Clarke 2006) was employed, which has enabled the respondent's experiences and interpretations to be noted. Alvesson and Skolberg (2009) explain that interpretation can be employed in any number of metaphorical backdrops. With this in mind the researcher opted for a reflexive approach set within the philosophical stance of critical reality. The use of university guidelines (UoG REC 2010) in setting out the researcher's stall in advance, describing what will be studied and the aim of interpreting the data within this framework, enables the researcher to claim confidence in the honesty and truth of the research task.

3.3.3.27 Reliability and the study

Reliability can be taken to have different meanings, but given that the context of this study is focused through the lens of critical realism, this view of the theory is that a neutral stance is not possible as the interviewee brings bias to the research. In response to this it is acknowledged that reliability must be focused upon the methods of data collection and subsequent analysis. Checks and balances were introduced to these stages of the research. Throughout this stage recording and organisation of the data was mapped, most notably with the use of software to compile a database. There has been the use of interview transcripts, which were returned to the interviewee to gather further meaning before submission to data analysis. There has been the development of the questionnaires from the data set which were also returned to the interviewees for comment and further clarification. All these steps were undertaken to ensure that the mechanism of the research task was as reliable as possible. This study cannot claim to follow the positivist ideal of the transplantation of the unique methodology of another researcher in another similar investigation to the same effect. As reliability and consistency is of such importance to the researcher, the steps listed below were followed:

1. An interview schedule was drawn up, and the details of the expert participants were collated to ensure an audit trail.
2. The sample used was representative of experts in the field of quantity surveying education.
3. Ethical considerations were accommodated in several ways; each participant was approached individually and furnished with the participant information sheet. The use of the UoG consent form and the return of the participant interview data for checking was applied in all cases.
4. The questions posed were the same for each of the candidates; the interview structure enabled the interviewer to explore emergent ideas and experiences with each individual.
5. The interviews were analysed to identify emerging themes and these were fed back to all participants using the Delphi Technique. This allowed the interviewees to further clarify points they had made.
6. The interviews were all digitally recorded ensuring a complete transcript. These were then entered into an electronic data set for analysis and storage.
7. Triangulation was carried out by cross examining interviewees' transcripts with the electronic data set, questionnaires and critical literature.
8. Data analysis was carried out in a thematic manner set against prior knowledge and identification of emerging topics. There was a continuous cycle to define the core themes.
9. Reflexivity was introduced by following the suggestions made by Weis and Fine (2000) and cited in Cresswell (2007) as a guide for analysis.
10. All participants were given sight of their transcripts for further comment.
11. All participants were copied in on the analysis findings through the use of the Delphi Technique to arrive at a consensus.

The purpose of carrying out the above procedures was to address any concerns over the reliability of the study.

3.4 Summary

Following the rationale proposed by critical realism that the phenomena being studied should guide the research methodology and methods employed, a pragmatic approach was applied to this study. An awareness of the intended audience and their preferred style of data gathering methods has been acknowledged. It has been suggested that the preference for quantified data by chartered QSs and the small size of the sample due to the geographical constraints of the study are best suited to rich data. By using both methods triangulation can occur which may address issues concerning validity and the reliability of the generated data set.

A mixed method focus was adopted which used both the positivist and interpretivist stances to interrogate the data gathered by this research. Attention was paid to the validity and reliability of the data, and there is an acknowledgement of inevitable researcher bias and where feasible an honest reflexive interpretation made of the data. Ethics have been carefully considered and informed consent sought using consent forms and notes for participants (samples are found in the Appendix). Interview methods and two rounds of questionnaires were carefully considered and used to collect field data; this will be discussed in Chapters four and five.

In the following chapter a summary of the outcomes of the analysis will be discussed, divided into two sections qualitative and quantitative. Within these two headings themes will be explored using priori coding and highlighting unexpected themes. These themes are supported by descriptive statistics drawn from the use of a Delphi Technique designed to support an application of Future Studies aimed at addressing the KQ's derived in Chapter 1.

4 Chapter 4: FINDINGS

4.1 Introduction

This study used a mixed method approach to address the aims and objectives of the research, in particular the KQs stated in Chapter 1. The data was gathered by a number of methods, and the rationale discussed in the methodology Chapter 3. The objective of this chapter is to describe the process undertaken, the methods employed and the data that was obtained. This part of the research generated both quantitative and qualitative data and these two approaches were used to triangulate the data generated and improve the validity and reliability of the study. The outputs are in the form of descriptive statistics generated by applying the Delphi Technique and the use of thematic analysis. This used semi-structured interviews and where prompted by the application of a priori coding and the generation of word cloud frequencies. The study began with two pilot interviews which were used to refine the topic and generate aims, objectives and the KQs. The study then progressed to semi-structured interviews with a sample of nine professionally experienced interviewees, from a set of a priori coding and qualitative analysis which was used to generate a set of themes. This activity highlighted new themes and some missing topics. These unexpected topics and themes were investigated further through the use of the Delphi Technique, to reach some consensus between the interviewees as to future possible outcomes for the subject of this research.

This chapter has been divided into two main sections based around qualitative and quantitative data. Within the qualitative section an explanation of the data mining activities and a commentary on the findings is offered. Word frequencies and development of coding are both discussed and exemplified in Chapter 3. This forms the basis of a structured approach to uncovering themes through the use of thematic analysis of the qualitative section of this chapter. There is a section on data set characteristics to give context to the subsequent findings. The qualitative part of this chapter comprises four subsets of data derived from the interview samples. These are characterised as the Australian experience and the views of English experts and are divided into three sections – academics, industry

and the profession. There then follows the second part of the chapter which focuses on the quantitative results of the two rounds of questionnaires.

4.2 Qualitative

4.2.1 Interviews with academic, industry and professional experts

Initially, the use of word frequency tables was undertaken as a starting point for KQ1 and KQ2. These gave an idea of the direction of the commentary and indicated areas which were lacking, as in the case of I2, who made no comment on KQ1 (p9).

The outcome from the qualitative findings for KQ1 was a clear divide in the cohort between those in academia and those in industry: the academics were knowledgeable about the White Paper to some extent whilst the experts in industry were less aware. This is discussed in more detail in Chapter 5.

The interviews then enabled a further set of word nodes to be clustered around KQ2 (p9) put to the respondents.

Table 4.1 Initials of respondents versus ranking of top ten words generated – KQ2

A1	A2	A4	I1	I3	I2	P1	A3
QS	chartered	education	education	education	education	economics	industry
education	RICS	global	professional qualifications	economics	debt	taught	programmes
employers	student	RICS	recruitment	non-cognates	employment	value for money	education
training	partnership	quality	training	cognates	knowledge	skills	universities
profession	members	universities	skills	graduates	institutions	knowledge	vocational
people /graduates /students	education	indicators – KSI	competencies	university	professional qualifications	professionals	students
degree	institution	profession	career paths	business	skills	industry involvement	communicate
management	course	private provider	apprentices	apprenticeships	market	global	training
area	fees	contact time	sector	people	business	university	parents
KPI	private provider	skills/knowledge	institution	degree	training	technical	technocratic

From analysis of the word cloud table there is a noticeable interest in education among all the parties. Most of the parties maintain that universities are the place to deliver HE, whilst the cohort also felt that training tended to be focused upon by industry. Representatives of industry and commerce were focused upon professional qualifications as a route to

training; they were also the only party that discussed apprenticeships to any significant extent, with members of the profession discussing the subject in a more limited way

4.2.2 Data characteristics of respondents

Using Nvivo 9 to collate the interview data each respondent was allocated characteristics using the classifications of gender, experience, role and qualifications. This helped to establish the sample as homogenous and to justify the selection of the expert panel for the Delphi Technique by using a stakeholder analysis to reveal those parties who have interest in the topic but also influence over policy around the topic. In this case the respondents have all over 30 years' experience in the CI or HE, and hold positions to influence the educational development of QSs. The details of the sample can be seen in Appendix B.

4.2.3 Qualitative Commentary

4.2.3.1 The Australian experience

4.2.3.1.1 The Australian interviewees

A study of the Australian experience of similar policy changes to those proposed in the White Paper 2011, was developed by examination of the literature, interviews with Australian QS academics and interrogation of other sources such as websites and government material. The common factors between Australia and England which have been previously outlined formed the basis of a comparative analysis, which may point to the future development of English-based professional education as well as addressing KQ3 (p9).

The similarities of the provision of education for Australian and British undergraduates in quantity surveying in the HE sector were explored. The transition of the Australian HE system under governmental changes was examined using interviews with Australia-based quantity surveying academics.

In the course of this study two quantity surveying academics – A5, an academic at an established state university in the so-called Group of Eight, and A6, an academic at a newer technical university – were interviewed to triangulate the information gleaned from websites and government reports on the provision of HE undergraduate education. Both academics were chartered QSs themselves and were selected to reflect two separate tiers of Australian HE. They were asked to describe the present provision of undergraduate

quantity surveying education. Both agreed that provision could be found in the HE sector and can be part-time or full-time study on professional programmes accredited by the RICS. As there is similarity in the provision of undergraduate quantity surveying education in Australia and the UK, the interviews then led on to an investigation of the historical development of the Australian HE sector and its move towards mass education over the last 30 years.

4.2.3.2 Issues highlighted

From a review of the material drawn from these interviews the main issues to arise were clustered around four themes: the purpose of a university; employability; quality; and the global economy. Two other points addressed were fees and the future of the Australian HE system. Fees are addressed first, and the future of the Australian HE system is considered towards the end of this section. Surprisingly, little significance was given over to the issue of funding. Whilst there was ample evidence of how to calculate fees and what financial help was available, both interviewees did not consider this topic an important issue (see Appendix G, A5 Response 7). This would indicate that the fee system has been in place in Australia for long enough to become the norm and was not considered exceptional. When looking through the financial assistance documentation a mixture of grants and loans available through the Commonwealth system were found. The fees that were charged were based on anticipated end salaries (Australian Bureau of Statistics 2005) and also the state's official opinion of likely skill shortages (Hare 2012). A review of the funding system from the perspective of the university was discussed, and this supported the view that the state controlled the amount of top-up fees, which it paid either through research funding or student top-up fees. SN stated that 30 per cent of income came from the Higher Education Contribution Scheme (HECS) and the rest from full-fee students, research and donations. He also observed that the income for each building student was the same across all HE institutions (see Appendix G, A5 Response 8).

4.2.3.3 The purpose of a university

Discussion with A5 and A6 focused upon the existing HE sector structure in Australia; the overall issue was about sharing the research budget and how this had affected education, in particular professional education. As A5 explained, his university had a specific view that attracts both better and international students and focuses on research (see Appendix G, A5 Response 9). He said that to meet this market staff were required to have higher academic

qualifications and not professional qualifications, and few academic staff now had extensive practical experience (see Appendix G, A5 Response 10). A5 observed that there was a dichotomy between research-driven qualifications and teaching requirements demanded by the students and industry. A5 reflected on the status of undergraduate degrees within the CI in Australia, and speculated as to the future provision of this type of professional undergraduate education (see Appendix G, A5 Response 11). A5 finished this discussion with a reflection on the validity of undergraduate professional education, questioning why students go through university and suggesting that the rationale for doing so was compromised (see Appendix G, A5 Responses 11 and 12). This observation mirrors an analysis carried out by academics in the HE sector which suggests that there is a level of awareness that employers are the end users of the education system in place at present. This then leads on to the next section on employability and the role of professional HE (see Appendix G, A5 Response 12).

4.2.3.4 The employability of QS graduates

A major theme emerging from the literature concerned employability, which was seen in the Bradley Report (Commonwealth of Australia 2008), the Skills Australia (2012) and in articles such as that written by Hare (2012), where the emphasis was on widening participation and filling the perceived skill shortage. There was a clear emphasis throughout on educating for employment. This was picked up by A6, who observed employment and employability amongst QS graduates was around 95 per cent but associated with the 100 days industrial experience within courses (see Appendix F, A6 Response 3). A5 also discussed this, observing that without work experience QS graduates would not get employment (see Appendix G, A5 Response 13). A deregulation of student intake numbers has led to an increase of students offered places by 5.5 per cent (as at May 2012 on the previous year (Hare 2012)). This was supported by A5, who also noted that construction-related studies in Australia brought their own issues when they interface with the workplace; he felt that this had impacted on student attendance (see Appendix G, A5 Responses 4, 5 and 6). This was further supported by A6 who remarked that 100 days of work experience outside university were required to be awarded a degree (see Appendix F, A6 Response 2) from a professionally accredited programme.

The rationale for examining professional undergraduate provision in Australia was partly grounded upon the similarity of the professional body requirements in both the UK and

Australia. This warranted closer inspection. There was also a question straddling the twin topics of employability and professional accreditation: namely, how important is professional accreditation of the course of study to the employability of graduates? A6 suggested it was imperative, and without achieving the accreditation there was “reduced scope” in the marketplace for the graduate (see Appendix F, A6 Response 5).

4.2.3.5 Role of the Institutions professional knowledge set and Professional education

Prior to the introduction of the Tertiary Education Quality Standards Agency (TESQA), the Australian HE sector held the responsibility for self-regulation and its own operation within the regional legislative framework. The issue raised here was measuring the quality and consistency of the education provided across all of Australia. What was apparent in the case of professional quantity surveying education was that the RICS had a major role in accrediting these programmes. A5 agreed that currently there was no accreditation of education by government bodies, although some professionals had accreditation requirements to meet their institution’s standards and equivalence to other programmes (see Appendix G, A5 Response 14). A5 went on to observe that student surveys have shown that students prioritise their work experience outside academe and the reinforcement of their academic studies that this practical experience brings (see Appendix G, A5 Response 15).

As has been mentioned previously, universities in Australia enjoy self-regulation and have operated within regional legislative constraints rather than a countrywide framework. This has opened up a benchmarking market where individual professional bodies assess the suitability of HE courses for their membership. This was pointed out by A5, who went on to observe that seven professional bodies accredit their programme all with different requirements; government attention on course learning objectives would reduce professional institutions’ influence on industrial practice and refocus it on professional practice (see Appendix G, A5 Response 16). This view was supported by A6 (see Appendix F, A6 Response 4).

The large number of accrediting bodies can be seen as wasteful and points to a lack of a universal equity benchmarking. The government as a large investor in the HE sector is now launching the TEQSA to effect a quality standard across all undergraduate provision. As was stated by A5, “professional bodies can focus on Continuing Professional Practice (CPD) a more lucrative market than the accreditation of undergraduate programmes, by

introducing TEQSA the red tape associated with these individual accreditations will be reduced” (see Appendix G, A5 Response 17).

The administrative burden of satisfying a large number of professional bodies is costly and points to a fragmented market in both HE and within the CI in Australia. Concerns around employability and a lack of skills were pointed out in the Bradley Report, which observed that there would not be enough skills available to meet the demands of 2020 within Australia. The current Australian government (at the time of writing, 2013) has increased the numbers of students attending HE, and this has resulted in large increases of undergraduate and postgraduate applicants. These increases had resulted in concerns over the quality of the service provided.

4.2.3.6 The quality of provision

As has been stressed, Australian universities are self-regulating and are autonomous in their operation within the state legislation that governs funding. The introduction of TEQSA in 2012 seemed to be aimed at bringing in more state control over quality and the benchmarking of degrees. A5 agreed with this analysis (see Appendix G, A5 Response 1), and explained that systems were still developing and benchmarking was being discussed (see Appendix G, A5 Response 2). A6 observed that whilst it was apparent that the state was shifting its position on intervention and the HE sector was in transition from self-regulation there seemed to be confusion over the role and purpose of the TESQA. It appeared that the confusion arose due to a lack of precise interpretation of the rules and the openness of the universities’ own application of the framework (see Appendix F, A6 Response 1).

The role of the Quality Assurance Agency for Higher Education (QAA) was not undertaken by the Australian government, and the introduction of the TEQSA was evolving at the time of this research but lessons were drawn from the use of the QA system in the UK. In Australia the UK QA system was seen as something to be learnt from, a point expanded upon by A5 (see Appendix F, A5 Response 18).

There appeared to be a more flexible approach to the undergraduate study period and individual students’ progress through their pathway. As described by both interviewees this was the time taken to complete a programme of up to ten years and the use of general degrees with specialisation in the final stages of study. A5 identified the programme as

taking four years but the completion time period as potentially ten (see Appendix G, A5 Response 19). This was reinforced by A6 who suggested that specialisation occurred in the final stage (see Appendix F, A6 Response 6). There was further flexibility in the system which A5 suggested covered part-time and flexible learning; this facilitated the individual students' progress and addressed the issues of work experience and part-time study (see Appendix G, A5 Response 20).

There was a noticeable difference in the flexibility of the undergraduate degree structure between the UK and Australia. However, there was a lack of key statistical information (KSI) on completion of undergraduate courses in Australia and the rates for the shorter completion time in the UK. This, however, raised concerns over the quality of service and the benchmarking of similar courses. A concern over marketisation of the graduate was raised by A5, who suggested that quality control was important for the universities and emerging students (see Appendix G, A5 Response 21).

The issue of increasing numbers of Australian students at intake, due to government relaxation of student quotas, was the basis of the article by Hare (2012) where the rationale given for the attendance of one student was simply that they were offered a place. This showed that widening participation may bring concerns over quality and the "like for like" education on offer. It was here that the question of quality in a mass education system was raised again. The role of new technology enabled a wider audience to be addressed. This was raised as scalability by A5 in that as the curriculum material was available, with a small increase in investment, additional students could be accommodated through the use of IT (see Appendix G, A5 Response 22).

The other interviewee agreed with the idea of the appearance of the mass audience, but went on to explain that their personal experience of it was as an amalgamation of seven teaching universities and the Open University which covered a "massive programme" and employed a pyramid structure to operate these learning programmes. He agreed that the numbers were large (see Appendix F, A6 Response 7). This move to mass education through the ideal of widening access and the relaxing of student quotas by the Australian state facilitated this move to scalability.

Hare (2012) also highlighted an increase in the postgraduate sector and the numbers of overseas students. This was as directed by the government, a policy based upon the

recommendations of the Bradley Report. This has led to the marketisation of HE in the global economy.

4.2.3.7 The global economy

The Australian government have forecast a skills shortage within the country (Gostudyaustralia 2012) and also acknowledge the international competition faced by citizens in a global market (DEEWR 2012). Tied into this is an aspirational culture where wider participation is a goal for individuals and the Australian state (Hare 2012). The interviewees were aware of this general situation and its impact on the HE sector, but also understood the use of the HE sector as a global and local market and the role of international competition. The role of the knowledge economy is being exploited in a move towards marketisation of the education sector.

4.2.3.8 The knowledge economy

The rise of the knowledge economy and its impact on the 'real' economy of the host state is now an openly discussed phenomenon, especially when viewed with an eye on commerce (Olssen and Peters 2007, Bernstein 1998, Ball 2007). The HE sector has had the ability to recruit full-fee paying foreign nationals in Australia since 2003. Student quotas for the academic session 2012/13 were relaxed and international student visas offered by the Australian state.

This has opened three clear areas of competition within the Australian HE sector between: HE providers from abroad; HE providers from other territories; and the export of Australian HE to other countries. This was suggested by A5, who articulated that there were two possible directions for this market; competing HE providers could set up temporary campuses and sell popular courses, and outgoing where the interviewee gave an example of his university exporting a campus to Singapore which, in the end, was not financially viable (see Appendix G, A5 Response 23). The overall feeling was that for the market to expand it needed to change and adapt to the new global context. The main point was knowledge development and its ability to be a two-way process. If this did not transpire, then the market was purely economic and would stagnate if no other benefit was derived, as explained by A5 (see Appendix G, A5 Response 24). The strategy behind opening up new markets needs to be more than economic, and the benefits need to flow in both directions. Following on from the provision of knowledge there is a change in the

recipients' perception of the commodity of knowledge and its provision; this is addressed in the following section.

4.2.3.9 Students' expectations of the HE sector

As students become accustomed to paying towards their education, they adopt the ideology of investment in the self for their own benefit. This can be seen as the individual rather than the federal government taking ownership of learning, a clear indication of the *rise of individualism* (Offer 2008). This neo-liberal stance has evolved from increased choices and the arrival of the customer dressed around the form of individualism and self-distinction. Bourdieu (1985) introduces this theme of distinction as a way of gaining advantage through capital. This capital can be evidenced in taste, knowledge, behaviour, ownership of objects or certificates – something which Bourdieu describes as cultural, social and symbolic capital. Economic capital is only one form that capital takes, and if the three other forms of capital are used to interrogate social phenomena then a discussion can be had on the rationale of investing in HE.

Student expectations are perceived to have changed mainly due to their awareness of paying and the subsequent position of the consumer within HE. This was commented upon by A5, who said that students believe that they now employ academics and view the gaining of a degree as a contractual arrangement; he also remarked on the use of networking by the student to gather information and stay informed (see Appendix G, A5 Response 25). It appears from analysis of the interviewees' statements that students take more ownership of their learning. Research showed that there was one private university in Australia (Bond University), where it appears that a full-time two-year course of study is offered rather than the structure favoured by the state's own HE institutions. A5 suggests part-time education would not be offered in Australia mainly due to the flexible study option employed by the state universities (see Appendix G, A5 Response 26).

It should be made clear that the position of private providers has not been researched further in this study; the majority of HE institutions are classed as public providers and number 38. Bond University has been providing education since 1988 and is the sole provider of private education. Therefore there has been little impact by the private provider upon the HE system with respect to this study.

4.2.3.10 The future

The interviewees gave some insight into possible outcomes for the future of the HE sector in Australia and the provision of professional undergraduate degrees. They raised three main areas of interest: demographics, loss of professional identity and the restructuring of the HE sector in Australia. These are discussed below.

4.2.3.11 Demographics

Whilst there is a demand for professional education at undergraduate level evident in the large number of students applying for places, there is a shortage of academic staff to fill teaching roles. Universities with a research facing strategy will forego experienced professional educators for research active staff. As A5 points out, restrictions on the employment of staff which favours research over practice will challenge the reputation of the taught programmes in a negative manner (see Appendix G, A5 Response 27). Skill shortages in the industry has a double-edged sword effect with demand drawing academics into the commercial world of work leaving less experienced staff to teach the higher student numbers demanded by the future needs of industry. Additionally, the professional boundaries are being blurred by the restrictions placed upon the HE sector.

4.2.3.12 Collaboration and loss of identity

Industry has emphasised the role of collaboration within the workforce and looks for the provision of not only technical knowledge but also personal skills which facilitate collaboration. The provision of professional undergraduate quantity surveying education is difficult to locate within the more popular built environment professions such as architecture and engineering. A5 suggested that there is now a strong movement to integrate very different professional programmes; this brings with it a loss of identity for the QS as different disciplines are subsumed into a generic mass. This has enabled the more high profile professional routes such as civil engineering to gain students who would traditionally be on the building pathways (see Appendix G, A5 Response 28). Further to this integration within the built environment it was suggested by A5 that further displacement of the programmes can be witnessed by the reorganising of faculties and the various places that quantity surveying courses can be found in different institutions. (See Appendix G A5 Response 29).

The issue emerging here is about keeping a unique identity and unique knowledge; as Schön (1985) would suggest, it is an important role of the professional practitioner. Industry is demanding skills which suit a broad range of disciplines to enable collaboration, but the resultant HE sector delivers less obvious unique professional knowledge. As there is a merging of professional disciplines there is also the demand for mass participation, which leads to the conclusion that there will be a readjustment of the HE sector.

4.2.3.13 Adjustment of HE sector

The outcome of the government's push for mass participation in HE and the introduction of TESQA was that the HE sector had to adjust to accommodate the demands made upon it. A5 stated that he believed that the university sector would segment and that at the top there would be the Group of Eight who would continue to benefit from most of their income coming from private donations and research income. This group would also benefit from the biggest cohort of international students due to the reputation of the constituent institution. His view was that the other providers would be more teaching focused, and their main income would derive from teaching activities (see Appendix G, A5 Response 30).

A5's view is supported by the article written by Hare (2012) where the students at institutions outside the Group of Eight are very aware that they are less academically able and consequently select establishments who will offer them places. Hare (2012) suggests that there is little information on the socio-economic backgrounds of these types of student and therefore little can be drawn from this information.

A5 speculates that there is surplus demand for undergraduate places in the HE sector at present, but suggests that this will reduce leaving the sector with a crisis in the future. He stated that the newer teaching institutions will suffer (see Appendix G, A5 Response 31).

There was, however, a suggestion that the more forward planning institutions have already invested in bridging FE and HE. This was referred to as a dual-sector approach, and was seen as especially prevalent in CI professional education which, as observed by A5, has large numbers of students who have been able to cross the bridge from FE to HE (see Appendix G, A5 Response 32).

4.2.3.14 Australian Experience as a Benchmark

The original premise proposed in this thesis was that lessons could be learned and transferred from the Australian HE sector. There was an assumption based upon the earlier introduction of fees in the Australian HE sector, that Australian signposts could be used to investigate and forecast the likely impact upon English QS undergraduate programmes. It is difficult to make any meaningful comparison due to ideological and political differences in the governance of the state instrument. The Australian government has embraced *widening participation* whilst the UK government has focused upon *fair access* rather than *widening participation*. Another major difference has been the approach taken by both governments in regards to migrants and the issue of work visas criteria for students. Overall the differences between the UK and the Australian experience are constrained by the role of the economy and Australia has been in a different phase to that of the UK. Australia has been in need of human capital and has used the provision of student visas of up to 10 years to enable migration.

There have been some points of interest raised which ring true for most academics in Australia and the UK mostly around the quality of provision for vocational courses. It is striking that students in both parts of the study are focused almost exclusively on the symbolic capital to be gained from successfully completing a degree over the knowledge that they will gain. There are differences between the Australian and UK HE system such as the of timescale to complete the undergraduate programme as a result is that in Australia there is no part time provision. There is also the heavy use of vocational work placement by students to finance their studies in Australia, perhaps to the detriment of their studies. Students in Australia appreciate the importance of work experience and a skill set that enables them to secure work.

4.2.4 The views of English experts

4.2.4.1 Introduction

The following section considers the sample drawn from England and analyses the views of those involved with developing strategies to deal with the possible impact of the HE White Paper 2011. These interviews were divided into three subsets: academics (educationalists); industry members (industry); and members of the professional institution (professional).

4.2.4.2 The commentary on interviews

The word clouds produced from the initial interviews were given structure by clustering the data into the two areas defined in KQ1 and KQ2. This was developed to give structure to the commentary derived from the interviews. This commentary looked at the interviews carried out with academic facing respondents and has initially been coded using a priori data set based upon PESTLE (Porter 1980). The data has been reallocated to themes which evolved from the original codings whilst the data was reclassified during the following stage of analysis.

4.2.4.3 Academic Respondents

The use of PESTLE gave rise to an initial data coding set already described. In addition, a section for thoughts was added, which allowed for considerations outside the PESTLE prescriptive codings.

Of primary importance was the introduction of the latest legislation impacting upon HE. It is also the first question posed in the interview and addresses KQ1. When interrogating the word cloud for frequency of words it was found that legislation ranks near the bottom; academics focus more on the outputs of education rather than the White Paper. These follow after the commentary on the White Paper 2011.

4.2.4.4 The HE White Paper 2011

The introduction of the White Paper is well known within the academic community. A1 highlighted the slow transition of the White Paper into Act of Parliament. This suggested that a wider debate about HE provision was superseding the political will to develop the White Paper (see Appendix J, A1 Response 1). A2 highlighted some aspects of the White Paper which he welcomed, such as the introduction of sandwich degree options, but overall he felt that the financial sustainability of HE institutions had become paramount under the implementation of the White Paper (see Appendix K, A2 Response 1). The position held by A2 was supported by A1, who felt that the financial aspects that had been introduced turned the issue of attending HE on its head and were the result of an ideological change (see Appendix J, A1 Response 4). A4 felt that the introduction of the White Paper had resulted in a volatile HE sector (see Appendix I, A4 Response 1). The framework which measured the outcomes of the HE sector had yet to be finalised, but the overall concerns of academics were that the wrong benchmarks were being used

particularly the Student Satisfaction Key Statistic. A4, A2 and A3 suggested that students were not aware of the relevance of their degree to the National Student Survey (NSS), and better communication was required to inform the students of their unique position (see Appendix I, A4 Response 4; Appendix K, A2 Response 9; and Appendix H, A3 Response 2). A1 pointed out that the White Paper was not well known in industry; the legislation based on the Paper was yet to be introduced and so most employers would not address the changes until this happened; this was supported by A2 (see Appendix J, A1 Response 23 and Appendix J, I3 Response 10). The issue of funding was raised by A4, who stated that this had been the fundamental catalyst for the White Paper (see Appendix I, A4 Response 23).

4.2.4.5 Education and training of professionals

After the analysis of the word clouds generated by the academics' interviews a list of word frequencies was employed to order the following commentary. There was a significant discussion held around education and the purpose of education – both professional and in the round – and interested parties such as students and employers were identified; political changes were also highlighted followed by the marketisation of the HE sector and its possible response.

4.2.4.6 The purpose of education

The initial stance taken by a number of academics regarding the purpose of education indicated an obvious split between a view of education for general purposes and a view that saw education as specific technical training. A3 suggested that the education delivered must be more general and focused upon a wider impact for the benefit of society rather than a narrow technocratic approach (see Appendix H, A3 Response 1). SP focused upon the basic educational needs required for a vocational professional level education, believing that these were of paramount importance for achieving a successful undergraduate degree (see Appendix I, A4 Response 2). A1 discussed the relevance of the professional undergraduate degree and suggested that the role of education within the surveying practice was attracting a lot of controversy (see Appendix J, A1 Response 2). A1 emphasised that education should teach individuals to think and how to solve problems, and cited other HE providers who emphasised the divide between education and training (see Appendix J, A1 Response 3). A1's position was supported by A3 who

stressed the technical skills and thinking skills of individuals (see Appendix H, A3 Response 4).

4.2.4.7 Role of professional bodies

There is an ongoing debate within the RICS membership revolving around the role of the accrediting bodies within the HE sector. A4 suggested that the professional institution was changing its objectives and focusing upon quantity over quality. He suggested that there were now alternatives to gaining entrance to professional qualifications rather than through studying at HE level (see Appendix I, A4 Response 12). A1 also highlighted this haziness over the professional body's aims (see Appendix J, A1 Response 22). A2 suggested that the provision of programmes and subsequent delivery methods were dependent upon successful professional accreditation (see Appendix K, A2 Response 12). There was an underlying dissatisfaction with the professional body's reaction to these changes (see Appendix I, A4 Response 31; Appendix K, A2 Response 18; and Appendix J, A1 Response 33).

4.2.4.8 Interested parties – students and employers students

The role of students as consumers was rejected by the academics, and there was a view suggested by A1 that students would question if an undergraduate degree was necessary on an individual-by-individual basis (see Appendix J, A1 Response 27). The use of the NSS as a measure of quality was condemned by all the academics (see Appendix K, A2 Response 16, 9 and Appendix I, A4 Response 21). A4 questioned the short-term basis upon which students make judgements about the quality of their studies (see Appendix I, A4 Response 27). There was a possibility of increased overseas student applications, but a squeeze on student visas by the Home Office had restricted this – as suggested by A2 (see Appendix K, A2 Response 17). However, A1 suggested that there was a demand from Eastern European countries such as Poland (see Appendix J, A1 Response 32).

4.2.4.9 Employability

To facilitate the development of themes, skills were grouped under the heading of employability. All academics were realistic about the fact that the focus of students was on vocational degree courses that would lead to employment in a related field. A3 speculated that the increase in fees and anticipated debt would focus students on gaining employment to service these debts (see Appendix H, A3 Response 3). A1 suggested that there was

growing global demand for surveying services, especially in Eastern Europe (see Appendix J, A1 Response 5). A4 introduced the idea of professional accreditation for degree pathways to endorse the employability aspect of a vocational-facing educational route. He went on to point out that knowledge benchmarks, whilst set by professionals, lacked the feedback loop necessary to alleviate confusion (see Appendix I, A4 Response 3). Specialisation of skill sets and knowledge was one way in which HE providers competed with one another as pointed out by A4 (see Appendix I, A4 Response 5). A1 raised the point that the QAA (QAA 2010) measure graduate employment through a very narrow classification – to the detriment of vocational students (see Appendix J, A1 Response 29). On a practical note, A1 explained that potential employers were involved in the degrees through employers’ forums (see Appendix J, A1 Response 35).

4.2.4.10 Skills

There was a level of discussion surrounding the content of the undergraduate provision, with some concern over the level and type of skills addressed. A4 felt that there was little teaching done to provide basic skill sets such as interpreting drawings and using scales. He felt that the emphasis was placed on higher level skills sets at the expense of the basic (see Appendix I, A4 Response 15). A1 viewed the situation surrounding skills as in a state of flux but not of concern (see Appendix J, A1 Response 14). She indicated her belief that EU students were better equipped to study in HE (see Appendix J, A1 Response 15). A1 suggested that with skill sets one size does not fit all as employers demanded different and bespoke skills which affected the individual’s skill transferability (see Appendix J, A1 Response 16). The mix of skills that were flexible and adaptable and attributed to the QS resulted in a variety of possible employment (see Appendix J, A1 Response 17). A3 suggested that there were differentiations between the skills gained from training and those from HE, and he also believed in being industry engaged but not industry led (see Appendix H, A3 Response 7).

4.2.4.11 Restructuring HE sector

A3 believed that there was a bifurcation of the HE sector resulting in a divide between universities based upon subjects and the age of universities (see Appendix H, A3 Response 6). He also suggested that the size of an institution would have an impact on its viability and specialisation in either vocational or humanities disciplines (see Appendix H, A3 Responses 8 and 9). A2 backed this train of thought and referred to sector consolidation

(see Appendix K, A2 Response 4). A4 also heavily emphasised a split between traditional HE subjects and technical subjects and went on to speculate that built environment subjects would be forced out of the university sector (see Appendix I, A4 Response 9).

A1 stated that changes have already been implemented to the structure of university teaching resulting in reduced student contact time, something which reflected student and employer demand. She also stated that the universities have engaged with this to increase efficiencies (see Appendix J, A1 Response 9). A4 backed up the assertion that contact and teaching time had diminished, and pointed to the cost efficiencies required in the HE sector (see Appendix I, A4 Response 10). A2 took the discussion in the direction of the specific idiosyncracies of the CI and the responses HE had made to suit employers, citing the example of part-time educational routes (see Appendix K, A2 Response 3). Mode of delivery was mooted by A2 as a possible change using flexible approaches and employing new technologies (see Appendix K, A2 Response 5). A1 reflected on flexible approaches by suggesting the blending of CPD, independent modes of study and industry-placed learning (see Appendix J, A1 Response 12). A1 raised a concern about the training versus education implications of these styles of delivery and the constraints placed upon the individual through training and deskilling (see Appendix J, A1 Response 13).

Competition from the FE sector may become evident according to A1 (see Appendix J, A1 Response 28), and students may opt to study at FE and transfer to HE further on in the undergraduate degree delivery. A4 stated that the biggest impact upon the HE sector was witnessed in the post-92 institutions (see Appendix I, A4 Response 28). The notion that relocating quantity surveying vocational degrees into more general departments and faculties would increase the loss of identity and publicity of these courses was discussed by A4 (see Appendix I, A4 Response 30).

4.2.4.12 Ideology of vocational provision

All of the academics referred back to the societal demands placed on education, where there was a duty to serve society and a resulting uniqueness of the education provided to the undergraduate (see Appendix H, A3 Response 7; Appendix K, A2 Response 14; and Appendix I, A4 Response 20). A1 discussed the likely impact of the vocational degree as 'bedlam' and A2 stated that there will be consolidation within the sector (see Appendix J, A1 Response 26 and Appendix K, A2 Response 4). However, A4 feared that there will be

a reduced number of courses on offer and the viability of surveying courses would be questionable (see Appendix I, A4 Response 19).

4.2.4.13 Marketisation of vocational provision

There was speculation about the financing of the HE sector. A4 suggested that the funding mechanism was a trigger for change and went on to state that it was propped up by government (see Appendix I, A4 Response 16). A1 believes the market price charged for an undergraduate degree will oscillate but settle at £7000 (see Appendix J, A1 Response 28).

A2 explained that managers in HE had taken a strategic view of courses primarily from a commercial standpoint (see Appendix K, A2 Response 8 and 16). Here there was also an undercurrent in the discussions of a return to elite education, particularly with the drop in applications to technical courses and the rise in student applications to institutions focusing on humanities and general education (see Appendix I, A4 Response 17). This view was also voiced by A1 who posed the question about differentiation between the Russell Group and the post-92 institutions (see Appendix J, A1 Response 34).

The theme that developed from the academic interviews was about strategy and the economic approach to education at the expense of society (see Appendix I, A4 Response 18). Recognition of changes to income for universities generated by technical undergraduate degrees was clear and this has had an impact upon the security of degrees within the university sector (see Appendix I, A4 Response 19). There was an acknowledgement that the numbers of students registering for vocational undergraduate degrees in the post-92 institutions has dropped (see Appendix I, A4 Response 24), but there was also some optimism displayed that numbers of applicants will rise to these courses (see Appendix I, A4 Response 25).

4.2.4.14 Private providers of vocational provision

There was some acknowledgement that private providers were mentioned within the White Paper. The interviewees from academia speculated that private providers could enter the HE marketplace; A4 believed this to be a significant possibility (see Appendix I, A4 Response 22). A2 suggested that private providers could work with employers (see Appendix K, A2 Responses 2, 11), whilst A4 believed that the professional institution could become the primary private provider (see Appendix I, A4 Response 13). A1 put

forward the view that some firms were actively seeking to partner with universities to provide in-house degrees (see Appendix J, A1 Response 8).

4.2.4.15 Quality of vocational provision

The issue of quality was of concern to the academics, particularly the perceived value of the vocational degree and the entrance requirements to study. One of the main concerns was the low level academic qualifications required by the undergraduate programmes; as A4 pointed out, those required on a RICS-accredited degree were lower than most universities' entrance requirements (see Appendix I, A4 Response 6). A1 described the manner in which most students accept places on surveying undergraduate degrees as rather haphazard and a result of poor grades (see Appendix J, A1 Response 6). On the other hand A3 pointed out that most students have poor A-level results but go on to gain good degrees (see Appendix H, A3 Response 3). A4 felt that students were not aware of the courses and what they offered, which resulted in the courses acting as catchalls for students with poorer academic qualifications (see Appendix I, A4 Response 7). This was supported by A1 (see Appendix J, A1 Response 7). Other professional institutions were said to place more exacting standards upon their discipline-specific undergraduate and postgraduate provision, and A4 suggested that globally there were more stringent controls than in the UK (see Appendix I, A4 Response 8). A3 suggested that changes over time within the curriculum had reduced the life expectancy of the HE experience (see Appendix H, A3 Response 5), and he added that HE institutions need to increase the quality of their vocational degrees (see Appendix H, A3 Response 10). Another concern about quality referred to the entrance requirements of the conversion courses in comparison to other construction-related professions such as civil engineering. A4 pointed out that these were one year in length, but that there were also global differences in quality within the profession (see Appendix I, A4 Response 14). The role of the QAA as enforcer of KPIs was highlighted by A1 who stated that the goal of HEFCE is to regulate funding (see Appendix J, A1 Response 30). She then added that HEFCE has had a role in the deregulation of student quotas.

4.2.4.16 Future of vocational provision

A2 stated that there would always be a demand for construction, and it therefore followed that there would always be a demand for construction-related education (see Appendix K, A2 Response 6). A4 discussed the threats from other construction professionals in the

workplace, and the rise of the status of schools of architecture within post-92 universities. He also expressed concern about the survival of quantity surveying undergraduate programmes (see Appendix I, A4 Response 11). A1 stated that the QS will always adapt and change to suit the environment (see Appendix J, A1 Response 10). Additionally, there was the issue of awards other than degrees raised by A1 who cited the CISCO certification within the IT sector (see Appendix J, A1 Response 11). A2 raised the point that FE and HE could merge in the future (see Appendix K, A2 Response 7). Political ideology was highlighted in the change of emphasis from widening access to the present rise of the apprenticeship (see Appendix J, A1 Response 18).

The appearance of apprenticeships was acknowledged and so too were foundation degrees, but the value and status of apprenticeships were questioned and it was highlighted as a pathway promoted by the present government (see Appendix J, A1 Response 20 and Appendix I, A4 Response 26). The role of migration in vocational courses was raised by MG (see Appendix J, A1 Response 21).

There was also a level of differentiation evident from discussions about skills sets, locational advantages, and concerns over competition from other construction-related professionals (see Appendix J, A1 Response 25 and Appendix I, A4 Response 17 and Appendix K, A2 Response 13). Concerns over reputation and branding came to the fore and the relaxation of student recruitment numbers to Russell Group institutions was cited by A1 (see Appendix J, A1 Response 24). A1 observed political and ideological changes in the purpose of HE, with the examples given ranging from widening participation in HE to incentivising training in the workplace through apprenticeships (see Appendix J, A1 Response 31). A4 discussed the role of a QS vocational degree as a “cash cow” for the support of more recognised professions in the built environment such as architecture (see Appendix I, A4 Response 29).

The academics in this study were all aware of the White Paper but unsure as to its future, either as a piece of legislation or in the form of its ideological impact on vocational courses. They were much more aware of the fragility of providing vocational-facing courses without the protection of the accrediting professional body. Both these points raised issues around uncertainty and professional boundaries. The spectre of elite education was also flagged up, and so we may conclude that inequalities in the system are being spoken about. Surprisingly, there was little discussion about knowledge either as

theoretical underpinning or workplace knowledge through implicit or explicit learning. However, employability and skill sets were discussed. It would appear that the UK HE sector is very industry focused.

4.2.5 Commentary of profession institution interview

4.2.5.1 Introduction

In this section the opinions of the institution (RICS) were sought and gathered through: (i) interviews with P1, a senior chartered surveyor with industry experience employed at headquarters; and (ii) a memo capturing the ideas generated from the education department in the RICS (RM). The memo was sent to the researcher after the interview with P1 had occurred. The following is a commentary on both of these data sources. Initially, the items pertinent to the introduction of the White Paper were identified and noted. The next stage was to ascertain who the key players were, and these were duly identified as students, employers, government, RICS and universities. Another section of the data gave considerable emphasis to skills which covered discussions on skills, competencies and knowledge. The future of undergraduate provision in the HE sector was further discussed; it was in this topic that most attention was given to the marketisation of both the HE sector and the service sector.

4.2.5.2 The HE White Paper 2011

The RICS memo states that there had been a deliberate decision not to comment on the White Paper as fee changes from this paper had been identified as a difficult area (see Appendix Q, Response 1). It goes on to suggest there is no link between the White Paper and the quality of graduates, contrary to the point raised by employers (see Appendix Q, Response 2). However, there is an opinion that the introduction of fees has had an impact on RICS-accredited programmes, evidenced by reduced students numbers returned to the institution for 2011 from universities (see Appendix Q, Response 3 and Appendix P, P1 Response 36). P1 believes that the White Paper will in time have a considerable effect (see Appendix P, P1 Response 24), but does not hazard a guess as to what the outcome might be.

4.2.5.3 Key players

The key players identified were students, the government and employers in this professional interview data set. The profession and universities were also discussed at length and allocated their own sections. P1 highlights the fact that undergraduates have an eye on value for money when embarking upon a course of study, and prospective students

will look at programmes that provide accreditation to the professional pathway they intend to follow (see Appendix P, P1 Response 22). This was also reiterated by RM who suggested that students will have higher expectations of their programme of study (see Appendix Q, Response 5). Another issue raised is that employers will look to use alternative routes to train employees; apprenticeships were mentioned as one such example (see Appendix Q, Response 6). The RICS memo indicated support for widening access to HE, a different stance to the government's present policies (see Appendix Q, Response 7). The role of elite education raised its head with a statement by P1 discussing the split in the provision of surveying education (see Appendix P, P1 Response 32). He also suggested that the routes available for 18-year-olds should provide a generalist degree with a specialism later, to suit the person and industry (see Appendix P, P1 Response 33).

4.2.5.4 The role of the RICS in education

There was a suggestion that the RICS had taken a stance that was non-prescriptive in the content of HE programmes and that perhaps this needed to be reviewed and a more prescriptive role adopted (see Appendix P, P1 Response 16). The need for full consultation on the provision of construction education was highlighted as being urgent and very important, especially between government and industry (see Appendix P, P1 Response 19). Stratification of the profession was touched upon with suggestions that a split between technical and lower-age entry should be introduced; this might mirror the earlier days of professional training rather than education and more strategic skill sets delivered in a later stage of the working life of a surveyor (see Appendix P, P1 Response 21).

Quality of graduates and their subsequent skill sets were discussed in light of their appropriateness for industry (see Appendix P, P1 Response 17). P1 noted that the contact time students have is currently a maximum of 13 hours per week; this, he believed, makes it impossible to teach some basic skills (see Appendix P, P1 Response 35). The point was also raised about a demand-driven model for skills which would result in higher salaries and so would see more entrants to surveying courses (see Appendix P, P1 Response 20).

There was also a suggestion that graduate entrance numbers applying for membership to the RICS would drop off, and that alternative membership routes to join the RICS based on experience would be developed to offset this trend (see Appendix Q, Response 10).

4.2.5.5 Collaboration

The need for industry and government collaboration over the future of construction education was identified by P1 (see Appendix P, P1 Responses 1 and 15). The suggestion was made of collaboration with other construction professional bodies to provide a more general undergraduate degree, a possible model being the built environment and an architectural engineering construction pathway. Collaborative approaches such as these would lay the foundation for further specialist education to follow (see Appendix P, P1 Response 25). The introduction of new technology such as building information management (BIM) may force working practices to be more collaborative, as stated by P1; this would subsequently affect the skills required by the industry (see Appendix P, P1 Response 29). P1 also gave an example that illustrated how silo routes of education would later give rise to silo practices in the discipline itself (see Appendix P, P1 Response 34).

4.2.5.6 Skills

Demand for surveying services and skills was identified as being at the mercy of the economic climate (see Appendix P, P1 Response 5 and Appendix Q, Response 4). This was discussed further by P1 who noted the global and cyclical nature of the CI (see Appendix P, P1 Response 6). P1 suggested that immigration may smooth out the shortages that may occur, but this was a government fix (see Appendix P, P1 Response 10). Dichotomies highlighted between basic technical skills and specialist skills and between technical knowledge and strategic skills were revealed (see Appendix P, P1 Responses 12 and 28). Also discussed were the emergence and value of soft and interpersonal skills and their place in a global marketplace (see Appendix P, P1 Response 13). This, P1 believed, had come about due to the rise in complexity of the services required by clients (see Appendix P, P1 Response 14). P1 added that the reintroduction of sandwich years to QS undergraduate courses would become the norm, and this would aid the employability of graduates (see Appendix P, P1 Response 30). Global demand for surveying skills and knowledge was discussed by P1, who cited China as a growing market; he also discussed the economic role of the service industries to the UK economy and gave specific attention to surveying (see Appendix P, P1 Response 31).

Private providers would most likely focus on training, providing specialist skills required by industry, described by P1 as “niche education” (see Appendix P, P1 Response 7). The idea of *fit for purpose* was discussed when considering the private market provision of education (see Appendix P, P1 Response 18). RM suggested that there would be more

choice for students to gain degrees and suggested the College of Estate Management (CEM) as a possible competitor to universities (see Appendix Q, Response 8).

4.2.5.7 Future structure of the HE sector

In response to changes in the HE sector, P1 believed there may have been a return to a polytechnic style of educational provision (see Appendix P, P1 Response 8). P1 explained that there was institutional support for the formation of university technical colleges (see Appendix P, P1 Response 9), and claimed that students would demand more value from their education (see Appendix P, P1 Response 11). He added that HE fees would have to be borne by the individual in the present economic climate (see Appendix P, P1 Response 2). AM stated his belief that the state would still be central in the provision of HE education (see Appendix P, P1 Response 3). RM stated that student numbers may fall and this would lead to some courses closing or amalgamating in both undergraduate and postgraduate provision (see Appendix Q, A3 Response 8). P1 pointed out that in the world tables the UK had slipped down in terms of pre-18 educational provision, and this needed to be taken into account (see Appendix P, P1 Response 4). He then touched upon the concern that literacy and numeracy were not at the expected standards when students arrived at undergraduate level (see Appendix P, P1 Response 23). There was a comment made that widening participation and quality levels do not have a real impact upon the provision of RICS-education, but that it was supported as a strategy (see Appendix Q, Response 7). P1 believed that other professions such as architecture and engineering were facing the same educational issues (see Appendix P, P1 Response 26). P1 felt in summarising his views that HE was well established, extensive and expensive, and so would be a difficult market to replace (see Appendix P P1, Response 27). Overall, the HE sector was expected to restructure and focus particularly on new modes of delivery. As suggested by RM, the student experience would become paramount and attention to the quality assurance processes increasingly important (see Appendix Q, Response 11). P1 discussed specialist skills and knowledge and stated that competencies had become more specialised over time and ever- changing to meet new demands (see Appendix P, P1 Response 37).

4.2.5.8 Analysis

The RICS acknowledged the existence of the White Paper but could not begin to explore the impacts of its introduction beyond noting the negative effect that the funding changes have had on graduate entry numbers to the profession. The official line has been to make

no comment on political changes, but there was an emphasis on dialogue with government, industry and the RICS to bring professional education to the forefront.

Uncertainties were expressed throughout the data gathered, some emerging from the market responsive behaviour of the service class, which can be driven by the economic climate. But the changing demands of a global client base were also influential, particularly as these affect the skills and knowledge sets that are requested and subsequently rewarded. Uncertainties were also present around the effect of the White Paper on the provision of professional education. The profession (RICS) is in flux as it has been affected by the global economic crisis, and so the search for new markets has resulted in changes around the knowledge and skill sets required. There will also be a skills shortage fuelled by higher demand and accentuated by lower numbers of students at graduate entry to the profession. Alongside this as an issue, uncertainties and complexity were observed, and this complexity was seen reflected in the new demands placed upon surveyors by new markets and clients. Underpinning these two points were knowledge and skills, which were sometimes referred to as competencies. There were some indications that these also took the form of technical skills, strategic skills and competences, which ties up with Schön's discussion on professional learning. Whilst Schön (1984) focuses upon expert knowledge, the term competency may have come to replace this concept. Contrasting styles of learning continue to hold sway particularly over the training and education debate. The surveying professional in a market environment gains rewards for intuitive and innate learning styles as described by Eraut (2000); these are used in the more complex and uncertain environments which surveyors work within.

From this basis a suggestion arises that there is an alternative to existing practice and that HE could provide a generalist undergraduate degree followed by professional specialisms, a view which thus advocates a generalist to specialist route. This indicates that barriers to the profession exist amongst the present professional institutions within the CI. Barriers to entry are an important issue, maintained by the RICS through accreditation of undergraduate programmes and subsequent training periods and an assessment of competence to practice (APC). These barriers produce – as Bourdieu would suggest – symbolic capital, a subset of cultural capital and generally translated into economic capital. It is the field and habitus, as discussed in Chapters 2 and 3 that appear to be under discussion when referring to the White Paper.

The spectre of elite education was raised, and Newman's argument of an education for free thinkers was revisited. In this particular investigation it was the training versus education, or technical versus strategic debate that was discussed. These would affect what and how the education or training would be delivered, which would in turn impact the field and habitus of the QS. Employability was discussed and connected to the ideology of the *rise of the individual*, introducing the concept of consumer-driven demand for HE. It became clear that neo-liberal ideas of economics have crept into everyday speech. However, this was juxtaposed to the concepts identified from the data, where HE was seen to be expensive and established and the state was viewed as still central to the provision and quality of the HE sector. It is argued that this indicates a neo-liberal creep into society's thinking.

In conclusion, the themes arising from this set of data, extracted from the professional set, are as follows: elite education; quality; barriers; uncertainties; complexity; and cultural capital. The role of field and habitus were also apparent in the practicalities of delivering services to the public. These were taken forward for comparison with the other data sets gleaned from academic and industry respondents.

4.2.5.9 Commentary – industry interviewees

In these interviews the data set was separated from the others as it relied on data gathered from people active in the workplace. This sample comprised respondents who were chartered professionals and also in charge of making decisions on company policy for recruitment, education and training. They were all based in England but work for globally active companies. For the purpose of these interviews they confined their discussions to England solely.

The interviews took the form of initially addressing KQ1 by focusing on the White Paper. This cohort was the most knowledgeable about the introduction of apprenticeships. A discussion about the CI and its context was introduced and a wide-ranging discussion about company strategies for education and training took place. This group were more concerned with skills than knowledge and the role of the professional body accreditation was discussed together with the future of education.

4.2.5.10 The HE White Paper 2011

The first question focused upon the introduction of the White Paper. Initially, the respondents were reluctant to offer an opinion as they confessed they knew nothing much

about the White Paper in question (see Appendix L, I3 Response 1 and Appendix O, I1 Response 1 and Appendix N, I2 Response 1). I1 went on to comment on her lack of exposure to the actual document, but her understanding was that it was about a change in funding and also that there were links to the national skill academies which were being developed (see Appendix O, I1 Response 2). She also suggested that universities would be most aware of these changes as they directly affected the HE sector through their budgets (see Appendix O, I1 Response 6). I1 explained that the biggest impact upon her company would be the cost of fees, and whilst changes had occurred to the internal strategy for funding there would be some difficulties in allocating funds (see Appendix O, I1 Response 7) indicating that the full burden of educating a workforce would cause issues even for a large employer. Student debt was discussed by I2 , who pointed out that students currently have large debts when starting work, even those who work and study part time (see Appendix N, I2 Response 6); he concluded, however, that this was not a defining issue surrounding education (see Appendix N, I2 Response 7). SH stated that there was quite a lot of uncertainty in his company around the current changes in HE (see Appendix L, I3 Response 14). Another outcome from the White Paper would be the incorporation of private providers into the HE system. The question of private providers was discussed by the industry-facing cohort as follows.

4.2.5.11 Private providers

I1 acknowledged the existence of private providers but expressed the view that the company she worked for would not be interested in this option (although she then explained that their in-house training team hoped to be accredited for the delivery of apprenticeships up to NVQ level 3 (see Appendix O I1 Response 5). I3 suggested that there would be only two reasons to become or look to a private provider: these were that the quality was seen to be lacking or that there were not sufficient numbers of graduates coming through from HE. He still believed that education was not a core service and therefore there was no rationale to enter this market (see Appendix L, I3 Response 10). I1 suggested that the quality of education was measured by the professional institution's course accreditation process (see Appendix O, I1 Response 11), and due to the diversity of educational needs existing provision was favoured (see Appendix O, I1 Response 12). Her final point about education was that it required expertise and was expensive to provide (see Appendix O, I1 Response 13). I3 suggested that private providers would find the market extremely expensive and would require a large amount of investment in education to enter

but went on to raise the point that perhaps the RICS could enter this market (see Appendix L, I3 Response 19). Interestingly enough, the industry interviewees considered their own ability to enter the private providers market and dismissed the possibility due to the level of expertise and cost of entry to the market.

4.2.5.12 Apprenticeships

From this industry-based cohort there was a lot of information concerning the government initiative on apprenticeships. I3 pointed to this new initiative and said that he had started to search out information on the government website (see Appendix L, I3 Response 2). I3 explained how his company became aware of the apprenticeship scheme, giving the example of the London Apprenticeship Company (see Appendix L, I3 Response 3), and adding that he had explored the financial incentives of engaging with a licenced apprenticeship company (see Appendix L, I3 Responses 4 and 7). I3 explained that through these licenced companies they are loaned the apprentice over a two-year period (see Appendix L, I3 Response 6). I1 pointed to the frameworks that provide skills through the national skills academies. At present I1 believed there to be some 200 such frameworks in existence (see Appendix O, I1 Response 3). This expansion of frameworks opened up the opportunity for companies to gather apprentices for specific needs; the example given was rail apprentices, and the framework supports a provider who can provide qualifications for these apprentices (see Appendix O, I1 Response 3). I1 described the financial cost of apprenticeships through these frameworks mostly focused upon the under 24s (see Appendix O, I1 Response 4). Her company's financial approach was different as they paid the apprentice directly, and then once finished on the apprentice route they would support the student to attend NVQ to level 4 and on to the degree level if they so wished (see Appendix O, I1 Response 8). I3 pointed to an existing scheme called the Chartered Surveyors' Training Trust which had been in existence since the 1970s (see Appendix L, I3 Response 25). Overall, the industry interviewees were better informed than the other professional data set and were more aware than the academic set who did not spend time on this topic.

4.2.5.13 Core business of the CI

It is pertinent to this industry-facing cohort that certain functions and anomalies of this sector of the economy are identified and addressed so that they can service their clients' needs.

I2 suggested that the primary focus of the CI was to make money; he went on to give examples that were intended to prove that it is indeed a cash-orientated business (see Appendix N, I2 Response 4). As the surveyor tended to work on the service side of the CI – which is itself focused upon cashflow and profitability – this was an important point (see Appendix N, I2 Response 5). I2 also suggested that there was an image problem associated with parts of the CI which adversely affected recruitment (see Appendix N, I2 Response 15); candidates needed to be persuaded about the importance of these sectors. Relationship development was seen as a key component in the CI and requiring certain skills and knowledge to enable the smooth running of the company (see Appendix N, I2 Response 18). The underlying point of these contributions is that skills and knowledge are sold to clients as a service in the modern CI, reinforcing the role of knowledge workers.

4.2.5.14 Strategy for employment and training

The industry respondents had all been involved with initiating within their own companies new strategies for education and training in the six months prior to being interviewed. There was evidence of some forward planning being undertaken within the sector, and as I3 noted the link between training and the balancing of supply and demand was being understood by companies (see Appendix L, I3 Response 9). However, I3 indicated that there were plans in hand to respond to a labour shortage (see Appendix L, I3 Response 5), and went on to explain the financial impact of apprenticeships, trainee undergraduates, graduates and postgraduates (see Appendix L, I3 Response 8). I1 stated that her company had put in place a three-pronged strategy to cover short, medium and long-term plans (see Appendix O, I1 Response 9; 16) which covered all educational routes but responded on a case-by-case basis (see Appendix O, I1 Response 10) as there was a limited budget in place (see Appendix O, I1 Response 14). I1 went on to explain that there was a rationale for educational support and certain criteria had to be met by the employee before support was granted (see Appendix O, I1 Response 15). I2 pointed out that most of his surveyors were vocational, part-time students who benefited from a free education and exposure to the workplace (see Appendix N, I2 Response 8). He suggested that his firm had made a number of responses to the vagaries of the economic climate, an example being that it had previously sourced surveyors globally (see Appendix N, I2 Response 9). In that specific case the tactic was affected again by the global economic recession that began in 2008 (see Appendix N, I2 Response 10). I3 explained that his company's policies were to recruit graduates from both cognate and non-cognate streams to broaden the company's diversity

of skills (see Appendix L, I3 Response 13). SH also described the part-time undergraduate route and the graduate routes which are at present the two models followed (see Appendix L, I3 Response 22). I2 stated that there was a continued recruitment of surveyors by his firm using a strategy to employ vocational graduates, although in smaller numbers than before and taking on ad hoc internships some of which were non-cognate degree holders (see Appendix N, I2 Response 11, 16, 26). This appeared to I2 to satisfy current demand for surveying staff (see Appendix N, I2 Response 12). The recruitment strategy of his company was essentially the retention of staff (see Appendix N, I2 Response 14) as this satisfied the requirement for specialised technical surveyors. I1 said that the culture of the organisation was an important factor when recruiting and educating staff, and this had had an effect upon the strategy employed by her organisation (see Appendix O, I1 Response 17).

It appeared after KQ1 was posed that the industry respondents would not have been prepared for the changes in education provision; however, they all described the approaches that are available and preferred by the companies they are employed by. There was a certain amount of uncertainty exhibited around the changes in HE and their impact on industry, and an awareness of the complexity of the situation, especially the vagaries of the market caused by demand from the clients' side and the supply side of technical expertise.

4.2.5.15 Skills

Skills were identified by these interviewees as something they expect to examine at the recruitment stage. There was an awareness of the importance of personal skills, interpersonal skills and competencies, and a strong sense especially of the balance between all of these.

Skills were tested and identified through an intense recruitment programme in I3's experience (see Appendix L, I3 Response 16). There needs to be a mix of skill sets, but overall I3 believed his company would employ vocational over non-vocational degree holders (see Appendix L, I3 Response 17); he emphasised the recruitment process which was followed and said that both types of graduates were employed (see Appendix L, I3 Response 18). NH concurred, saying that recruitment was now focused upon the roles advertised and that the minimum educational qualifications were requested (see Appendix O, I1 Response 18). This process did include matching skill and knowledge sets to the

roles (see Appendix O, I1 Response 19), but she went on to elaborate that the certified qualification may not match the role title but that the relevance of the individual's skills and experience to the role was more important (see Appendix O, I1 Response 20). I1 stated that each individual would be offered a training programme to suit their needs but it would follow an accredited professional route (see Appendix O, I1 Response 21). After having mapped the progression routes of graduates to the professional charter, I1 found that there was little difference in time between those entering through NVQ, apprenticeships, undergraduates and graduate routes (see Appendix O, I1 Response 21). She spent time giving examples of competencies and technical knowledge (see Appendix O, I1 Response 22) and finally suggested that a balance of skills and knowledge was required. I2 discussed the technical content of vocational undergraduate education and expressed fears that it was insufficient (see Appendix N, I2 Response 19); he then proceeded to list examples of skills and some knowledge sets that he believed required more attention (see Appendix N, I2 Response 20). The difference between cognate and non-cognate degree holders was explored by I2 when he explained the role of technical knowledge and highlighted the skill set brought by non-cognates (see Appendix N, I2 Response 21). I2 went on to reiterate that the marketplace demanded the appropriate professional qualification (see Appendix N, I2 Response 22), and he supported this as he believed the professional qualification demonstrated a further level of competence (see Appendix N, I2 Response 23). I2 pointed out that he believed that there had to be a mixture of experience, exposure and education (see Appendix N, I2 Response 24) and these were important because overall the goal was the employability of the person (see Appendix N, I2 Response 25). I3 summed up by saying that the focus was on the person and potential rather than on accumulated knowledge (see Appendix L, I3 Response 23).

4.2.5.16 Knowledge

Very few opinions were expressed about knowledge per se, although terms such as expertise (see Appendix O, I1 Response 23), standards (see Appendix O, I1 Response 24) and competencies were used (see Appendix O, I1 Response 22). I2 felt that there was a gap in sector knowledge that was especially focused upon infrastructure (see Appendix O, I1 Response 20). This is commented upon here as the researcher expected to discover more about knowledge given the focus of the research on professional HE.

4.2.5.17 Role of the institution (RICS)

I3 underlined the importance of the final charter received from the RICS, as this indicated a level of credibility awarded to the professional services being offered globally. (see Appendix L, I3 Response 11). I3 hinted at unease with the focus of the RICS on increasing membership and a subsequent possible watering down of professional standards (see Appendix L, I3 Response 12). I2 stated that he supported his staff in attaining their relevant professional body accreditation, as he felt this was a requirement demanded by clients in the marketplace (see Appendix N, I2 Response 14). I1 observed that her company would support good quality education for which an accepted criterion was a professionally accredited programme (see Appendix O, I1 Response 17). I2 said he supported this stance by putting in place a company policy where there was a target of professional qualifications (see Appendix N, I2 Response 27). I3 felt that the RICS provided a robust professional accreditation route (see Appendix L, I3 Response 24) but feared that global expansion had left the UK professional uncertain of the future, and furthermore there were concerns about the quality of new entrants to the profession (see Appendix L, I3 Response 20). There was a feeling that the RICS was not keeping up to speed with the changes in the CI. I2 suggested that the new form of measurement for rail was driven by the client not the institution (in this case the RICS) (see Appendix N, I2 Response 32), whilst I3 was concerned about the global impact on the UK's professionals' quality and standards (see Appendix L, I3 Response 20). The role that the RICS operates for industry-employed professionals through its chartership qualifications and the subsequent accreditation of educational routes was seen as important. A chartered brand affords status and indicates quality of personnel and service offered. This has been identified as valuable and is actively sought out by new recruits who will be trained through the professional routes identified by the institution (RICS in this instance, of course). This indicates that barriers to practice are identified and welcomed as differentiators.

4.2.5.18 Future of education

The industry respondents had a fairly uniform view that HE needs to revisit its goals. They believe that education should result in employment, which given the vocational focus of undergraduate QS programmes is to be expected. This was also supported by the paper written by Perera et al (2010). SH explained that his company appreciated that there would be changes in the HE sector and his firm had raised its education and training profile

internally and looked to react to possible impacts on the business (see Appendix L, I3 Response 21).

I2 felt that there was a need to specialise in the civil engineering sector which covers railways and the energy sector and this was lacking a focus in the education that was being presently provided (see Appendix N, I2 Response 13). I3 worried that a style of education had developed that was delivered remotely and resulted purely in achieving certificated learning (see Appendix L, I3Response 15). I2 raised the point that HE does not provide fitness for employability at present (see Appendix N, I2 Response 28), and went on to give an example indicating that basic educational elements were not delivered (see Appendix N, I2 Response 29). He also highlighted infrastructure-related topics and civil engineering, rail, utilities and energy as technical subjects which needed to be incorporated into the undergraduate courses (see Appendix N, I2 Response 30). I2 explained that non-cognate and vocational graduates were both employed by his company and brought different skills (he indicated that non-cognates bring a breadth of skills) (see Appendix N, I2 Response 31). He suggested ways to improve technical content but feared that education may use mass distance learning programmes to the detriment of quality and the graduate.

4.2.5.19 Collaboration

I2 expressed the idea that there needed to be better dialogue between the key players of the industry and the government (see Appendix N, I2 Response 2). Driving this stance was the high government investment in the national infrastructure, including rail and energy (see Appendix N, I2 Response 3). He then discussed the procurement and management strategies used around collaboration and alliancing (see Appendix N, I2 Response 17).

4.2.5.20 Analysis

The industry-facing cohort discussed the changes in the HE sector in England, although they recognised the wider global market that the QS and the CI operated within. The interviewees were unanimous in maintaining that they lacked in-depth knowledge of the White Paper and were not sure what the component parts of the Paper that affected QS education in HE were. There was an awareness of changes within the HE sector in response to alterations in funding and an expectation that the education sector would be aware of the government policies that brought this about. On further investigation the individuals interviewed described different approaches that were being adopted to adapt their respective companies' employment and education strategies. The role of private providers in professional education was brought to their attention as it was a component

part of the policy document. The initial discussion on this topic was on the possibility of providing education within companies, but this was dismissed as expensive and too general to be worthwhile. A view emerged that the RICS should take on the role of private provider, based on the esteem that institutional recognition gives to educational routes.

This group then discussed education as a part of employability, giving emphasis to the view that the main aim of vocational degrees was to provide a fitness for work. During these interviews questions were raised about the role of HE in the provision of QS education and the quality of the service offered by the universities. The overall feeling was that an undergraduate degree in a relevant topic with professional institutional accreditation was the requirement of all the companies. It became evident in the interviews that this was in response to client or market-driven requests for chartered professionals rather than stemming from a demand from individuals in the companies.

The interviewees discussed the increasing prominence of apprenticeships that had resulted from recent interventionist government policies, and explained that they had researched this topic and produced possible employment strategies. They described different types of apprenticeships focusing mainly on direct employment or on loan through an apprenticeship trust for two years. It was in this area that there was discussion about providing private education internally within their organisations up to NVQ level 3.

The interviewees discussed changes and uncertainty within the CI that focused upon the sector's vulnerability to the economic climate and change both in the UK and globally. The role of clients and their demands were also highlighted and this indicated that there was a preference for chartered professionals delivering the services required. The role of HE in providing the skilled workforce required by the CI was reflected in the sector's requirements for quality education backed by a professional accredited programme leading to chartered status.

This group discussed the capital return of education and economic capital as the primary forms of capital that would direct the choices made about which type of education was valued. They said that the economic judgement was made on the basis of the resultant demand for the required competencies. There was an awareness of cultural capital, especially in the form of symbolic capital and chartered status that clients recognise, and they discussed criteria that gave a measure of quality and value. Social capital was not discussed.

Leading on from the identification of symbolic capital in the form of a chartered status was the notion of barriers to practice. To ensure quality there was a reliance upon the professional institution to uphold quality by enforcing training and verbal examinations before granting full entry to the profession. It was pointed out that the institution also holds sway over the undergraduate programmes where companies will choose to send their students to undertake their degree. There was an acceptance that a mixture of educational routes is viable and that straddling all of these routes by the professional institution's examination process provides assurance of quality. This assurance was that the behaviours, knowledge and skill sets are of an acceptable level that enables entry to the profession. In this set of interviews there was little reference to knowledge or expert knowledge, but an emphasis was placed on competencies and the market's recognition of experience through certified learning.

4.3 Summary

The interviewees from the industry sample focused, as requested, on the issue of HE provision for the QS in England. They did, however, highlight that there were other pathways to education and training being considered. They confessed to a lack of knowledge about the White Paper and volunteered that none had seen the actual document. They expressed an interest in structuring a company strategy around the recruitment and education of young people.

The policy which attracted them was the introduction of apprenticeship schemes, and this had been investigated by the interviewees. There was a preference for an undergraduate degree in a vocational programme which was professionally accredited; however, there was an acceptance that there were different routes to chartership. They focused on the economic marketplace and an awareness that they were selling services to clients with a particular focus on making money. Profitability was of importance to them, and when they considered the entry of private providers to HE their main points were that breaking into a new market needed expertise and the costs were high.

They then went on to explain the role of the RICS in maintaining quality by raising barriers to entry to the profession. The examples given were accredited programmes and the professional examinations after a period of training. Finally, they all expressed a wish to have proper dialogue between industry, the institution and the government over the future of education in the CI. The industry interviewees discussed changes in the HE sector

within England, although they recognised the realities of the wider global market. The interviewees were unanimous in maintaining that they lacked an in-depth awareness of the White Paper. In a general sense there was an awareness of changes within the HE sector, and on further investigation the individuals interviewed described different approaches that were being adopted to adapt the respective companies' employment and education strategies.

The role of private providers was brought to their attention as it was a component part of the policy document, and the initial responses were reflections on the possibility of internally providing education within companies. However, this was then dismissed as expensive and too general to be worthwhile. The view resulting from that was that the RICS should take on the role of private provider, based on the esteem that institutional recognition gives to educational routes.

The group discussed education as a part of employability, emphasising the view that the main aim of vocational degrees is to provide fitness for work. Questions were raised about the role of HE in the provision of QS education and the quality of the service offered by universities. The overall feeling was that an undergraduate degree in a relevant topic with professional institutional accreditation was the requirement of all the companies. It became evident in the interviews that this was a response to client or market-driven requests for chartered professionals rather than due to a demand from individuals in the companies.

In response to recent interventionist government policies the interviewees discussed the role of apprenticeships, and explained that they have researched this particular topic and produced possible employment strategies based around apprenticeships. Different styles of apprenticeship were described with the focus mainly on direct employment or on loan through an apprenticeship trust for two years. There was also relevant discussion about providing private education internally up to NVQ level 3.

Discussion ranged widely over the changes and uncertainty within the CI and the sector's vulnerability to the economic climate, both globally and within the UK. Client demand for chartered professionals delivering services was also a prominent feature of the discussion. And finally, the role of HE in providing the skilled workforce that was required by the CI was reflected in the industrial sectors requirements' of quality education backed by a professionally accredited programme which would lead to a chartered status.

4.4 Quantitative

In this second part of this chapter, data generated through the use of a quantitative method is analysed and commented upon. These results were gleaned from two rounds of questionnaires modelled upon the Delphi Technique (Linstone and Turoff 2002, Skulmoski, Hartman and Krahn 2007), with the aim of reaching a group consensus. (Consensus has been taken in this study as achieved when 70 per cent or more of respondents agreed was yielded from the questionnaire.) Topics were generated from the interview transcripts and developed into a questionnaire format. An explanation can be found in Chapter 3 surrounding the development of the descriptive statistical approach adopted for the following section. As the first round is deemed to be the interview stage the next stage is named 2/3 and the final stage is named 3/3.

A legend is provided to guide the reader through the annotations.

2/3	Information pertaining to round two of the Delphi Technique
3/3	Information pertaining to round three of the Delphi Technique
rank	Agreed order of importance
AIA	Average Index Analysis
A	Agreed
N	Not Agreed
N/A	Not Applicable
sd	Standard deviation
Changes Y	Yes
Changes N	No

4.4.1 Part A

These points were raised by some participants but fall outside of the above KQ2.

Table 4.2 Points raised by participants and incorporated in the questionnaire

	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Is there a role for professional (vocational) education?	1	6.50	A	0.92	1	5.63	A	2.56	Y
Is professional education provided to the required academic standards?	2	6.20	A	1.07	3	4.38	N	2.26	Y
Does the provision of professional education need to change to meet future demands?	3	5.75	A	0.89	2	4.88	A	2.03	Y
Societal recognition is an issue in professional education?	4	5.00	N	1.85	4	4.00	N	2.00	N

4.4.1.1 Commentary:

These points were raised in the interviews by the members of the group involved in the research; whilst not directly attributed to the KQs these items have relevance to the topic in general. Consensus was reached in 50 per cent of the items, and two items remained in the same position of rankings; these were: is there a role for professional education (Rank 1; sd from 0.92 to 2.56); and societal recognition is an issue in professional education (Rank 4; sd from 1.85 to 2.00). The two non-agreed items were does the provision of professional education need to change (Rank 2; sd from 0.89 to 2.05) and is professional education provided to the required standards (Rank 3; sd from 1.07 to 2.26); these two items also changed positions indicating that changes need to be made in the provision of professional education within the HE sector.

The main point taken from this exercise was that there was disagreement about societal demands and it remained as a low reason for selecting a professional education. This would indicate that Bourdieu's three types of capital were not equally represented; cultural capital was not recognised as currency. This then indicated a clash with the professional

conservative approach which stressed the good of society and the resultant role of professions as exhibiting the expected cultural capital normally found in society.

4.4.2 Part B

4.4.2.1 Question 1: What is the future purpose of professional education?

Table Q1

Question 1:What is the future purpose of professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
improve professional education	1	3.00	A	1.41	2	3.63	N	1.30	Y
improve vocational employment	2	3.00	A	0.76	1	3.88	A	1.25	Y
improve general employment	3	2.50	A	0.53	3	3.13	A	0.83	N
improve society	4	1.30	NA	1.30	4	2.75	A	1.58	N
develop a body of knowledge that develops to meet society's needs	N/A	N/A	N/A	N/A	5	2.00	A	2.08	

4.4.2.2 Commentary:

This question was searching for the purpose of the professional education experienced by this surveying-facing cohort. Consensus was achieved in four out of five items; the non-agreed item was to improve professional education (Rank 2; sd from 1.41 to 1.30) which ranked second in the final round. The items which reached 70 per cent or above agreement were improve vocational employment (Rank 1; sd from 1.41 to 1.30); improve general employment (Rank 3; sd from 0.53 to 0.83); and improve society (Rank 4; sd from 1.30 to 1.58). The additional item – to develop a body of knowledge that develops to meet society's needs (Rank 5; sd 2.08) – is ranked at the bottom.

It would appear that employability was the most important goal of professional education; there was an emphasis upon skills and learning but less emphasis given to society and the profession's role within this process. This could be interpreted as evidence of the rise of individualism and a move from traditional conservative practices to a neo-liberal market

approach. There was no agreement reached on the role professional education plays in the improvement of professional education, however this topic was ranked second in importance.

4.4.2.3 Question 2: Who will provide future professional education?

Table Q2a

Question 2a: Who should provide future professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 Sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Higher Education institutions (universities)	N/A	N/A	N/A	N/A	1	3.38	A	2.97	–
Further Education institutions (FE colleges)	N/A	N/A	N/A	N/A	5	1.88	A	2.36	–
Professional institutions	N/A	N/A	N/A	N/A	3	2.75	A	2.66	–
Workplace	N/A	N/A	N/A	N/A	6	1.25	A	1.58	–
Private providers	N/A	N/A	N/A	N/A	4	2.00	N	2.33	–
HEIs and employers in collaboration	N/A	N/A	N/A	N/A	2	3.00	A	2.56	–

4.4.2.4 Commentary:

This question was set to gather opinion as to where professional education provision will sit in the future. The data gathered indicated that the standard providers were expected to carry on providing this education. HE (Rank 1; sd from 0.46 to 0.35) followed by FE (Rank 2; sd from 0.97 to 1.36). Consensus was reached on the previous two options and also the third of collaboration between HE and employers (Rank 3; sd 1.40). This was added in the final round of the Delphi Technique. Consensus could not be achieved with the following items: workplace (Rank 4; sd from 0.92 to 1.16); professional institutions (Rank 5; sd from 1.30 to 1.46); and private providers (Rank 6; sd from 1.13 to 1.55).

From the above findings the provision of future education by the professional institution (RICS), the workplace and private providers was not agreed by consensus and were therefore found towards the bottom of the rankings. This would indicate a change in

awareness of who may be able to provide professional education in the future. The introduction of collaboration between employers and HE institutions, was the most favoured outside of the traditional routes of HE institutions and FE.

4.4.2.5 Question 2a: Who should provide future professional education?

See Appendix E for Table Q2a.

4.4.2.6 Commentary:

This question was added as an alternative where, given the choice, what would be the ideal provision of future professional education for this cohort of interviewees. Consensus was reached on six out of seven items, the non-agreed item being private providers (Rank 4; sd 2.33) which ranked fourth in the provision of professional education. HE institutions (Rank 1; sd 2.97) were favoured over HE institutions and employers in collaboration (Rank 2; sd 2.56). It would appear that the grouping felt the professional institution should take a high profile in providing professional education (Rank 3; sd 2.66). FE (Rank 5; sd 2.36) and education provided in the workplace (Rank 6; sd 1.58) followed up.

There is a difference between will and should (Qs2 and 2a), in the rankings found mostly around the FE provision and the professional institution, private providers and workplace education. FE still holds a higher position in the rankings and the other three above mentioned items will play a smaller part in the provision of professional education. There was no agreement reached around the role of private providers, indicating some uncertainty over the issue.

4.4.2.7 Question 3: How will the provision of professional education be offered?

Table Q3

Question 3:How will the provision of professional education be offered?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Apprenticeships	4	6.88	N	2.30	3	6.13	N	2.53	Y
Internships	8	4.50	A	2.62	8	4.00	N	2.93	Y
National Vocational Qualifications	10	5.50	A	1.66	8	4.00	N	1.73	Y
BTEC	8	4.75	A	2.31	11	3.38	A	1.85	Y
Higher National Certificate/Diploma	6	6.38	A	1.51	4	5.88	N	2.53	Y
Undergraduate degree	1	9.88	A	0.35	1	9.50	A	0.76	N
Postgraduate degree	2	8.25	A	2.12	2	8.00	A	2.14	N
Chartership	4	5.00	N	4.07	6	4.88	A	3.94	Y
Professional body recognition	6	4.88	A	3.64	5	5.50	N	3.51	Y
Employers	3	5.75	A	2.36	7	4.38	N	2.36	Y
HEIs working in collaboration with employers	N/A	N/A	N/A	N/A	10	3.88	A	3.64	-

4.4.2.8 Commentary:

This question sought to gather opinion on different learning avenues, such as technical, generalist and specialist styles. These can be further divided into FE, HE and workplace learning, and again as vocational education and generalist education. Consensus was difficult to arrive at in this section of the questionnaire with, five out of the eleven reaching the required consensus of 70 per cent and above. The most popular routes were undergraduate (Rank 1; sd from 0.35 to 0.76) and postgraduate degrees (Rank 2; sd from 2.12 to 2.14); these could be described as elite and traditional routes. Consensus was achieved on both of the HE routes. The following two items were non-agreed items. The

newly offered apprenticeship scheme was ranked third (Rank 3; sd from 2.30 to 2.53); this though could be classified as workplace training; its placing in the ranking might be due to the raised profile the government have awarded this scheme. The traditional FE qualification Higher National Certificates/Diplomas (Rank 4; sd from 1.51 to 2.53) is seen as popular, and this was recognised as a vocational-facing education route. Professional body recognition (Rank 5; sd from 3.64 to 3.51) was ranked higher than chartership (Rank 6; sd from 4.07 to 3.94), but consensus was reached only for chartership. Perhaps there was non-agreement because the chartership is a training programme assessed by competencies rather than an educational route.

The possibility of employers providing professional education (Rank 7; sd from 2.36 to 2.36) was ranked seventh, but consensus failed within the group. NVQs (Rank 8; sd from 1.66 to 1.73) and internships (Rank 8; sd from 2.62 to 2.93) tie in the rankings, but both failed to reach consensus from this group. The item added to this final round of the Delphi Technique referred to collaboration between HE and employers, and whilst this did achieve consensus it was ranked tenth, (Rank 10; sd 3.64). The final item BTEC (Rank 11; sd from 2.31 to 1.85) did reach consensus within the group.

Overall, the favoured route for professional education was in the HE sector, followed by FE. Workplace education was discussed, but when apprenticeships, internships and employers were aggregated and combined they were a less favourable option. This was emphasised when offered the ideal of HE working with employers; agreement was reached but this option was ranked in the lowest segment, surprisingly with BTEC. This outcome indicated a sector in flux where only traditional and accepted HE routes were agreed on.

4.4.2.9 Question 4: How will this professional education be funded in the future?

Table Q4

Question 4:How will this professional education be funded in the future?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Government	4	2.38	N	1.19	5	2.38	A	1.30	Y
Industry	3	3.00	A	0.92	4	2.50	A	0.76	Y
Employers	2	3.75	A	0.46	2	3.88	A	0.83	N
Individual	1	4.88	A	0.35	1	4.50	A	0.76	N
Mixture of all the above	N/A	N/A	N/A	N/A	3	3.00	A	2.51	-

4.4.2.10 Commentary:

This question was set to ascertain if the respondents knew of funding changes and their likely impact on the individual, employers and industry. All of the items achieved consensus and reached 70 per cent or above agreement. The ranking was as follows: individual (Rank 1; sd from 0.35 to 0.76); employers (Rank 2; sd from 0.46 to 0.83); industry (Rank 4; sd from 0.92 to 0.76); and government (Rank 5; sd from 1.19 to 1.30). When a new item – a mixture of all the above – was introduced it met with approval and was ranked third (Rank 3; sd 2.51).

It was obvious that respondents were informed of the funding changes and were aware of government withdrawal from the funding of undergraduate courses and the fact that the individual consequently carried the funding burden fully. Here was evidence of the *rise of individualism* and the ideology from government of neo-liberal market economics in play.

4.4.2.11 Question 5: Who are the future stakeholders of professional education?

Table Q 5

Question 5: Who are the future stakeholders of professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 Sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Society	5	4.38	N	2.26	5	3.38	N	2.26	N
Government	6	4.38	A	1.92	6	2.75	A	1.83	N
Industry	1	6.63	A	0.53	1	4.63	A	1.81.	N
Individual	2	6.50	A	0.76	2	4.50	A	1.77	N
Professional institution	4	5.13	A	1.13	2	4.50	N	1.20	Y
Academic institution	3	5.00	A	1.19	4	4.25	N	1.58	Yes

4.4.2.12 Commentary:

This question was set in the expectation of discovering the role of cultural capital in the future, and therefore the beneficiaries of professional education were suggested to the interviewees. Consensus of 70 per cent and above was achieved on three items out of six. The first two ranked items agreed were industry (Rank 1; sd from 0.53 to 1.81) and the individual (Rank 2; sd from 0.76 to 1.77), and in sixth and final rank was government (Rank 6; sd from 1.92 to 1.83).

The non-agreed items were the professional institution (Rank 4 sd from 1.13 to 1.20), academic institutions (Rank 4; sd from 1.19 to 1.58) and society (Rank 5; sd from 2.26 to 2.26).

The emphasis was laid at the door of economic capital, evidenced by the importance of industry and the individual and the relegation of government to last in the list of beneficiaries. Neo-liberal ideology is clearly visible in this part of the questionnaire. It was apparent that there was a *rise of individualism* but it was thought that industry may benefit most from the future of professional education. This may indicate a marketisation of knowledge. Society and the state are relegated to lower positions as potential stakeholders

in future professional education which impacts on the employment of cultural capital. A duty to society was one of the founding principles of the RICS and these responses may cause conflict within the professional values set by the institution. There was no agreement reached on the benefits of professional education for the professional institution, universities and society, presumably indicating a disparity of views between respondents.

4.4.2.13 Question 6: How will the future provision of professional education be facilitated?

Table Q6

Question 6: How will the future provision of professional education be facilitated?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Face to face (coaching/mentoring /lectures/seminars)	1	3.50	A	0.53	2	3.50	A	1.60	N
E-learning	4	2.88	A	1.36	4	2.13	A	0.99	N
In workplace	3	2.88	A	0.83	4	2.13	A	1.36	N
Mixed styles	2	4.00	A	0.00	1	3.63	A	1.77	N
Mixture of all the above	N/A	N/A	N/A	N/A	3	3.00	A	2.51	-

4.4.2.14 Commentary:

The purpose of this question was to highlight possible methods of delivery of education. Consensus was achieved upon all of the items, with the only change being the newly added mixture of all above, which was a catchall and took third place in the rankings (Rank 3; sd 2.51). Mixed styles of delivery was ranked first (Rank 1; sd from 0.00 to 1.77), followed by face to face (Rank 2; sd from 0.53 to 1.60), e-learning (Rank 4; sd from 1.36 to 0.99), and in workplace (Rank 4; sd from 0.83 to 1.36).

A preference for a mixture of delivery styles was expressed, but both e-learning and in workplace learning were not a popular choice for delivering education. An explanation for this could be structured around the age and preferred learning styles of the participants which could have a significant impact upon the results. Perhaps if the question had been posed around training there may have been a different response.

4.4.2.15 Question 7: How will the future value of professional education be measured by quantity surveying professionals?

Table Q7

Question 7:How will the future value of professional education be measured by quantity surveying professionals?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Safety to practice	7	4.00	A	1.31	7	3.62	A	1.85	N
Expert practitioner	6	5.00	N	1.93	5	4.88	N	2.17	Y
Professional standards	2	6.25	A	1.83	2	6.00	A	1.77	N
Knowledge base	3	5.88	A	1.88	4	5.13	N	2.59	Y
Skill set	3	6.00	A	1.60	3	5.25	N	2.25	N
Duty of care	5	4.13	N	1.96	6	3.88	N	2.36	Y
Competencies	1	7.50	A	0.76	1	6.88	A	2.42	N
Reputation	N/A	N/A	N/A	N/A	8	3.50	A	3.76	-
Ability to work independently	N/A	N/A	N/A	N/A	11	2.13	N	2.90	-
Ability to adapt	N/A	N/A	N/A	N/A	8	3.50	A	3.08	-
Ability to learn and innovate	N/A	N/A	N/A	N/A	10	2.38	A	3.11	-

Comments added: Competencies through the APC and Graduate Assessment centres

4.4.2.16 Commentary:

This question set out to ask what education was valued by the surveying professional; this had four additional items added to the list for the final Delphi Technique round. One was cultural capital – reputation – while the others were better classified under Bloom’s taxonomy (2002): work independently, be adaptive and learn and innovate (problem solve). Of these newly added items all were agreed apart from the ability to work independently (Rank 11; sd 2.90). The agreed items were reputation (Rank 8; sd 3.76); ability to adapt (Rank 8; sd 3.08); and ability to learn and innovate (problem solve) (Rank 10; sd 3.11).

The purpose of this question was to investigate the use of knowledge and learning and its impact upon the field and the habitus of the surveyor.

In the remaining items consensus was achieved in three out of seven, these were the top two – competencies (Rank 1; sd from 0.76 to 2.42) and professional standards (Rank 2; sd from 1.83 to 01.77), and the seventh ranked safety to practice (Rank 7; sd from 1.31 to 1.85). The non-agreed items were skill sets (Rank 3; sd from 1.60 to 2.25), knowledge base (Rank 4; sd from 1.88 to 2.59), expert practitioner (Rank 5; sd from 1.93 to 2.17) and duty of care (Rank 6; sd from 1.96 to 2.36).

The topics which did not reach agreement – knowledge, skills and expert practitioner – can be grouped under the heading of professional knowledge. The results indicated that there was flux in these areas, although perhaps the term competencies is better understood by the respondents. The lack of agreement surrounding the legislative-backed duty of care was intriguing and contrasted to the response to reputation that was agreed by respondents but ranked lower. This may indicate that societal expectations were not of great importance.

It can be drawn from this ranking that symbolic capital is of importance to a surveyor when validating the value of other professional surveyors. The field, as described by Bourdieu, and applied to the practice of a surveyor is very much in the symbolic culture of Bourdieu's model, and the habitus of skills and knowledge was very much debated; consequently consensus was difficult to achieve. This reflects the myriad of skill sets and specialisms of the surveyor.

4.4.2.17 Question 8: How will future professional education be recognised by quantity surveying professionals?

Table Q8

Question 8: How will the future professional education be recognised by quantity surveying professionals?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Employment	1	6.88	A	0.35	1	5.88	A	0.52	N
Salary	2	6.38	A	0.74	2	5.38	A	1.88	N
Professional regulation	5	4.12	N	2.23	4	2.88	N	0.92	Y
Status	4	5.00	A	0.92	3	3.62	N	1.07	Y
Awards	6	3.38	A	1.30	6	2.00	A	1.69	Y
Lifestyle	3	5.12	A	1.55	5	3.50	N	1.41	Y
International expansion	N/A	N/A	N/A	N/A	7	1.50	A	2.17	-

4.4.2.18 Commentary:

In this question the role of cultural capital as described by Bourdieu was explored in the recognition and rewards of the professional, not merely in the realms of the economic – money – but also other capital. Some elements of capital are economic (employment and salary), whilst others – such as professional regulation – are cultural, or rooted in status in society and with peers. Awards and lifestyle can both cover all three forms of capital and the introduced item of international expansion can be covered by symbolic and cultural capital.

Consensus of 70 per cent and above has been reached in four out of the seven items, leaving three non-agreed items. The first two highest-ranked items can both be described as economic capital: employment (Rank 1; sd from 0.35 to 0.52); and salary (Rank 2; sd from 0.74 to 1.88). The next two items were non-agreed: status (Rank 3; sd from 0.92

to1.07), and professional regulation (Rank 4; sd from 2.23 to 0.92); this may be due to the unease that symbolic capital and cultural capital evokes in the UK CI.

There was non-agreement for lifestyle (Rank 5; sd from 1.55 to 1.41), which can be thought of as covering all three forms of capital, but agreement was reached for awards (Rank 6; sd from 1.30 to 1.69). This seems at odds with the lifestyle question but there was insufficient information from which to draw any further inferences about this divergence. Finally, the newly added item of international expansion was agreed (Rank 7; sd from 1.41). This could be covered by symbolic and cultural capital, but there was little else that could be taken from this data. It would appear that the QS values economic capital over other forms such as cultural capital and symbolic capital. However, there was an awareness of these other forms but a reluctance to adopt them openly. “Status seems anachronistic nowadays”, noted AR.

4.4.2.19 Question 9: What is the future importance to society of professional education?

Table Q9

Question 9:What is the future importance to society of professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Extraordinary knowledge (Schön)	6	4.50	N	2.51	3	5.13	N	2.17	Y
Expertise (tacit)	1	6.30	A	0.74	1	6.00	A	0.76	N
Duty of care (legal)	2	5.50	A	1.93	2	5.25	A	1.91	N
Technical rationality (application of scientific theory and techniques)	7	4.12	N	2.36	5	4.00	N	2.00	Y
Hard knowledge(technical)	3	5.50	A	1.31	4	4.75	N	2.19	Y
Soft knowledge (intuition)	3	4.88	A	2.10	6	3.88	A	2.53	Y
Competence (institutional prescribed)	5	4.62	N	2.33	7	3.50	A	2.07	Y

4.4.2.20 Commentary:

This question explored the importance of professional education and society; consensus was reached on four out of seven items and one item changed from agreed to non-agreed in the final round of the Delphi Technique. Hard knowledge moved down the ranking by one (Rank 4; sd from 1.31 to 2.19); this was an example of explicit learning under Eraut's classification; it too acted as a barrier to entry to the profession, and indeed it showed a wide disagreement as to the future importance of hard knowledge to society.

The top two agreed ranking items were expertise (Rank 1; sd from 0.74 to 0.76) and duty of care (Rank 2; sd from 1.93 to 1.91). Extraordinary knowledge (Rank 3; sd from 2.51 to 2.17), exhibited a wide range of opinion from the respondents indicating a disparity and ensuring that a consensus of 70 per cent was not reached. Schön describes extraordinary knowledge as something the professional holds, and we can see that the respondents are not all agreed that the professional has an important impact upon society, although they have ranked it third. Interestingly enough, the legislation-backed duty of care is seen as an important item for the future of society. This can be viewed in one of two ways: as the regulation imposed by an external body or force such as the law, or the internal regulation of the professional body and its duty to society. The remaining non-agreed item was technical rationality (Rank 5; sd from 2.36 to 2.00); this can be viewed as a tacit manner of learning, and whilst the ranking was agreed there was disagreement between respondents as to its importance – as witnessed by the variance in the standard deviation and the lack of consensus. Soft knowledge (Rank 6; sd from 2.10 to 2.53), and competence (Rank 7; sd from 2.33 to 2.07) both produced consensus and stayed at the bottom of the rankings.

4.4.2.21 Question 10: Which skills sets will need to be embedded in future professional education? Table Q10

Question 10: Which skills sets which need to be embedded in future professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Soft	1	5.13	A	1.13	1	5.57	A	1.27	N
Hard	2	5.00	A	1.07	3	4.28	A	1.80	Y
Innate	5	2.57	N	2.07	6	3.14	N	2.19	Y
Tacit	4	3.28	N	1.70	4	3.71	N	0.95	N
Implicit	6	3.71	N	1.25	5	3.57	N	1.51	Y
Collaborative	3	5.62	A	0.74	2	5.14	A	0.90	Y

4.4.2.22 Commentary:

The ranking of the items changed a little between the second and third round of ranking, but the skill sets which need to be embedded and which achieved consensus were ranked in the top three, namely soft skills (Rank 1; sd from 1.13 to 1.27), collaborative skills (Rank 2; sd from 0.74 to 0.90) and hard skills (Rank 3; sd from 1.07 to 1.80). There was consensus on three out of six items, and the non-agreed items remained constant through the Delphi Technique rounds. A selection of implicit and explicit skill sets were seen as important, but also in the less important and disagreed section both are apparent. In the non-agreed items, where consensus did not reach the 70 per cent agreement, there was a split between the fourth ranked item of tacit (Rank 4; sd from 1.70 to 0.95), and the remaining innate (Rank 5; sd from 2.07 to 2.19) and implicit (Rank 6; sd from 1.25 to 1.51), whose standard deviation were much higher, indicating a wider variance between respondents. Overall, little can be drawn from the implicit and explicit classification of skills, apart from the fact that some are prized more than others, and there was a difference of opinion between respondents. Perhaps Eraut's approach addressing how the professional learns is the best basis from which to view these results; principally explicitly

and implicitly these also affect what Bourdieu would style as field and habitus. What is learnt and observable and what is absorbed from one's surroundings? The respondents could not agree upon the non-certified routes of knowledge such as innate, tacit and implicit, indicating that measurable outcomes which can be translated into symbolic capital are favoured.

4.4.2.23 Question 11: Will professional education promote extraordinary knowledge (Schön) through?

Table Q11

Question 11: Will professional education promote extraordinary knowledge (Schön) through?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
General knowledge	7	3.57	A	1.90	7	2.38	A	2.37	N
Technical knowledge	3	5.57	A	1.72	1	5.75	A	1.72	Y
Implicit knowledge	6	4.43	A	1.40	4	4.38	N	1.13	Y
Behavioural skills	5	4.57	A	2.37	5	4.00	N	2.14	Y
Technical skills	2	5.71	A	1.50	3	5.13	A	1.91	Y
Personal skill	3	5.14	A	1.68	5	4.00	N	2.23	Y
Competencies	1	5.00	A	1.63	2	5.50	A	1.51	Y

4.4.2.24 Commentary:

After initially arriving at consensus the group then adjusted their responses and could not agree on the roles of implicit knowledge (sd changed from 1.40 to 1.13), behavioural skills (sd changed from 2.47 to 2.14) and personal skills (sd changed from 1.68 to 2.23) in professional education and its impact on extraordinary knowledge. These non-agreed items reflect styles of being and learning rather than knowledge. An interpretation which may be laid over these results is that interviewees consider the topics to be outside the realm of professional education providers in the HE sector. Importance was allocated to technical

knowledge which rose to take first place, competencies dropped to second place and technical skills in turn moved to third place in the ranking. Consensus was achieved on four out of seven of the items proposed. Agreement was achieved on the first three ranked items and also the last item, ranked seventh – general knowledge.

4.4.3 Areas of non agreement

The above results show that by using descriptive statistics and applying a parameter of 70 per cent as a benchmark to reach consensus within the sample, most statements reached consensus, although some did not. There follows a list of the items which were not agreed in the second stage of the Delphi Technique, and so consensus was achieved in all but these remaining points.

- A4 Societal recognition an issue in professional education?
- B1 What is the future purpose of professional education?
 - To improve society
- B2 Who will provide future professional education?
 - Professional institutions
 - Private providers
- B3 How will the provision of professional education be offered?
 - Apprenticeships
 - Chartership
- B4 How will this professional education be funded in the future?
 - Government
- B5 Who are the future stakeholders of professional education?
 - Society
- B7 How will the future value of professional education be measured by quantity surveying professionals?
 - Expert practitioner
 - Duty of care

- B8 How will future professional education be recognised by quantity surveying professionals?
- Professional regulation
- B9 What is the future importance to society of professional education?
- Extraordinary knowledge (Schön)
 - Technical rationality (Application of scientific theory and techniques)
 - Competence (institutional prescribed)
- B10 Which skill sets which need to be embedded in future professional education?
- Innate
 - Tacit
 - Implicit

Information drawn from the identified areas of non-agreement would indicate that these interviewees disagree about the role of society in the provision of vocational education, and also how the provision of vocational education will be administered and the government's role in funding. Surveyors disagree about the role of society in the provision of education; this is seen in QA4, QB1, QB5. Academics deem society to have an elevated role in the provision of vocational programmes whilst other sectors do not reflect this view. This elevated view of the role of society held by academics is again mirrored in QA7, while there is a clear split between industry and academia focused upon expert knowledge and duty of care.

The anticipated future provision of vocational programmes sits firmly within the traditionally recognised routes, but there was no agreement reached on the newly introduced apprentice route (QB3) or the use of chartership to gain education. These outcomes may reflect a conservative approach to undertaking studies. There is a clear disconnect in QB4 between the fact of reduced government funding and the lack of agreement by this group on the government's role in funding these studies. This may be due in part to the newness of the funding changes.

Descriptive statistics gave most meaning to the limited quantitative information derived and the restricted sample size employed. The use of AIA and the standard deviation gives confidence to the interpretation of these results.

In this instance the variance in the statistical data was not viable in the Factor Analysis, and could not be used as a basis to interpret the sense and meanings behind the answers given into a meaningful pattern. The data was best used to give an introduction to the qualitative approach adopted in the second section of this study, and underpins the research rationale of adopting the use of descriptive statistics in this study. This especially works in the Delphi Technique section where the main aim is to reach consensus rather than have a definitive outcome.

To reach the third and final stage of coding, which was reductive in its approach, selective coding was employed arising from the above interviews together with axial codings. In this study the themes developed from this section were ones of marketisation, quality, power and knowledge. Uncertainty, neo-liberal creep, inequalities of system and taste also emerged.

4.5 Summary

In this section the subject under consideration has been examined by collecting rich data through semi-structured interviews and further investigation carried out using qualitative methods. This constructivist approach had looked to future studies (Ratcliffe 2008) to enable a forecast to be made by gathering a consensus of expert opinion from a group of informed stakeholders who have an interest and power to affect the implementation of the phenomenon. To supplement this, rich data has been mined from Australian academics that might point to future challenges and directions for the English HE sector.

The data gathered in the qualitative portion of this chapter can be identified in four sections the Australian academics, the next three are English and are identified as academics, industry professionals and the institutional. The Australians identified four themes: the purpose of a university; employability; quality; and the global economy. There were two other points addressed by the Australian academics these were fees and the

future of the Australian HE system. The English interview sample where investigated in three different sections, the first English educationalists identified themes of uncertainty, professional boundaries, employability and skills. The second grouping, Industry on review generated themes of change, uncertainty, economic vulnerability, client driven focus, quality of education and the role of the accrediting body. The finally the Professional grouping identified themes of elite education; quality; barriers; uncertainties; complexity; and cultural capital.

In the second part of the chapter attention was focused upon the use of data gathered through the use of descriptive statistics. The questionnaires used in this research for the basis of data generation were designed to reach consensus. In the following chapter the results will be analysed and discussed.

5 Chapter 5: ANALYSIS AND DISCUSSION

5.1 Introduction

The themes which have been recognised in the findings in Chapter 4 are as follows: uncertainty, inequality, barriers, quality, marketisation, conflict and power. Just as important to this study is the missing theme of knowledge which was anticipated at the start as being of pivotal importance. Leading on from the topic of knowledge the specialist knowledge of the professional was expected to emerge from the research, identified as professional expertise; however, this, alongside societal recognition, was found not to play a central part in this study.

These themes are grouped into three sections: power, marketisation and knowledge; barriers and quality; complexity, uncertainty and conflict including inequalities. A fourth section has been introduced to discuss the possible future that the respondents have described. A reflexive approach to these sections has been adopted by the researcher, but during data gathering and reviewing the rich data the advice of Wei and Fine (as cited in Creswell 2007) was followed. This can be evidenced in Table 3.2 which shows that their advice was followed and that an honest reflexion occurred. To develop the study further, a cognitive approach has been declared by the researcher. The research topic was affected by socio-ethical principles, particularly the need to position the data in relation to a world view focusing on the introduction of the HE White Paper 2011. In this case, how does knowledge fare against political power in a professional environment? Bourdieu (1990) suggests that power can be obvious and invisible and adds that conversations are carried out in a coded dialogue that he argues some are unable to decode. Bourdieu and Passanton (2010) suggest that these codes are found in field and its subset of habitus. This concept has been adapted for this study in Figure 2.2 below.

Bourdieu's formula as they relate to my research.

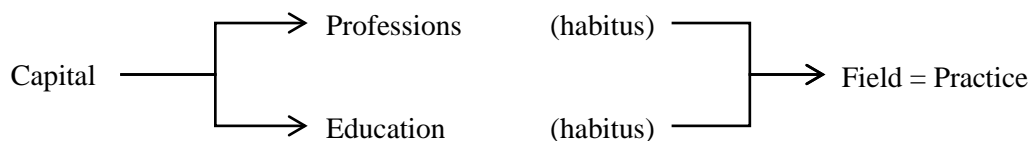


Figure 2.2 Adapted from Bourdieu's (1990) analytical framework of capital

On reflection, Figure 2.2 would benefit from the addition of an outer skin to include the effects of the state and legislation – identified as sitting outside the skin but still causing an effect. The HE White Paper 2011 can also be placed on the outside of this skin. The phenomena is not legislation, but it does reflect the policy of the ruling party (at the time of writing the coalition of Conservative and Liberal Democrats) and so takes its place outside the skin.

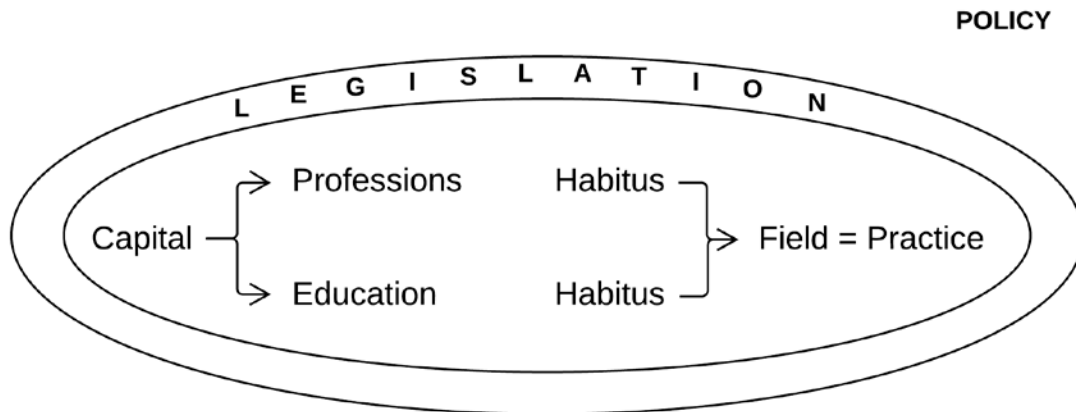


Figure 5.1 Capital, habitus and practice adapted to show legislation and policy impact

As background information to the following discussion, a short description of the context of the professional grouping investigated during the study is required. The RICS can be described as a professional body with low level entry requirements, enabling the movement of agents provided they fit into the field and habitus of the surveyor. The actor can enter the body of chartered surveyors provided they exhibit traits and knowledge required of this profession. In exchange, the individual gains cultural capital as defined by Bourdieu (1973). The body is made up of individual actors and some firms who act collectively as chartered surveyors. The behaviour of this mass of professionals can be described as a collective which has constructed barriers to entry. It is with this information in mind that the following classification of themes has been generated.

5.2 Power, marketisation and knowledge

Power – who has it?

The purpose of power as identified in this research is the reproduction of social order as suggested by Bourdieu (Hammersley 2013, Ainsley 2013). Power can be seen to operate at three levels in this study: the micro level, the meso level and the macro level. For the specific purposes of this study they are identified respectively as follows: the profession; the state; and the global market.

It is argued that authority in this research is identified and held at the professional level by this interview data set. Some of the sample expressed professional authority in a positive manner; this on the whole seemed to be generated from all the different samples.

I3 Response 11 *“And, actually, that in itself adds a huge amount of value to our business, because if we didn’t have it we would have to invent something similar, and actually it wouldn’t have the credibility that the RICS/APC has.”*

P1 Response 1 *“...think that’s the way forward to encourage stronger government industry institutional debate about these issues in a fully collaborative way.”*

P1 Response 19 *“That debate now needs to be extended into education in construction and given the same importance that it had in terms of the age of austerity and saving money in construction.”*

A2 Response 12 *“The ability to do that will depend largely on the attitude of the professional bodies. If the professional bodies are not prepared to accredit those programmes....”*

Also, the authority of the professional body can be identified through the negative comments made by the interview sample; in one instance an indication of a pluralist stance is made.

A4 Response 12 *“Unfortunately what the RICS is doing isn’t helping this process. In the ‘90’s RICS had the vision of getting a better quality into quantity surveying and related programmes ...”*

A2 Response 17 *“If we can’t rely on our professional bodies to give us some protection at that time, then who knows what the future holds!”*

A4 Response 18 *“... because professional body means an organisation that upholds quality as number one, ethics and quality. Those are non-profit and non money-making things. If they are not at the heart of an organisation and commercialism comes into the organisation then we are out – RICS is like a business company now.”*

A1 Response 22 “ *Professional institutions work in mysterious ways, and I’m never quite sure when they’re trying to become elitist and restrict access to the profession so as not to over saturate the market and then get this reputation that there’s so many unemployed quantity surveyors, or when they really want to get fees for the professional institution and ...*”

Power has not necessarily been found in this study to be linear in nature. Indeed, the focus of power and who holds it is not visible to the participants in this study; this will be discussed further under the heading Authority. There is more evidence of a tendency to default to a pluralist stance of a higher authority by this grouping – in this instance the role of the government in the provision of HE to graduates.

P1 Response 10 “*you know. It’s so inextricably linked to lots of other policies, such as immigration and that in terms of how you meet the market demand for what’s perceived to be at the time. And I think the government has some easier fixes.*”

This may reflect the nature of being an individual in a collective, as described earlier in Chapter 2, or the conservative approach of the 19th century where chartered QSs found their professional roots (Thompson 1968, North 2010). There is a belief expressed by both the academics and industry participants that the professional body, RICS, should take more of a leading role in education. There is then a belief expressed explicitly that the professional body has power in this debate.

I2 Response 2 “*And that engagement, I think, between universities and employers and actually the government*” and “*And the institutions. We should be a little bit more joined up.*”

P1 Response 9 “*So how do we proceed forward from there in an educational sense? Personally I think that in terms of – first of all if I can say what I believe the RICS should be doing in response to that. I think that we’re encouraging the formation of UTC’s and University Technical Colleges because we see that as a potential application of more dedicated specialist training from an early age, and something that we could perhaps influence and get involved in ourselves. And I think at the same time there’s a debate about the future of the Built Environment.*”

Authority can be seen to have been awarded to the public-facing professional body (RICS) of this profession (CoP). In the 20th century the global role of the QS emerged (Thompson 1968, North 2010), and in the 21st century this role has gained momentum; this is discussed next.

5.3 Global role

The role of the global market is highlighted by the State through directives from government departments such as Business, Innovation and Skills (BIS); all the parties interviewed in this research have raised points about the global market. It is discussed in the critical literature review where there is a debate around global markets and marketisation, particularly from the academics. There is acute awareness of modern economic trends in the world and a response to the increased trading of services expressed by all interviewees. The professional interviewees suggest that the global market is both outward and inward facing.

P1 Response 31 *“And, in fact, you know, I was recently in China, and one of the interesting things about the Chinese market is that when you talk to them about Cost Engineering, a similar term to Quantity Surveying as we know it, they’re talking about very technical skills that are required in the market. So, I think sometimes, you know, we forget that the profession has developed in this country quite a lot from a technical base, but it’s quite often the technical base that people want in an overseas context. So we must continue to train professionals in that way, I feel, not least of which because, and the government has rightly pointed out that we are a trading nation and, you know, professional services, exports are actually a very healthy export market and we need to get that right. And also, obviously vice versa for students that come and train in this market. Because if you go to, again, a Construction Management course, say at the University of Reading, which I went to not long ago, at least 90 per cent of the students in the room were Far Eastern or Chinese in origin and therefore they were coming to the course in the UK because of the, you know, the technical content on these courses. Because when you work overseas, as I have done, some of the boundaries between technical disciplines do tend to merge and blur. But it seems to me that the British model is about being strong in those technical disciplines, and we’ve got the reputation both from an academic university point of view and from an institutional point of view in providing that technical expertise.”*

Whilst from an industry perspective there are concerns over the keeping of barriers and core values of the profession, this is countered by the positive global market brand which the professional body promotes.

I3 Response 20 *“Well I think the only thing that I’m sort of concerned about is the term – my concern is that RICS seem more – and this is sort of from a million miles away – but, people that we’ve got sort of working on the inside, if you like – my concern is that RICS are just concerned about getting membership up.” and “I think that their drivers are a little bit different to what industry, or the sort of profession in the UK, is actually concerned about. So I’ve not seen anything from them that kind of changes the discussion, if you like.” and “actually, I think that in itself, the less tinkering they can do with it, the better, in my opinion. But they do keep tinkering with it. They keep trying to sort of like push the edges out so that anybody can come in, and I kind of think that’s actually not a good thing.”*

I3 Response 11 *“And, actually, that in itself adds a huge amount of value to our business, because if we didn’t have it we would have to invent something similar, and actually it wouldn’t have the credibility that the RICS/APC has.”*

It is thought that behind this increase in global trade is an economic trend that is described as neo-liberal (Offer 2008), and which can also be described as having roots in monetarism (Olssen and Peters 2005). The policy change adopted in the UK reflects an ideological shift from the interest of the state through investment in HE towards income generating opportunities that HE can possibly harvest. This has been embraced by the professional institution and industry participants in this data set, which is not at odds with an industry-based on service provision. The academics view the global market as an opportunity, but explain the dichotomy of being a state controlled service with imposed restrictions (QAA 2008, HEFCE 2014) which prevents the full advantages derived from competition in the knowledge market occurring; the concurrent restructuring of the HE sector removes the protection of state investment.

A2 Response16 *“we could see an influx of foreign students, but the Home Office is making sure that doesn’t happen through the UK BA restrictions.”*

For those based in the UK this results in an uneven platform from which to compete in the global marketplace. Another issue which is identified is the development of knowledge and the possibility that it may suffer once it is treated as a commodity.

A5 Response 24 *“Yes, I think its becoming much more global this whole competition of education, which could have some good points, but it loses it if it doesn’t actually develop.”*

For the purpose of this study the role of the global market is described as operating at the macro level in economic terms. The state is viewed as operating at the meso level in economics and the profession at the micro level. It is at this micro level that the study has been focused, using vocational education provision and a set of interviewees who have been educated and trained in this specialised area of quantity surveying. It is at this professional level that power is viewed as authority by this research’s sample population.

5.4 Authority

Authority could be described as in flux throughout this research period; this position is visible when the idea of power was studied between the three subsets of interviewees. There is a trialetic discussion occurring over the emergence of the White Paper. There is a belief that the professional body has authority, and this is evidenced by the use of barriers or boundaries to entry established by the professional body. The data set all state that the role of the RICS is to set standards, particularly to entry of the profession and as a subset of this function regulate quality. The industry cohort on the whole valued the symbolic capital of a professional award which would be a certificate of membership to the chartered body.

I2 Response 14 *“It was an opportunity for them to mark us down because he was not a chartered member of the ICE. So it can be used against you if your people are not chartered.”*

I1 Response 17 *“... actually, if we’re prepared to fund it why wouldn’t we send them to a good institution that is recognised by a professional body to deliver the qualification to the standard that is set by that institution.”* and *“That’s one of the criteria is that any qualification they get has to be recognised by their relevant professional body.”*

This view was also evidenced within the academic cohort, but the academics voiced an indication of reliance on the RICS, particularly in accrediting programmes.

A4 Response 12 *“Unfortunately what RICS is doing isn’t helping this process. In the ‘90s RICS had the vision of getting a better inter quality in to quantity surveying and related programmes.”*

A2 Response 12 *“The ability to do that will depend largely on the attitude of the professional bodies. If the professional bodies are not prepared to accredit those programmes.”*

A2 Response 17 *“... If we can’t rely on our professional bodies to give us some protection at that time, then who knows what the future holds!”*

Authority can be seen to be vested in the professional body, acting as a guardian of the profession. In a period of stability both industry and academics (interviewees are all members of professions) give over authority to the professional body. As individuals the data set have undertaken to agree by the RICS’s rules of conduct (RICS 2014); a bias is then considered to occur when deferring to authority. The model then exists whereby authority and the endowed power is afforded to the professional body (P) by both academics (A) and industry participants (I). See Figure 5.2.

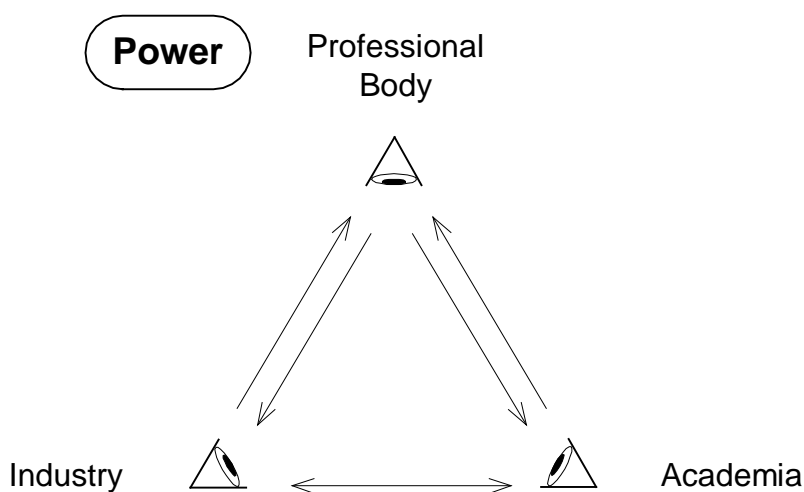


Figure 5.2 Prior to the emergence of policy impact

The emergence of the White Paper was not visible to those interviewees in industry, whilst its impact on the university sector was not developed by the professional body.

A1 Response 23 *“No, absolutely not. If education, that is the area of impact, is not aware of the White Paper, why would industry be aware of the White Paper? Industry’s only aware of the measures that are put in place, when they’re put in place. So the measures are announced and they’re then put in place and the industry starts making strategic plans regarding their employment criteria, when the fact that the measures are going to be put in place is announced.”*

A2 Response 10 *“It’s absolutely clear they haven’t really thought about it. And the answers have been mixed. Those in the public sector have said ‘of course we want to do that’, but that means ‘but we won’t be’ because they won’t have the money to do it. They’ve talked about instead of asking the student to take out a student loan, which they could, they might loan the money to the student themselves and effectively that student in to the company because they can’t leave until they’ve discharged their loan to the company for their education. Whether ... I don’t know.”*

The educators in this data set were aware of the White Paper and were generating possible impacts and outcomes but were unable to be specific at this stage. Overall, the academics suggested that government finance and the issue of funding students through HE were the core reasons for the changes.

A4 Response 1 *“Well, this is a very interesting time period in higher education in general as well. So the whole landscape is at a volatile stage. Everything is changing. And I think all universities are undergoing some kind of change within the universities itself ...”*

A4 Response 16 *“... with the fee scheme introduction of the heavy fee schemes and its impact, people will be thinking of alternative routes, won’t they.”*

A4 Response 23 *“... The funding structure basically triggered this whole process, so we can say we’re trying to implement the Browne Report triggered this whole process of change which is now happening right throughout the university systems.”*

A2 Response 1 *“There is a language and lexicon, if you like, about viability and sustainability, and we’re talking business viability and business sustainability rather than*

academic viability and academic sustainability.” and “... How we’re going to do that, I’m not entirely sure at this stage, but there’s a separate investigation going on about that which is yet to report.”

A1 Response 4 *“... and therefore the White Paper will need to address those transitional issues, which is something that doesn’t really touch on. I think the concern is mostly the domestic market and the fees. It’s all about money and how we’re going to handle the money and how we’re going to control the access to higher education, which is contrary to what was promoted by the previous administration where everybody should have a degree, now ‘is a degree necessary?’” and “really reflective of the political underlying situation but is reflective of flavour of the month. But if you go back and you look at what is being promoted by the government, during the Blair years: education for all, everybody should have access to university, everybody should go to university. Now, it’s all about apprenticeships.”*

A2 Response 9 *”And by allowing the market to form a base just around student perception is highly dangerous.”*

The data was gathered pre-implementation of the White Paper and the stage can be defined as an incubation period of the phenomena. During this stage there was an ongoing debate and data gathering exercise undertaken by all parties. The industry set were unaware of the phenomena and responded to this university generated discussion.

I2 Response 1 *“... know nothing about the government’s White Paper, to be quite frank, so I don’t really know what that impact would be at all.”*

I1 Response 1 *“I wasn’t aware of the impact of the White Paper per se, because I wasn’t really aware that much of the White Paper. However, I am aware of the increase in fees,” and “The actual White Paper itself, I have no visibility of, no awareness of at all prior to this conversation.”*

I3 Response 1 *“Well, in truth I know nothing about the White Paper. So I’m a little bit ignorant actually on the detail of that.”*

The professional body representatives whilst aware of some of the major change in funding had as yet to develop a response but their focus is on finance and funding of student tuition.

RICS Memo Response 1 *“Tuition fees are a difficult area and one which we have avoided making any statements. I would state that tuition fees are a controversial area and there have been some consequences for RICS accredited courses...”*

P1 Response 24 *“I think it’s got a lot of potential impacts.”*

Knowledge of the implementation of the White Paper was found to rest mostly in the academic data set. This makes practical sense as this is the grouping most immediately affected by the introduction of the phenomena. Perhaps the most obvious reason is that it affects HEI’s budgets as suggested by I1.

I1 Response 6 *“Yes, because it affects their budgets.”*

The power of knowing drew the interest of the other two data sets towards the educators. This caused a flux in the power and authority balance and focus is turned away from the professional body. See Figure 5.3.

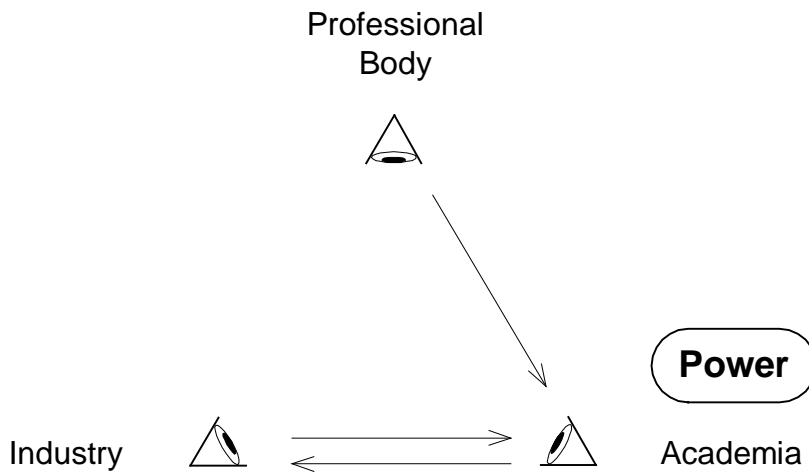


Figure 5.3 Emergence of policy

There is a return to the status quo, where both educators and industry sets reveal expectations of the professional body to provide input and guidance.

The power linkages between these three parties are more complex than firstly described. The professional body has authority imbued by the membership, and so is reliant on this

relationship to keep its authority. The members are also educators and industry- employed individuals, and so although an underlying power is held by the professional body membership this structure appears to be invisible to the participants. Although as suggested by MG,

A1 Response 33 “... the profession is really driven by the demands of the industry, not by what we do on education and how we manipulate education.”

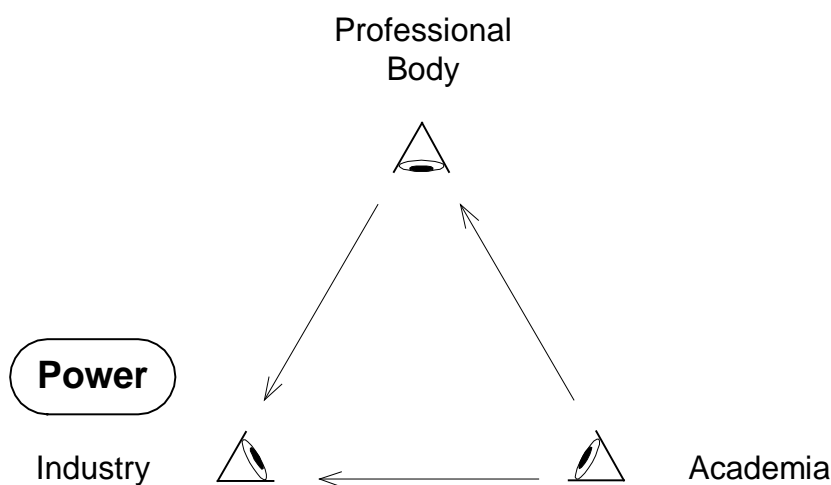


Figure 5.4 Model in flux

The result is not a static model but it does exhibit evidence of a model in flux; power and authority shift through the model, but in this instance an agreement of all parties was made to default to an agreed model of authority. There is evidence of Bourdieu’s *boundaries around entry* in this behaviour – to enter and remain within the profession agreement on conduct is essential and a default of authority rests with the professional body. Knowledge is shared within the profession and often introduced and developed by the membership rather than the professional body.

An overwhelming demand placed by the interviewees upon the RICS relates to the quality of its policies, which ensures that boundaries are intact. This is generally focused on the conduct of members and most importantly the quality of knowledge of those entering and practising in the profession (APC and RICS Rules and Code of Conduct). The focus of this study has been on how QS education will be affected by the introduction of the White

Paper. The role of the RICS in ensuring the standard of the knowledge set held by Qs is evident through the emphasis placed on competencies. When asked about knowledge the data set opted to use the terminology of competencies. This terminology has been in use in professional education and training since the early 1990s (RICS 1990, core competencies) and was described by Eraut (1994) as tacit learning. It would appear from the data gathered that most individuals do not recognise knowledge in the forms discussed by Schön (1980) as professional and expert, or in Eraut's (2000) use of the terms tacit and implicit knowledge.

Evidence for this may be found in Appendix E, Q10, where tacit, implicit and innate learning skills were not agreed upon by the cohort. In the non-agreed items, where consensus did not reach the 70 per cent agreement mark, there was a split between the fourth ranked item of tacit (Rank 4; sd from 1.70 to 0.95), and the remaining innate (Rank 5; sd from 2.07 to 2.19) and implicit (Rank 6; sd from 1.25 to 1.51), whose standard deviation was much higher, indicating a wider variance between respondents. The respondents did not agree upon the non-certified routes of knowledge (such as innate, tacit and implicit), indicating that measurable outcomes which can be translated into symbolic capital are favoured.

Further to the above data more information was gathered on the type of knowledge promoted by Schön (1985) as expert knowledge; the results are found in Q11 of Appendix E. The group could not agree on the roles of implicit knowledge (sd changed from 1.40 to 1.13), importance is allocated to technical knowledge which rose to take first place, while competencies dropped to second place and technical skills in turn took over third place in the rankings.

The drive to achieve a competency-based knowledge set saw the professional body favouring explicit and measurable knowledge. This appears to have been at the expense of expert knowledge alongside tacit and implicit knowledge. Appendix E, Q7, suggests how the professional QS would value professional education. The purpose of this question was to investigate the use of knowledge and learning and its impact upon the field and the habitus of the surveyor.

Consensus was achieved in three out of the seven remaining items: these were the top two, competencies (Rank 1; sd from 0.76 to 2.42) and professional standards (Rank 2; sd from

1.83 to 01.77). Consensus was not reached upon expert practitioner (Rank 5; sd from 1.93 to 2.17) and alongside an added comment “Comments added: Competencies through the APC and Graduate Assessment centres”. The conclusion could be drawn from this ranking that symbolic capital is of importance to a surveyor when validating the value of other professional surveyors. The field of a surveyor is very much in the symbolic culture of Bourdieu’s model, and the habitus of skills and knowledge is intensely debated and consensus is difficult to achieve. This reflects the myriad of skill sets and specialisms of the surveyor.

Vocational education must focus on knowledge provision as described by QAA (2008) and on the skill sets described and imposed by the UK government (HEFCE 2009). A dichotomy is evidenced here between the state-imposed requirements of the QAA and HEFCE and the resultant knowledge measure applied by the profession – competencies. Add to this a requirement passed to the RICS to measure the quality of their accredited vocational courses acting in the role of statutory body (Simpson 2010b) and the result is a complex set of relations which have developed in the delivery of quantity surveying undergraduate education. With this complexity comes conflicts and uncertainty which will be discussed later in this investigation. The Australian academics pointed to this level of state control within the UK as restrictive to the development of vocational courses, something they are not constrained by; however, they then went on to explain the energy involved in satisfying numerous professional body requirements (see Appendix F, G).

A6 Response 4 “... but our construction management in economics undergraduate degree has – I think it’s either eleven or thirteen accreditations.”

A5 Response 16 “At the moment we get accredited by professional bodies. We would have seven professional bodies that accredit our programme because of our focus and they all have their own different requirement ...”

It would appear that complexity is inherent in the provision of vocational undergraduate education in both Australia and England.

5.5 The role of the global market place

This set of respondents indicated that knowledge in the sphere of vocational education is discussed in terms of competencies. They rank competencies at the highest level (Rank 1; sd from 0.76 to 2.42; Q7) while expert knowledge – including innate and implicit knowledge – was ranked 6 (sd changed from 1.40 to 1.13; Q11). This set of interviewees rank non-certified learning lower than certified, and indication that in Bourdieu's terms symbolic capital is of greatest importance to this group. When asked further about the worth of symbolic capital in relation to other cultural capital, the responses would seem to indicate that economic capital is an overriding factor for this grouping (Appendix E, Q7 and Q8).

This is further reinforced in Appendix E, Q8, where the question is asked what does the QS regard as the important output from professional education. The first two highest ranked items were both what could be described as economic capital – employment (Rank 1; sd from 0.35 to 0.52) and salary (Rank 2; sd from 0.74 to 1.88). The next items were non-agreed: status (Rank 3; sd from 0.92 to 1.07), which may reflect the unease associated with symbolic capital and cultural capital in the UK CI.

Appendix E Q8 A3 “*Status seems anachronistic nowadays.*”

It would appear that the surveyor values economic capital over other forms such as cultural capital and symbolic capital; there is an awareness of these other forms but a reluctance to adopt them openly. There is also a possible explanation for the adoption of competencies as a term of common parlance by this grouping; they may be exhibiting a tendency to react to symbolic violence by absorbing the policy to ensure that symbolic control applied through legislation is avoided. The group envisages self-regulation as an important facet of their operations in the marketplace (RICS 2014c).

A thread that developed through the critical literature section emphasised a change in the reason for providing education – for economic benefit. In the 1960s Scott (1998) suggested that the advantage was for the state, a view that was recently backed up by an OCED (2004) report which focused on the wealth of a nation related to the education provided to its populace. Knowledge in this sense can be described as a national investment. In the recent past this view of investment in education has changed focus and is now described by government and in BIS reports as an income good (BIS 2009, BIS 2013). This stance is backed up by Bernstein (1998), Ball (2007), and Young and Muller (2014) who are not so

convinced of the benefits of these changes in policy direction. Others such as Collini (2011), Kus (2006) and Swain (2010) view this policy change as a deviation from the purpose of education in universities. However, when this data set were asked about the purpose of education, the overwhelming response was that it was to ensure vocational employability, (Q1B, Rank 1; sd from 1.41 to 1.30). This was to be expected as the context for this research was vocational undergraduate degrees.

More at odds with general expectations at the outset was the low impact that professionalism and professional knowledge had in this research. Whilst some papers have been written on professionalism there has been a lack of research in the context of quantity surveying. The terminology employed by Eraut (1985, 2000) and Schön (1980, 1985) may be the issue around the identification of these types of knowledge and their acquisition. This is possibly evidenced by the request in the second round of three of the Delphi Technique for clarification of the definition for these terms (Q11).

Appendix E Q11 Clarification Appendix D – Table 5.1

General knowledge	Basic building block of knowing on which to build understanding, comprehension, application (Bloom’s taxonomy) generalist education
Technical knowledge	Knowledge used by the professional for business
Implicit knowledge	Learnt through experience and of an expected level
Behavioural skills	Soft interpersonal skills such as collaboration. Team work
Technical skills	Hard – technical skills, i.e. measurement, structural calculations
Personal skills	Soft – soft skills, i.e. self-reliance, time keeping, presentation skills
Competencies	Measured technical abilities, NVQs RICS usually measured in a tick box manner i.e. can do/cannot do

On clarification of this point and in the third round of three in the Delphi Technique cycle, the terms still did not receive a higher ranking than previously held.

The state's impact upon knowledge could be traced through the power exerted on universities and through the professional bodies. The government, it can be argued, uses explicit means through symbolic control such as legislation, and exerts less obvious pressures through policy based upon political ideology such as the idea of the consumer and value for money.

P1 Response 22 *“... they want good value for money as well “ and “it’s perceived by students to be – I mean I think it will be increasingly scrutinised, is what I mean, by graduates, because there’s not much point them going on a course that they feel is not appropriate for industry or appropriate for the institution that they’re trying to get qualified through.”*

There is also a noticeable increase in the use of terminology such as individualism, global marketplace and marketisation. The interview set were split over the implications of this; those in industry and the profession welcomed the global market and ranked it as a positive occurrence (see Appendix E, Q8) believing it added to status of the professional. The RICS market themselves as a leader of global markets (RICS 2014d) – the global property profession. The educators indicated that whilst a global expansion was a positive point they also believed marketisation of the HE sector was not a positive event. SN gave examples of setting up campuses abroad and the significant losses that were suffered as a result.

A5 Response 23 *“It cost us about – well they said it cost us about 60 million dollars, but it cost a lot more than that. But, yeah, they pulled the plug. I mean set it all up and, you know, planned to move us all up there, but they pulled the plug, and that’s Australia and Singapore, so Reading and Malaysia you think ‘oh’. No, it is a long way.”*

The concept of spreading knowledge is welcomed but if it is restricted to market advantage it quickly becomes outdated and unsuitable to the identified market. Knowledge, it is suggested, needs to be delivered and improved upon to ensure its validity and survival. Young and Muller (2014) agree with this when specifically examining professional knowledge. The barriers to entry and professional knowledge were seen in a positive light, but it is also acknowledged that the restriction on knowledge and its development was not beneficial to the market opportunities of the profession as a whole.

The discussion of a global market (Q8) international expansion was agreed (Rank 7; sd from 1.41) by this cohort, which indicates an awareness of the macro-economic impact of the 21st century on the provision of professional services and the supporting educational framework that is required. There was a debate on the policy of the free market and its newly acquired title of neo-liberal economics. This neo-liberal policy approach has been evident to the profession of quantity surveying since the 1980s when the Compulsory Competitive Tendering Act 1988 (CCT) was introduced. This was followed by the duty of care legislation imposed by the House of Lords in 2002, and based upon the case of *Babcock vs Merritt*. There was evidence of an increase in symbolic control of what was essentially a self-regulating body. An approach seemed to have been adopted by the professional body to absorb policy changes such as the competency-based approach to knowledge. This was to make professional knowledge explicit, much in the same manner of CCT to ensure transparency of costs and services. This could be viewed as a survival strategy for the profession. The neo-liberal approach advocates access and transparency to markets (Barry and others 1996, cited in Olssen and Peters 2005); this was at odds with an exclusive grouping of service providers working as a Community of Practice (CoP). For the same reasons that Bourdieu (Wolfreys 2000) identified this neo-liberal trend as detrimental to the workers in France, it can be suggested that a similar impact can be expected on any collective of service providers such as chartered QSs in the UK.

Certain questions were raised by the interview cohort which fell outside of the research proposed but they were of importance to the framing of the topic of vocational undergraduate education. These questions included the purpose of education, the quality of provision and the requirement of education to change to meet new demands imposed upon it. These points all reached agreement in the third round of the Delphi Technique, but essentially they indicated some options for future research.

In the next section professional boundaries and quality are discussed with a particular focus upon cultural capital as described by Bourdieu. The important issue raised here is that boundaries may become barriers to entering the profession of quantity surveying.

5.6 Barriers and quality

5.6.1 Bourdieu – field and habitus

Professional bodies operate in designated areas of specialism; in the case of the RICS they have declared themselves the “property profession”, and within this general area reside the Qs who specialise in the construction industry. As discussed in Chapter 2 the RICS obtained its chartered status in 1881 and to achieve this status certain self-imposed rules and regulations were proposed. These altered little over the 20th century, but in the 21st century the wording was changed as recently as 2011 (RICS codes of conduct) to focus better on a global market. These rules and regulations are there to ensure quality boundaries are put in place and operated, thus ensuring that self-regulation by the profession can continue.

These boundaries are usually knowledge based and are examined by representatives of the members of the RICS based upon a set of competencies (QS Division RICS Competencies, 2010). Knowledge is deemed to be gained either through education as discussed in Chapter 2 (an undergraduate or postgraduate degree) and a period of certified training (academic route), or through experiential learning, the second examined by a panel made up of members in the same manner as the academic route. In this study Bourdieu’s idea of boundaries is an ideal place from which to examine the role of the professional body. However, in the context of the RICS, rather than boundaries the term barrier is used. Barriers can describe the impermeability of entry to the profession, which is manifested by the twin controls of entrance examinations and the operations of disciplinary boards.

A concern expressed by SN was the blurring of these boundaries and the relaxation of professional barriers to entry. He described under the heading of collaboration, the concern that other related professions such as engineers and architects are seeking to enter the prescribed discipline activities of the chartered surveyor.

A5 Response 28 “... It’s kind of reflected in the way the industry is going, but it means that the differences between these disciplines, or these areas, are blurring as well. That’s the way the industry is going, you know, there isn’t that strong differentiation anymore.”

Whilst in the English data set, DH believed that collaboration within professions was a positive approach and one to pursue; it will be seen that this was reinforced by AM.

I2 Response 17 “around collaboration. You need to be BS1100 accredited. They’re going down the alliance route.” and “BS1100, BIM and alliancing. All cultural.”

P1 Response 25 “... and maybe that comes down to what’s been suggested at the moment in collaboration with other professional bodies is that there may be some kind of Built Environment degree and Architectural Engineering Construction degree that gives a basis for choice within the industry, and then specialisms proceed thereafter.”

The critical literature examined in Chapter 2 pointed to the development of the chartered surveyor as a result of the lack of collaboration between other professions. The invisibility of collaboration between the other professions has benefited the chartered surveyor in the past. As with all professions, there is the possibility of collusion against the public; George Bernard Shaw summed this up:

“All professions are a conspiracy against the Laity.”

A complaint raised was the use of barriers to entry by Downie (1990); however, these barriers, it can be argued, are necessary to ensure fitness to practice. Another issue noted was that to further reinforce the barriers to entry there was evidence of the use of subject-specific knowledge, the employment of innate expert knowledge and a discipline-specific language. Bourdieu (1973) identified these learnt behaviours and acquired knowledge when he discussed cultural capital and the notions of field and habitus.

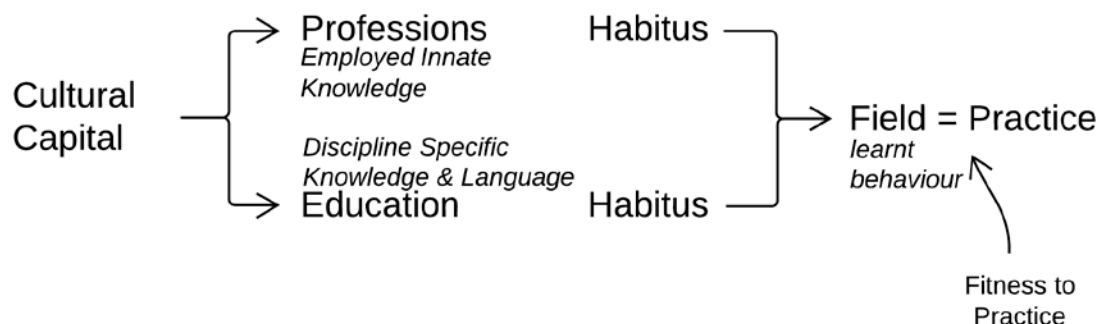


Figure 5.5 Professions, education and practice: adapted from Bourdieu 2014

To be able to practice as a competent surveyor these behaviours and knowledge must be acquired. As a chartered surveyor the regulation of practice must be apparent to counteract the complaints against professions and their “closed shop” of practices. The laity are not the only grouping with an interest in making more explicit the workings of professions; the government is concerned with this too.

The state is at present in favour of the deregularisation of such markets, and through legislation has introduced enforced behavioural patterns in professional bodies. An example for the RICS is the introduction of competitive tendering through the use of the Local Government Planning and Land Act 1980 and the Local Government Act 1988 (CCT 1980/1988) and the Best Value Act 1999. Another example would be the absorption of competencies and the introduction of explicit outcomes for learning (RICS QS Council 1989), in what could be described as an ideological stance. It would appear that the professional body (RICS) has decided to react to legislation and the possibility of further legislation in a similar manner; this can be viewed as a coping mechanism which may prevent the erosion of self-regulation, the cornerstone of chartership. This may explain the reaction of the RICS and its members to the latest policy affecting the provision of HE in the form of the White Paper.

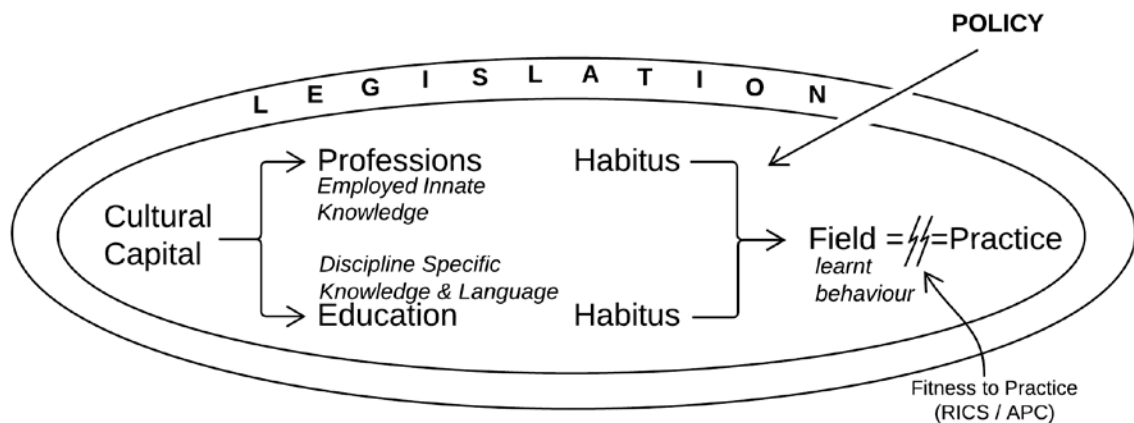


Figure 5.6 Capital, habitus and practice adapted to show how legislation and policy impact are absorbed

The interview sample indicated that they believed the professional body was responsible for the control of quality.

I2 Response 23 *“I believe it is a good thing. I think it is important. And I’m not just saying it’s the RICS, I’m not wedded to the RICS, I am FRICS, but if you want to be CIOB, ICE, ICES or CICES now. I do think it demonstrates an extra level of competence and professionalism.”*

They suggest that even in university provision, quality is indicated by the accreditation of the programme of education,

I1 Response 17 *“... actually, if we’re prepared to fund it why wouldn’t we send them to a good institution that is recognised by a professional body to deliver the qualification to the standard that is set by that institution.”* and *“That’s one of the criteria is that any qualification they get has to be recognised by their relevant professional body.”*

In the following subsection there is a discussion about the role of the profession and quality drawn from the interview data set.

5.6.2 Quality

A view universally held by respondents was that a level of quality was indicated when courses were accredited by the professional bodies. This is evidenced in Appendix E, Q7, where this question asked: how would future value be recognised; within the replies was the additional comment of competencies through the APC and Graduate Assessment centres (Q7). SN and MS remarked that in Australia the importance of this type of accreditation for undergraduate programmes was mainly due to the absence of state-led quality checks. NW suggested that as a company paying for undergraduate vocational courses a primary consideration was that the course must have professional accreditation.

I1 Response 21 *“Absolutely. We see it as a really really important part, certainly for certain job roles. So where there is a professional vocational institution, like civil engineer, ICE, CIOB, RICS, ICES, then we would actively encourage our people to go forward for those qualifications, because we really think there’s a real benefit in having them.”*

In England the state has put in place a quality system which is policed in terms of explicit knowledge, skills and learning. However, professional accreditation is held as a benchmark of quality in both England and Australia. When reviewing Bourdieu’s model of cultural capital as applied to the professional route of the QS, it can be developed to

include recognition of the role of quality in the progress from education and field to practice.

I3 Response 24 “... the APC is a rigorous and robust process. So to become a Chartered Surveyor you’ve got to be signed off by your counselling supervisor and your employer and then you’ve got to go and sit in front of an assessment panel of three people. And, a bit like judge and jury, generally speaking they seem to get it right, more often than not. And it’s actually a robust process, so if that didn’t exist then we would have to invent it.” and “We have some really really bright people come out of university and they really struggle with the APC, because it’s tough, it’s the toughest thing you’ve had to do in your career, in many respects.”

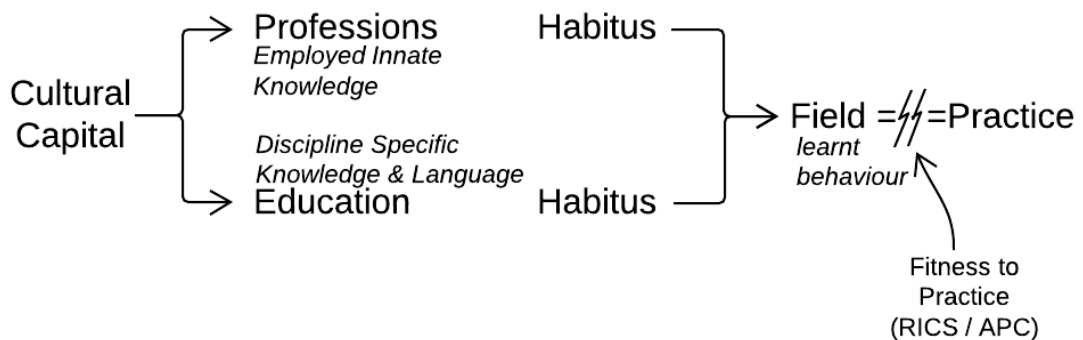


Figure 5.7 Capital, habitus and practice adapted to show fitness to practise as a barrier to entry

This sample of interviewees professes a preference for professional accreditation as a symbol of quality as suggested above. This would imply that quality control as applied by the state does not carry the same importance to this data set (Q7; professional standards Rank 2; sd from 1.83 to 1.77).

The state has implemented a quality control system since the 1960s when as Scott (1998) explained large investment was made in the HE sector. At present the quality system in place in England is represented by HEFCE (2009) and QAA (2008), and the system is also covered by the European Network Quality Agency (DEI 2003). These are described in Chapter 2 as independent bodies operating as QUANGOs as classified by Harvey (2002). The present government has undertaken reviews into quality provision under the auspices of the Department of Employment and Learning (DELNI 2009), which was continued by

publishing the BIS paper *Higher Ambitions* 2009. The providers of education operate three bodies to monitor quality: Universities UK (UUK); Guild HE; and the Higher Education Academy (HEA). Harvey (2002) refers to these as non-statutory bodies. Within this cohort of interviewees the statutory bodies as identified by Harvey (such as the RICS) hold more authority over quality control.

5.6.2.1 Inequalities – the HE White Paper 2011

In the data set suggestion was made about bifurcation of the university sector and the possible merging of institutions that cater for the vocational undergraduate provision; this was seen as a reaction to the workings of market forces, mainly the reduction in applications.

A3 Response 6 *“So we might see a divide between non-vocational pure programmes: geography, history, modern languages, and so on in the older universities, and the newer universities dealing with the technical education, which is where they were pre-’92.”* and *“No, I think principally old universities have got a good tradition of architecture, history, geography, physics, they do medicine and allied degrees that go along with medicine. So I think we’re going to see a bifurcation of old universities who maintain their position in the top 50 because they’ve got those strong subject areas.”*

This was backed up by the figures expressed in TES 2011 pertaining to student applications to undergraduate programmes split into sectors such as the Russell Group and the Millennium grouping. Where Russell Group applications have increased, the members of the Millennium grouping have seen a reduction in the region of 25 per cent. The elephant in the room of this discussion was the role of prestige in the HE sector, where a liberal education, in certain prestigious university groupings, was more attractive to prospective students. It could be argued that cultural capital was gained by attending these types of establishments. This was reinforced by SN who speculated that Australian students can differentiate between universities in the Group of Eight and the other institutions, a point echoed in this study by MG.

A5 Response 33 *“And where do they go? They’re all going to these lesser universities because the top universities have just, you know, taken the cream. That’s going to have a real impact on the aspect of fees and the structuring means that those*

institutions become real factories, you know, they're taught by staff who are, you know, the majority – and I've been around them all – the majority of them are just recent immigrants from overseas and they don't really understand the Australian context of what they're doing. And the quality of the graduate outcomes is going to be a real test, and that's why the academic standards are so important.”

A1Response 24 *“ and do you think that faced with the choice of going to a Russell Group university and going to an ex polytechnic for the same amount of fees – where is the student going to go?”*

To further underline this issue an Australian student is quoted in TES (2014) as saying “I chose this university as they took me.”

The rise in the cost to students for the provision of HE was cited by some of the interview set as a cause for the drop in applications to vocational programmes. Funding was highlighted by a number of interviewees as the main impact of the White Paper. The Australian cohort suggested that this was not an issue for their students when they apply for study, and paid this topic fairly light attention.

A5 Response 7 *“I don't know. I'm pretty sure it's been since I've been here, which I went here in '87/'88, and I'm sure it came in since then.”*

It could be suggested therefore that fees in Australia are now embedded in the HE sector.

5.6.3 Complexity, uncertainty and conflicts

As in all things, there was complexity and conflict, which became evident in the research sample between findings in interviews and the Delphi Technique stage (which the interviewees helped to create). Arching over this research was uncertainty about the impact of the White Paper on the HE sector and vocational undergraduate provision. The awareness of uncertainty (Winch 2010; 6–8) is essential to the successful operation of the CI, where it would be described as part of risk. The industry has developed a vast library of theory and practice surrounding risk – so-called risk management. Uncertainty is an integral part of identifying levels of knowing surrounding risks and the subsequent identification and management of possible occurrences of risk. To ensure the credibility of this research when feeding back results to this data set and the CI at large, the existence of uncertainty must be addressed. Three headings will be addressed as complexity, uncertainty and conflict, and there reference will be made to Roy Bhaskar's argument

surrounding critical realism and especially his idea of the existence of *epistemic fallacy*. The theory of *epistemic fallacy* has influenced the pragmatic research adopted for this study. In addition, there is reference to Bourdieu's notion of field, referring to the manner in which the professional Qs reconstruct their field in response to the introduction of the White Paper.

5.6.3.1 Complexity

In this study levels of complexity were found to exist between the data set sample and also within the individual's own responses through the interview (qualitative) findings and the questionnaire results derived from the Delphi Technique (quantitative). It would appear that different and conflicting responses were given. This was to be expected of human beings, and could be seen as especially prevalent when studying a response to a particular occurrence (in this instance the introduction of the White Paper). In a critical realism paradigm the White Paper would be defined as a generative mechanism which triggers the social phenomena being studied. The outcome can be explained by employing the use of critical realism which suggests that complexity is brought about by three layers – the domain of the empirical, the domain of the actual and the domain of the real. The facts which exist at the present time, and the cultural and social acceptability of viewing these facts all add together to result in a method of understanding which is then constrained by the accepted manner in which we may interrogate these facts. Overall, the idea is that the behaviour and choices made by actors are always constrained by an environment they did not construct and the idea that actors are influenced by a level of unawareness that some may call naive.

Bhaskar (1978) suggested that there exists an *epistemic fallacy*, which he stated focused on a method-driven process of studying the topic rather than allowing the topic to take its place at the centre of the research to drive the methodology. This study has taken the generative mechanism identified and investigated the social phenomena triggered, and then allowed the topic to suggest the style of investigation. The use of mixed methods has helped to generate a tiered level of knowledge production which uses rich data and statistics to give a complex picture of the research outputs. Without this complexity the research findings would be open to the possible suggestion that they lack credibility.

When examining the findings it becomes apparent that there was flux in the development of this research topic; two levels can be identified. There was the identification of the occurrence, and an adjustment of whom may hold the knowledge of this occurrence.

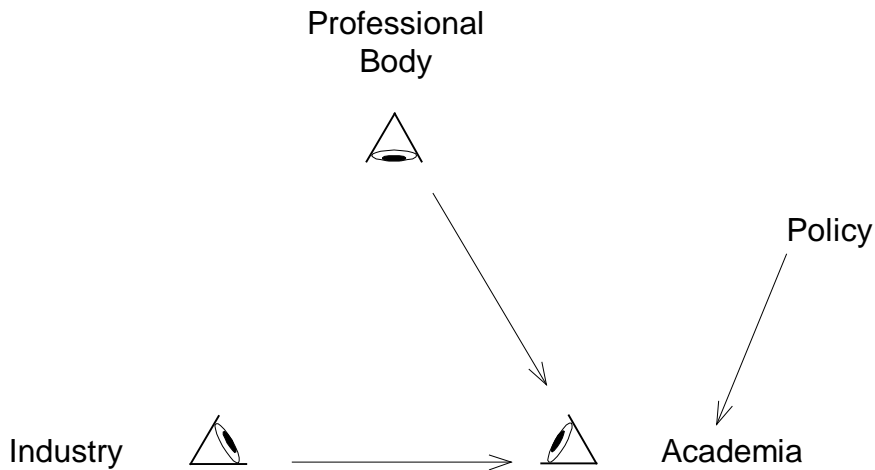


Figure 5.8 Critical realism: occurrence of policy impact

In the critical literature review the arrival of the HE White Paper 2011 was chronicled, and at present the White Paper has not moved on to take the form of an Act of Parliament. The HE sector has geared up to the changes envisaged by the White Paper, but the profession of chartered quantity surveyors has yet to respond.

P1 Response 16 *“The RICS has in the past taken a very non-prescriptive approach to course content, but it seems to us that actually in a world of austere resources that we probably need to be more prescriptive there.”*

When prompted, the interviewees suggested that the profession, which can be identified as a community of practice, should provide guidance on the approach to these changes. The profession chose not to comment whilst looking to the educators and industry to gather facts to inform choices.

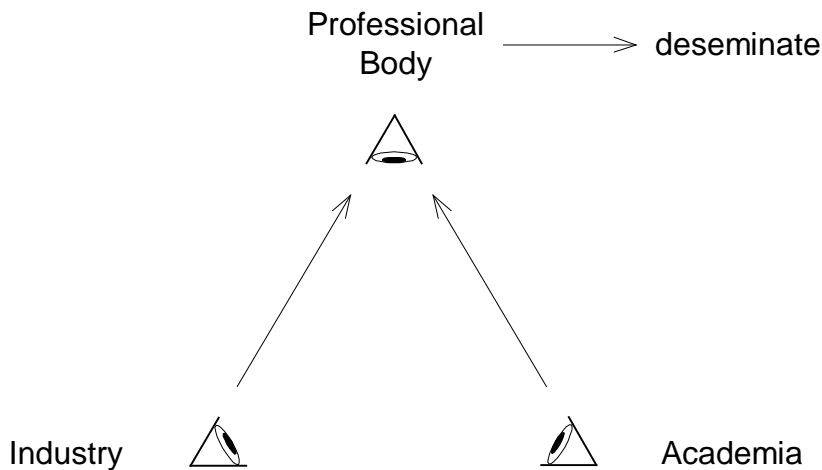


Figure 5.9 Critical realism: idealised version of policy impact

It becomes apparent from the interviews that an idealised approach to the research topic is supported by the sample. Educators and industry suggested that the professional body should take the lead and discuss the development of vocational education provision with the government. There was great emphasis laid upon collaborative approaches – a point discussed at length in this chapter. This reflected the culture of the profession and underpinned its approach to changes imposed upon it. The regulation of quality was a subject which was discussed at length as the maintenance of barriers was of high importance to this data sample CoP. The use of competencies as an indicator for fitness to practice was ingrained in this interview set and was raised by them as an important issue. (Q7: competencies (Rank 1; sd from 0.76 to 2.42).) This data set sample weighted the RICS quality control higher than the university and government quality controls when asked to rank preference. (Q7: Appendix E, professional standards (Rank 2; sd from 1.83 to 01.77))

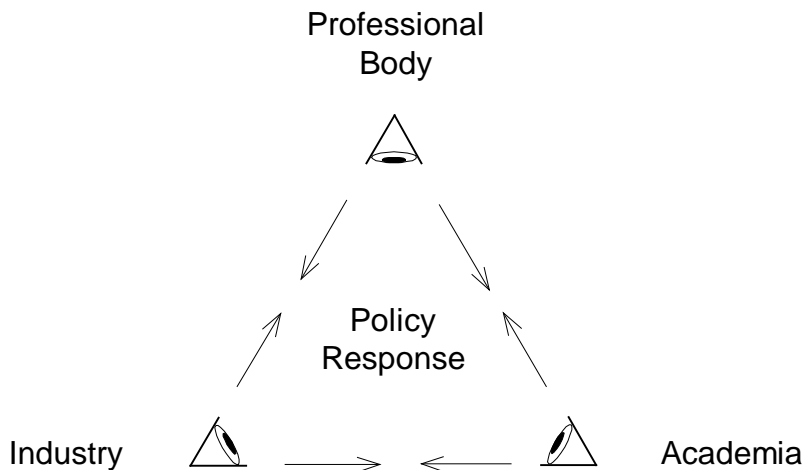


Figure 5.10 Critical realism: reality of policy impact

The outcome of the research findings suggested a fairly uniform approach by the sample to the generative mechanism – the HE White Paper 2011. There was a reliance on the community of practice to which all chartered QSs belong, as symbolised by field and habitus by Bourdieu (2001). There was a gathering of information and then an expectation that the professional body would act as a figurehead for the resulting response. Knowledge of the occurrence was gathered from parties best suited to investigate. In this instance the academics dealing with the education route and the policies developed by the industry engaged QSs on how to respond and provide education strategies. The analysis and strategies employed will inform the RICS, and policy will arise from this cycle *see* Figure 2.2

In reality what was witnessed was a construction of a symbolic field; this indicated flux and generated uncertainty. Adaptive responses need to be developed and these take time. Although it seems that the field of practice remains firmly within the geographical constraints of England and was not extended to other parts of the globe by the institution (RICS) or industry participants.

5.6.3.2 Uncertainty

There was disturbance in the field of practice and an adjustment of the required knowledge had to be undertaken. During the period of study the sector continued to change and develop which may indicate the changes made to the Delphi Technique's final results. What emerged was the construction of the symbolic field; this was evidenced by the flux in power and knowledge sharing. Power changed as suggested by the use of Bourdieu's

diagram, and also when using Bhaskar's (1978) three domains to explain inherent behaviour and conditioning. When dealing with knowledge or facts the position of power changes over time; at the beginning it sits with the most affected party (the academics), then with the industry cohort, and then reverts back to the professional body. These shifts reflect changes in the situation; as the White Paper continues to move from the university sector to impact upon the industry sector the importance changes to the different parties now affected. The point is that the effect of culture can be visible on this process – all parties defer to the professional body to interact with government bodies. There is evidence of a default stance of pluralism in existence within the body of the profession; indeed it is evident in the habitus and field of the chartered surveyor – the agreement to abide by a code of conduct and regulation supports this statement.

5.6.3.3 Conflict

There was during this phase the possibility of misinterpretation of facts and of other parties' actions, either of which could have resulted in conflict. The future impacts of the implementation of policy surrounding HE are still to be experienced, and therefore views have been sought from the sample. This conflict could arise out of the adjustment of the symbolic field, in this instance vocational education versus training. The overall view of this sample was that education was for employment, therefore rejecting the followers of Newman (1835) who have viewed the idealised belief of a liberal education as being superior to others types of education. However, within the sample there was a disconnect between the academics' view of education of the QS and the industry and professional cohort's beliefs. This was based on specific professional competencies, favoured by industry and the professional body and which differed from the wider knowledge favoured by the academics. What occurred could be depicted as a contest over construction of the symbolic field. Whilst the professional body has in the past dealt with similar imposed changes, such as the introduction of competencies, it has elected to absorb these, as discussed in Chapter 2. The RICS Memo also stated that it was not prescriptive about undergraduate degree content, but perhaps they are more likely to be so in the future.

P1 Response 16 *“The RICS has in the past taken a very non-prescriptive approach to course content, but it seems to us that actually in a world of austere resources that we probably need to be more prescriptive there.”*

Another conflict arose over the use of barriers to entry to the profession; field and habitus were discussed in this study and within this was the use of knowledge (see Appendix E, Q9). There was agreement on expertise (Rank 1; sd from 0.74 to 0.76) and duty of care (Rank 2; sd from 1.93 to 1.91). There was a lack of consensus on extraordinary knowledge (Rank 3; sd from 2.51 to 2.17), which elicited a wide range of opinion from the respondents. This is described by Schön (1983) as the knowledge held by the professional.

When introducing the concept of extraordinary knowledge in Appendix E, Q11, there was a lack of consensus to be found in this cohort; around implicit knowledge, however, there was agreement. Importance was allocated to technical knowledge which rose to take first place, competencies dropped to second place and technical skills in turn took over third place in the ranking.

Referring to Bhaskar's beliefs, conflict was between the known and the unknown (ref), in this case the removal of state funding and the impact upon the education and training of the future professional QS. Further to the previous views attributed to Bhaskar is his assertion that actors respond to a pre-constructed reality imposed upon them; this is an interesting stance to adopt in the context of this study. However, yet again there was no simple answer to the issue of conflict, and the participants could be seen to collude with a behavioural method adopted by the RICS as a profession. This resulted in the choice to absorb changes stemming from government in the form of policies in the expectation that these policies would not become legislative. The main goal was to remain self-regulating rather than controlled by legislation. This was further enforced by the pluralist stances adopted in deferring to a higher authority, in this case the government and its education policies.

P1 Response 10 *“... you know. It's so inextricably linked to lots of other policies, such as immigration and that that in terms of how you meet the market demand for what's perceived to be at the time. And I think the government has some easier fixes.”*

The sample was very aware of the possibility of inequalities in access to the profession. They were very aware of barriers to professional practice and the journey through the field of practice and the positioning of the habitus – behaviour, preferences and knowledge of the QS in this field. They believe that these need to be regulated and use the term quality to explain the existence of this barrier to practice. They also believe that the professional

body was best suited to make decisions on entry to practise. They were very focused upon the cost to the student when entering this field and believed that this may restrict access. All in this interview sample were concerned that the provision of vocational undergraduate degrees would be reduced because demand for the places would consequently fall. As the professional body (RICS) were able to gather the following data.

P1 Response 36 *“But there have been, and we know from our statistics, a fall in people undertaking Quantity Surveying courses, and most people think that that’s actually partly recession generated but probably partly £9k fee generated as well.” and “ but generally speaking I think there’s been a fall in numbers of somewhere between 10–15 per cent on Quantity Surveying courses since 2009.”*

RICS Memo Response 3 *“Undergraduate tuition fees – fall in undergraduate applications to Built Environment courses (architecture, building and planning subjects) in 2012.*

2011 – 11283 applications- entrants 3290

2012 – 9407 applications- entrants 2841

These stats are from UCAS and do not cover all RICS accredited courses but are reflective of the situation within the nearest subject group.”

Industry interviewees were involved in developing long-term strategies to ensure a flow of new blood into the profession by examining apprenticeships, and sponsored part-time and sandwich undergraduate degrees. The overall approach by industry was that financial investment in this area of vocational education would rise, but selection for financial support would meet stricter criteria.

I1 Response 9 *“... we’ve sort of got the short term fix is somebody who’s gone and got their degree and we just recruit them directly in to a job. The medium term would be our traineeships where we take people on who have done their A levels and they’re going straight on to an HND, hopefully, or a degree part-time, dependent on what level of qualifications they’ve got. And then the long term is the apprenticeship routes.” and “And once that was in place, for us, it made more sense to have this, almost three tier approach, to say ‘well we recognise that we’ve got a shortage now. We need to take graduates on’.*

The sort of medium term is taking them on as trainees, but actually in a ideal world there is definitely something about bringing them on from the ground and accepting that a proportion of those will never move beyond that level, but a proportion of those will move up through the ranks.”

Academic interviewees have similar views on the impact of funding changes introduced in the White Paper .

A4 Response 16 *“... with the fee scheme introduction of the heavy fee schemes and its impact, people will be thinking of alternative routes, won’t they.”*

A2 Response 17 *“I think there will be some consolidation and they’ll also be some trading. I think we are vulnerable because of the downturn in student numbers, and I think when the boom comes back that will create opportunity but it will also leave the door open to private providers who might be able to do it at a lower fee. If we can’t rely on our professional bodies to give us some protection at that time, then who knows what the future holds!”*

What was highlighted was a belief by the academic cohort that students would differentiate between HE institutions. This was thought to be mainly associated with expectations about the worth of the cultural capital to be gained by attending elite liberal educational focused programmes and institutions.

A4 Response 17 *“... we saw that traditional academic areas of study has been getting a better response than the professional orientated programmes. I think the universities are thinking as to whether they should give more prominence to the traditional streams,” and “... that the universities are now trying to focus more on traditional academic subjects, this all works in favour of the professional programmes that are there in the universities” and “... the traditional redbrick, and Russell Group that sort of group of universities, didn’t have any problem of recruiting. They run traditional programmes, they are not even bothered, they don’t even talk about recruitment, they get their numbers. And the fee didn’t have any impact on them, virtually little impact.” and “Nobody talks about that and everybody’s talking about – it’s more, even though not openly said, it’s more elite education now.”*

A view from industry related to the importance for a quantity surveying candidate to be enrolled on an RICS-accredited degree programme. However, this was not the only criteria

when recruiting; the person with the correct skills and personal traits would be favoured over the technical knowledge they possess.

I1 Response 22 *“... we would measure them against, I think it’s eight, key areas. One of those key areas is technical competency that’s specific to their job role.” and “So that’s the, you know, what is it they need to be able to do to do their job, the actual nuts and bolts of it. But then the rest there’s obviously stuff around health and safety, but then there’s things around planning, communication, IT, and so we try to cover the broader competency of the individual alongside the technical competency required to do the job.” and “behavioural competencies on top of that” and “people success factors,” and “And that’s equally as crucial. You know, you could have somebody who’s come out with a first in their degree and is absolutely, you know, brain of Britain but can’t hold a conversation with somebody, or if they do have that conversation to get that technical and put down in detail, that they just leave the other person behind” and “... there’s the balance of the two.”*

There was evidence of conflict arising over the purpose of education and subsequently where it should be provided. Very few in the data set indicated that they were in favour of liberal education and all explained that they would expect education to result in employment – this was to be expected in vocationally facing education. The educational route favoured by all parties was an undergraduate degree from a university, then a training period, followed by passage through the APC. This mirrors the existing pathways to reaching chartership that have been in operation since the 1960s (Thompson 1968, North 2010). The use and type of knowledge in education provision caused the greatest disparity between the interview groups. Knowledge required for employability was deemed to be different within the data samples. The academics favoured a broader knowledge and discussed a more rounded style of education, rather than focusing on training and emphasising the contribution to society.

A3 Response 1 *“... it goes back to what the fundamental reason for universities is, which is to expand knowledge and to create citizens who can contribute to the cultural and economic wellbeing of society.” and “... but universities aren’t about training, they’re more about education and looking after the whole intellect of somebody it is not just our area which is focused.”*

A4 Response 20 “... what is the social impact of that at the end, because we all work in the society and you’re talking about the professional status of professions and this is a key factor in defining what the profession is.”

A2 Response 8 “... is higher education a national investment, universities exist because society needs them, not they exist because the people who go to them need what they offer.”

Industry and the profession discussed competencies and technical knowledge. This group also did not identify intrinsic knowledge but favoured explicit knowledge, and they also favoured soft skill sets too. This can be seen in the following table taken from Appendix E Q10.

Question 10: which skill sets need to be embedded in future professional education?									
	2/3 Rank	2/3 AIA	2/3 A	2/3 sd	3/3 Rank	3/3 AIA	3/3 A	3/3 sd	Changes
Soft	1	5.13	A	1.13	1	5.57	A	1.27	N
Hard	2	5.00	A	1.07	3	4.28	A	1.80	Y
Innate	5	2.57	N	2.07	6	3.14	N	2.19	Y
Tacit	4	3.28	N	1.70	4	3.71	N	0.95	N
Implicit	6	3.71	N	1.25	5	3.57	N	1.51	Y
Collaborative	3	5.62	A	0.74	2	5.14	A	0.90	Y

A = Agreed
N = Not Agreed

Commentary: soft skills (Rank 1; sd from 1.13 to 1.27); collaborative skills (Rank 2; sd from 0.74 to 0.90); and hard skills (Rank 3; sd from 1.07 to 1.80). Overall, little can be drawn from the implicit and explicit classification of skills, apart from the fact that some were prized more than others and there was indeed a difference of opinion between respondents. The respondents did not agree upon the non-certified routes of knowledge such as innate, tacit and implicit, indicating measurable outcomes which could be translated into symbolic capital are more desirable.

The academics expected there to be a split in HE provision with vocational education being housed in one type of institution and education described as liberal in another set, mostly in the Russell Group. These Russell Group universities were differentiating themselves by indicating a level of elitism.

5.7 Future

5.7.1 Education

There was a thread running through the research which focused upon the purpose of HE, which on reflection has been visible in educational dialogue over the last century – strategic education versus vocational education. It became relevant in this study as the ideological changes of government have moved from determinism towards a market focus approach (Williams 2009, Collini 2011, Ball 2007, Bernstein 1998) and this impinges upon the financial mechanisms which HEIs have depended upon over the last 50 years (Scott 1998). A further development of the present government is the proposition that HE becomes an economic generator in itself (BIS 2009, Brown and Carasso 2013, Olssen and Peters 2007) rather than an enabler of a society, something which has far reaching consequences for the sector.

A3 Response 1 *“... but universities aren’t about training, they’re more about education and looking after the whole intellect of somebody it is not just our area which is focused.”*

A3 Response 8 *“... to create citizens who can contribute to the cultural and economic wellbeing of society.”*

A2 Response 8 *“... is higher education a national investment, universities exist because society needs them, not they exist because the people who go to them need what they offer... at this time are asking themselves questions about ‘well, what does a competitive market do to higher education?’” and “Somebody somewhere in the system has to have a view about the forward-planning of that commercial activity.”*

In the descriptive statistics gathered from the Delphi Technique rounds, the sentiments expressed by the largely academic grouping about the role of education in society were at odds with the other interview cohorts as improving society ranked fourth (sd from 1.30 to 1.58) in Appendix E, Q1. The additional item concerned with developing a body of knowledge that developed to meet society’s needs (Rank 5; sd 2.08) was ranked at the bottom. The highest ranked purpose was that of employability. This could possibly be

interpreted as evidence of the *rise of individualism* and so indicate a move from traditional conservative practices to a market approach.

There were dichotomies evident between the role of free market strategies and the constraints of government instruments such as quality control mechanisms (QAA) imposed on English universities. Interviewees from the industry and professional data sample believed that the provision of HE was expensive, thus resulting in them considering entering into the HE sector as difficult and unnecessary.

P1 Response 27 *“But I think if you’re trying to replace what is quite an extensive and expensive educational base, then I think that’s much tougher.”*

I1 Response 13 *“It’s very expensive. And then there’s the issue around expertise.”*

I1 Response 11 *“Because this, in terms of higher education/further education, we do it across all the businesses. If you look at the range of qualifications that we deliver, in terms of the types, whether it’s in civil engineering or quantity surveying, whether it’s a degree or an HNC, or whether it’s SIPS qualification, there’s a multitude of variance. And I think that we are far better served by using the institutions that are there already.”*

Only the academics view the possibility of private providers as a concern under the introduction of the White Paper. However, once the topic was introduced the RICS go on to discuss the possibility using the model of blended learning used in the College of Estate Management (CEM); this was also suggested by SP.

A4 Response 22 *“... think there is a significant possibility of private providers coming in to the market.”*

A2 Response 2 *“Well it opens the door to the private providers offering much cheaper courses, and therefore partnerships between big organisation and private providers to provide those courses, that is true. Yeah.”*

A4 Response 13 *“So people might think why don’t we do these kinds of things and go in and get qualifications. On top of that, RICS themselves are facilitating that. Did you come across CPD programmes RICS is promoting at the moment?” and “They are the first private provider because they are now actively promoting and they have created a stream of CPD events that suits that as well.”*

Undergraduate provision at HE level is essential as it supports a structured training route proposed in the professional body from the mid-1960s for achieving professional charter status (RICS). In the case of Australia there was evidence that a balance was reached in the HE sector after the Dawkins Review (1989). The Australian HE system expanded to include a two-tier sector including FE, and there was one new private provider – Bond University – and student funding does not appear to attract much attention today. None of these changes were of importance to the interviewee set as they had to be prompted on these issues. There was a concern over increased federal quality control, which was welcomed as it was expected to reduce the professional accreditation burden; however, this was seen to restrict education development particularly knowledge.

A5 Response 19 *“Well, the threshold learning outcomes are different to the QA and I think the Australian government learnt from some of the concerns about QA and that approach.”*

5.7.1.1 HE White Paper 2011

5.7.1.1.1 Purpose

Currently the HE White Paper 2011 takes the form of a policy and has not become an Act of Parliament as at the state opening of Parliament June 2014 (BBC 2014). The influence of the White Paper was nonetheless very visible in the operation of HE institutions, and the key statistical indicators (KSI) were of importance to vice- chancellors (DMG). These KSIs formed the basis of the reward system engineered by government through the HEFCE (2014) which impacts the expected revenue of a university (particularly student numbers and research grants). It can be concluded that these instruments have an impact upon the operations of HE institutions and will continue to do so in the near future.

A1 Response 1 *“... whether this is going to be something that is going to reflect in the structures pattern of education through a three year degree as we know it today, that is what is debatable. And if that’s what the White Paper is trying to address, that’s probably why it’s not progressing through the channels that will take it to legislation, because it may not be necessary.”*

5.7.1.1.2 Private providers

The professional body (RICS) have raised the issue of entering the arena for the provision of education and embracing the new role of private provider.

RICS Memo Response 9 *“New providers – more choice for students, private providers gaining degree awarding powers (for example CEM), challenge to existing partner universities.”*

It has been suggested that the College of Estate Management would be a model which could be adopted. There may be a conflict of interest should this arise, as the question of whom accredits whom for QA purposes was raised. The answers to Q2a are found in Appendix E, where respondents did not rank private providers (Rank 6; sd from 1.13 to 1.55) particularly highly. When asked who should provide professional education, it would appear that the grouping felt the institution should take a high profile (Rank 3; sd 2.66) and ranked private providers (Rank 4; sd 2.33) in fourth position (Appendix E, Q2).

The final change recognised was that of the provision of funding for part-time education, but this was not discussed at any great length. This may be in part due to the use of part-time and sandwich degrees in the provision of quantity surveying education, elements which are now well embedded and available to undergraduates.

5.7.1.1.3 Impacts of the government instrument upon professional bodies

The overriding need of the RICS is to retain the ability to self-regulate (RICS Charter, 1922); the application of legislation acts to restrict this ability. This could be described as symbolic state control and is resisted where possible. The introduction of the HE White Paper 2011 can be described as symbolic violence, which, based on observations forthcoming during this research, will be absorbed and enacted upon. The aim is to avoid symbolic control. There may be an issue of conflict surrounding professional values and practices which was introduced through the reaction to the use of symbolic violence in resistance to increased symbolic control over professional bodies.

A5 Response 12 *“But why would you bother putting them through a university? I mean the whole rationale for our programmes is starting to dry up as well.”*

5.7.1.1.4 Provision of education

The preferred routes for the provision of undergraduate vocational education was at HEIs (see Appendix E, Q2a, Q2 and Q3), followed by postgraduate education, also at HE institutions. Most respondents would prefer collaboration between HEIs and employers, but overall the existing route to chartership was endorsed. As seen in Appendix E, Q2a, HE institutes (Rank 1; sd 2.97) were favoured over those same institutes and employers in collaboration (Rank 2; sd 2.56). Also, when asked how education would be offered (see

Appendix E, Q3) the most popular routes were undergraduate (Rank 1; sd from 0.35 to 0.76) and postgraduate degrees (Rank 2; sd from 2.12 to 2.14); these could be described as elite and traditional routes.

Private providers were new to the discussion and little could be agreed upon when it came to their role and impact. In Appendix E, Q2a, the non-agreed item was private providers (Rank 4; sd 2.33) which were ranked fourth in provision.

5.7.1.2 A bigger question of purpose and validity was raised

5.7.1.2.1 **The bigger picture:** Is a degree necessary?

A1 Response 27 “... as to whether a degree is necessary, and the value of the degrees, ... but those who are working in the industry don’t see their degree as essential, they will go for further education qualification and stay there because the benefit of experience will probably be all that they need.”

A1 Response 31 “... really reflective of the political underlying situation but is reflective flavour of the month. But if you go back and you look at what is being promoted by the government, during the Blair years: education for all, everybody should have access to university, everybody should go to university. Now, it’s all about apprenticeships” and “All the incentives within the industry are giving to apprenticeships.”

A4 Response 12 “ and ‘RICS is now promoting its the Assoc RICS.’ and “The Assoc RICS route was introduced. Now that means – Assoc RICS is the shortened form for Associate RICS – so that route means that people don’t have to have an RICS accredited degree.” and “He can do that, and then go through that way, within about 5 to 6 years’ time I will be able to get my chartered. Now, I don’t have to go to university at all, but I might do ad-hoc short courses to fast track the route.”

A1 Response 1 “It may fall within this philosophy that ‘is a degree really necessary? And is the value of a degree something that justifies the cost of the degree?’”

Various themes have been explored in this chapter using the framework designed in Chapter 2 (see Table 2.3), and analysis has given a perspective to the data collected in the course of this investigation. Working from this basis the four Key Questions have been addressed as follows:

5.8 KQ1 What is the potential impact of the government's White Paper on the provision of construction education?

When considering KQ1 in relation to the rich data set gathered from this study, it became clear that there was a definite split between those who were aware of the HE White Paper 2011 and those who were unaware of it. The academics were more aware of the White Paper and its potential impacts upon the HE sector than practitioners in industry, whilst the professional interviewee set elected not to comment specifically.

It follows that the generation of the potential impacts of the White Paper on construction education fell heavily into the academic sector of the data collected. However, all of the interviewees believed that changes in the HE sector were focused upon the funding of undergraduate provision. Whilst this data may exhibit a bias, the other respondents made it clear that they would have expected this sector to lead in the discussion of this particular topic. As discussed earlier, this reflects the pattern of working exhibited in a CoP. The responses fell into four categories: the purpose of education; the marketisation of HE; professional education; and progression of the HE sector.

5.8.1 Purpose of education

The *purpose of education* was the topic the academics devoted most time to in the interviews. In particular they highlighted two headings which have been identified as societal and employment. When these discussions were analysed they tended to follow Cardinal Newman's (1835) discussion on the purpose of education. The aim to provide a wide-ranging education for students was documented in the interviews, and so too was the desire to prepare students to gain employment (see Appendix E, Q1, Rank 1; sd 1.25), mostly arising from the specialised knowledge and experience delivered in vocational degrees (see Appendix E, Rank1; sd 0.52). On the surface Newman advocated a liberal education over the vocational versions. By placing Newman's speeches in context it enabled the history of undergraduate degrees to be investigated, and this upheld the view that the main goal for a university education was the employment of educated people (de Ridder-Symoens 1992, Clifford and Gutherie 1990). There were exceptions to this where education was seen as being for educational purposes only, but these were unusual and elite (Rothblatt 1997).

The modern debate of training and education arising from these interviews may better reflect the liberal versus vocational debate. The concern of all of the academics in this study was with the ability of students to independently learn, and the supply of the skills

necessary for free thinking and problem solving; this was in line with Bloom's Taxonomy (2002). There was an overwhelming belief that a vocational degree should lead to employment but should not be a training experience (see Appendix H, A3 Response 1 and Appendix I, A4 Response 20). Training was viewed as a constraining influence on education. However, from a review of the academic's vocabulary, skills and competencies were discussed but little was said about knowledge. Knowledge was not explicitly described or discussed. This was rather perplexing in the setting of a vocational-facing degree, as the acquisition of expert knowledge was of paramount importance to the professional QS. Following on from considerations of the purpose of education was an acknowledgement of the progressive changes in funding HE, identified in this study as neo-liberal creep; this is discussed in the next section.

5.8.2 Marketisation of HE

Funding was identified as the main driving factor behind the White Paper by all interviewees in this study; education is expensive and the burden until recently has been carried by the British state. The aim of the White Paper was to transfer the funding of HE education from the state to the individual. This has been made explicit and the *rise of individualism* has been identified in a neo-liberal context where the student decides on the worth of the study that they undertake at HE level (see Appendix R, AM Response 22 and Olssen and Peters 2008). In addition, the role of quality indicators have been added to the burden of HE; whilst quality was of great interest to the academic community, the measures employed by HEFCE and QAA, such as the NSS, are seen to be blunt and irrelevant tools with which to assess the programmes (see Appendix I, A4 Response 4 and Appendix K, A2 Response 9).

Academics are united in refusing to view students as consumers (see Appendix K, A2 Response 16 and Appendix I, A4 Responses 21, 27 and Engers 2013). This position which was adopted by the academics with regard to the government's description of students, caused the greatest disparity between the government's emerging ideology and the academic communities' approach to interacting with students. It was not simply the reframing of the education transaction between students and universities in a commercial manner, but also the use of consumer-like indexes to benchmark quality (see Appendix K, A2 Response 1 and Appendix I, A4 Response 21), which caused the greatest disconnect between ideology and practice. The academics were very aware that the government was no longer placing itself at the centre of HE. The state has now restructured the flow of

funding to pass through the individual thus encouraging the *rise of individualism* in this sector. It seemed to interviewees a move designed to marketise the HE sector. This marketisation of the HE sector was the biggest struggle that academics had – to develop a strategy to respond to the transient nature of the commercial market in the HE sector (see Appendix K, A2 Responses 8 and 16; Bernstein 1996, Ball 2007, Young and Muller 2014).

The marketisation of the HE sector was apparent to academics in this sample; the awareness of commercial realities for the post-92 institutions was evident in the discussions held. This was at odds with the ideological stance of most academics, who discuss HE as a societal good and the state as the prime and central provider of funds (see Appendix K, A2Response 14; and Appendix I, A4 Response 20 and Appendix H, A3 Response 7 and Scott 1998). Academics were very aware of the inequalities of the present and potential future system, and focused on the return to elite and liberal style education as detrimental to vocational programmes (see Appendix J, A1 Response 24 and Appendix I, A4 Responses 9 and 17). There was an obvious disconnect between present HE policy and these academics' individual opinions about the provision of education. In the emerging commercialisation of HE there was a growing awareness of the use of education as a commodity for sale in the market and not as something purely available for the good of society (BIS 2010 and Appendix G, A5 Response 33and Brown and Carasso 2013). This economic approach to the provision of education was, they felt, a double-edged sword, which they feared would impact upon the vocational degrees and the HE sector which provided them. This disconnect between policy and implementation can be found in the next discussion on professional education.

5.8.3 Professional education

Professional education has a strong culture of societal good and the expectation of returning benefit to society in general. The RICS early on in the 19th century and into the 20th century valued the *good of society* (see Appendix K, A2 Response 8; Appendix I, A4 Response 20; and Appendix H, A3 Response 1) as a pivotal professional value (Thompson 1968, North 2010). This can be found in the paternalistic interest that professionals exhibited by using expert knowledge for the betterment of society. This also became visible in the use of instruments such as duty of care which was carried by all professionals under law in England. The role of the charter granted by the Crown to the profession also set rules which had to be operated under. The *rise of individualism* is evident in the HE

sector but is juxtaposed to the demands of a chartered professional. It becomes obvious there is a conflict for academics between the new governmental ideological model – described as the *rise of individualism* – and the demands of the profession for *the greater good*. The charter can be viewed as a societal instrument to define behaviour and defend the wellbeing of society in general.

Returning to the discussions surrounding society there was a two-pronged view of investing by society and giving to society. There was an underlying feel of government investment in education for the benefit of the state; this reflected the ideology of the past education system where the state paid for this future benefit to society (Scott 1998, Collini 2011, OECD 2004). This manner of investment has ceased to be since the Blair years of the mid 1990s; education changed from the good of society to that of the individual's own investment in their own learning (Williams 2009). There appears to be a time lag between the ideological changes and the realisation of the full impact of these changes (see Appendix E, Q4, Rank 4; sd 1.30). The final point raised under this heading is the relevance of this topic to the HE sector; this is discussed next.

5.8.4 Progression of the HE sector

When situated within the vocational landscape of undergraduate degrees, particularly quantity surveying, the HE White Paper 2011 may have become irrelevant as the discussion in this study has now moved on to the value of a degree (See Appendix G, A5 Response 12 and See Appendix J, A1Response 1). This may have become apparent not only because of the drop of students applications to vocational degrees in the post 92 institutions (See Appendix Q, Response 3 and Morgan, 2013) but also in the stalling of the HE White Paper 2011 en route to becoming an Act of Parliament. There is no timetable set for the HE White Paper 2011 to be discussed in the House of Commons, as of 24th June 2014.

5.9 KQ2 How will the CI sector's key stakeholders react to the changes introduced by the government's White Paper, particularly with respect to the education and training of the professional QS?

When considering KQ2, the interested parties were identified as key stakeholders (Burgoyne 1997), and for the purpose of this research were made up of chartered

professionals with influence, interest and the power to shape education choices for the early career QS. This sample is made up of those in academia, industry and the professional body (RICS). The three changes to be introduced by the White Paper that stimulated most discussion were funding, private providers and part-time provision; these will be reviewed in this section. Other relevant issues are applied to give context to the discussion, and these will form the following headings in this section: barriers to entry, the role of the professional body and the restructure of the HE sector. The overall aim for the role of HE as stated by employers is in providing the skilled workforce required by the CI. This stance was reflected in the industry sector's requirements for quality education at HE level, backed by a professional accredited programme leading to chartered status (see Appendix N, I2 Response 25 and Appendix L, I3 Response 22 and Appendix O, I1 Response 21).

5.9.1 Funding

There was an awareness – exhibited by both the industry and academic interviewees – of changes within the HE sector in response to changes in funding (See KQ1 pg 203). Additionally, the industry set held an expectation that the education sector would be aware of the government policies that had brought these changes about. On further investigation the industry-orientated individuals interviewed described different approaches that were being adopted to adapt their respective companies' employment and education strategies (see Appendix N, I2 Response 16.18; Appendix L, I3 Response 13; and Appendix O, I1 Response 18). They acknowledged that their education budgets would increase but that stricter criteria would be applied to their education and training selection process.

5.9.2 Private providers

The role of private providers in professional education was brought to the attention of the industry data set by this research, whilst the academic set were more vocal and concerned by the impact of private providers. The initial discussion on this topic was on the possibility of providing education within companies, but this was dismissed as expensive and too general to be worthwhile. The resultant view was that the RICS should take on the role of private provider, based on the esteem that institutional recognition gives to educational routes. This was also discussed by A4 who indicated a possible conflict of interest should this occur (see Appendix I, A4 Response 14). The appearance of private providers was considered in general terms, but not much has been specifically identified

by the academics, especially the practicalities of this occurring in quantity surveying education. There was a suggestion that private provision may occur in a mixed method delivery, and indeed the RICS itself can be viewed as a competitor in this arena as the organisation has entered the market to supply CPD activities (see Appendix E Q2a and Appendix P, P1 Response 7).

5.9.3 Part-time study provision

This change was discussed in the early phase of the preliminary interview set by the VC and by an additional person in the interview set (see Appendix K, A2 Response 1) who had identified this possible change. However, members of the industry and professional data set discuss part-time routes in their strategic plans to employ and recruit new blood to the profession (see Appendix L, I3 Responses 13 and 22 and Appendix P, P1 Response 30). The benchmarking measures introduced through the mechanisms of HEFCE and the QAA, the purpose of which was to provide transparency and indicate a level of quality, may not reflect true outcomes from a vocational part-time course. Measures such as the NSS and employability returns do not reflect the styles of study preferred by employers in a vocational course in particular a part-time route. It could be suggested that these measures are at odds with the changes introduced by the White Paper, especially the employability issue, and may indicate why there is blindness to this change by most of the interview data set.

5.9.4 Barriers to entry

Barriers to entry are an important issue; the RICS maintains these barriers through accreditation of undergraduate programmes and subsequent training periods and an assessment of competence to practice (APC), as discussed in Chapter 2. These barriers may be discussed in two forms: one as a restriction to trade (Downie 1990); and the other as a clique (Bourdieu 1973). The interview set believes this act of constructing a barrier indicates a fitness to practise. These boundaries produce, as Bourdieu (1973) would suggest, symbolic capital, a subset of cultural capital and generally translated into economic capital. It is this field and habitus, as discussed in Chapters 2 and 3, which appear to be under discussion when referring to the White Paper.

The academics were most vocal when focusing in on the role of the professional institution within the HE sector; this topic took up the biggest proportion of all their interviews. Industry values the best practice approach delivered at the APC point of entry to the profession; this indicates a preference for the application of fitness to practise criteria (see

Appendix L, I3 Response 10). Academics are very aware of the role of cultural capital within their vocational courses and appreciate the barriers to entry which are put in place by the RICS in the guise of entry points and the accreditation route to membership (see Appendix I, A4 Response 12). A paramount role of the RICS is seen to be the role of accrediting a course and monitoring quality (Simpson 2010a). Academics feel that they provide a degree which fulfils the requirements of the RICS but at the cost of additional scrutiny; it does, however, provide the students with a certain amount of social and cultural capital.

The main concern is that the RICS is changing its approach to recruitment with too much emphasis upon expansion (see Appendix L, I3 Response 12). This was pointed out as a concern of quantity over quality, evidenced by the numerous new routes to membership that have recently been introduced (see Appendix I, A4 Responses 14 and 15). There appears to be a certain amount of confusion, confessed by the academics interviewed, as to the present direction of the RICS (see Appendix J, A1 Response 22). A particular point made was that the RICS has not understood the changes initiated by the White Paper, and the possible effects on the provision of undergraduate professional accredited courses. The RICS has taken a market-driven position on membership into the institution putting at risk the current accredited routes to more market forces than purely the effects of the White Paper. It is this level of uncertainty that is causing concerns for the academics over the validity of vocationally specific undergraduate routes. It is vital that vocational-facing programmes receive professional accreditation to ensure survival of these programmes (see Appendix K, A2 Response 17).

5.9.5 Restructuring of HE

Restructuring of the HE sector was the area of speculation by academics which caused the greatest uncertainty and diversity of opinions. There is, however, one uniting view held by the academics and that is a fear of an increase in elite education and its impact upon vocational courses (see Appendix J, A1Response 34; Appendix I, A4 Responses 9 and17; and Appendix G, A5 Response 33). The deregulation of student recruitment numbers announced would appear to be an identified issue which could lead to students opting to attend Russell Group universities over other HE institutions. There is some acknowledgment of the poorer academic standards of the students applying for vocational courses (see Appendix H, A3 Response 3; Appendix J, A1 Response 15; and Appendix P, P1Response 4), but they anticipate the number of applications will fall further when

HEFCE lifts the student number quota restrictions (HEFCE 2014). The move to drop the A level grade entries that are eligible for the quota exclusion from AAB to ABB has already seen student numbers move dramatically in the university league tables (TES 2013). Students have favoured non-vocational courses in the Russell Group institutions which supports the concerns of an elite education mostly fashioned by Newman's liberal ideas (1835, 2009). This trend would be viewed by Bourdieu (2001) as fairly typical of the bourgeoisie using social and cultural capital to advance their young.

Academics speak about the bifurcation of the sector (see Appendix H, A3 Response 6), in other words institutions which are elite and generally not vocationally focused, separated from others who are not elite and are vocationally focused (see Appendix H, A3 Response 6 and Appendix I, A4 Response 9). Even within this market segregation there is articulated a fear for the disappearance of surveying courses. The breakdown of professional barriers through promoted collaborative approaches (see Appendix N, I2 Response 17 and Appendix G, A5 Response 28), which lack the professional protection of entry to the profession alongside the lack of visibility of these vocational courses, are all seen as contributing to a reduction in cultural capital collected by quantity surveying graduates.

Further to the HE sector's internal reorganisation the interview sample also identified the emergence of the FE sector in the delivery of vocational degrees (see Appendix L, I3 Response 32 and Appendix P, P1 Response 32). There was the suggestion that FE will cross over into the traditional arena of HE in delivering professional undergraduate education. This may not be in direct competition but in the last ten years technical university colleges have been used to provide foundation degrees.

Academics speculated that perhaps the introduction of apprenticeships by the coalition government will affect employers' internal training choices and the emergence of training 16-year-olds under this system. Whilst there is some acknowledgement of apprenticeships there is no clear idea of how these will integrate with or affect HE. The industry-facing cohort of interviewees discussed the role of apprenticeships resulting from recent interventionist government policies, and explained that they have researched this topic and have produced possible employment strategies. They described different types of apprenticeships focusing mainly on direct employment (see Appendix O, I1 Responses 4 and 8) or on loan through an apprenticeship trust for two years (see Appendix L, I3

Response 6). There was also discussion about providing private education internally within their organisations up to NVQ level 3.

On a more practical point, application of the modes of delivery for education were reflected upon – blending styles of attendance and information delivery were very much under discussion (Appendix E, Q6). Some academics were aware that restructuring of the sector has been occurring over a longer period of time, evidenced by the reduced contact time with students dressed up as increased efficiencies within the sector (See Appendix I, A4 Response 10). These were covered under such headings as “widening access”, an idea introduced by the Blair government; the academics commented that staff-to-student ratio was increased to the detriment of quality offered. The one-size-fits-all approach was highlighted as a cost-saving exercise by the academics, And there was an awareness of the creep of neo-liberal market economics into the HE sector that had occurred since the mid-1990s (Williams 2009, Bernstein 1998, Ball 2007).

5.9.6 Role of the professional body

It would appear that the protection and promotion of the image of the chartered QS through reputation (symbolic capital) and quality of the service provided is the implied expectation of the interview sample for the professional body. Qs as a collective form a service class as discussed in Simpson (2010b) which provides professional services to clients (Hanlon 1998). It then follows that clients play an important role in the employment of Qs. The professional body acts as a figurehead for its members and gives clients the benefit of a collective umbrella grouping by imposing barriers to entry. This then emphasises the importance of reputation to both clients and member Qs (see Appendix E, Q7). This could be identified as cultural and symbolic capital which is supported by the member signing up to a code of conduct, professional rules and regulations. As discussed earlier, there is a reliance on the barriers to practise enforced by the RICS in the form of an APC (see Appendix L, I3 Response 11) and post-chartered status and the existence of disciplinary boards. The interview group identified the role of the professional body in several ways: as a customer-facing entity which projects the reputation and knowledge of the QS to the public; a guardian of quality through the implementation of barriers to practice and subsequent patrolling of behaviours of individual members thereby protecting the status of those chartered individuals (see Appendix L, I3 Response 20). Education was considered as core to the employment of QS graduates. During interviews with this data

set questions were raised about the role of HE in the provision of quantity surveying education and the quality of the service offered by the universities. The overall feeling within this industry cohort was that an undergraduate degree in a relevant topic with professional institutional accreditation would meet the requirements of all construction employers. It is evident from the interviews (see, for example, Appendix L, I3 Response 22) that this was in response to client- or market-driven requests for chartered professionals rather than from a demand from individuals in the CI itself.

The industry and professional group discussed the capital return of education and economic capital as the primary form of capital that would direct choices made about which type of education was valued. They said that economic judgement was made on the basis of the resultant demand for the required competencies, which indicates a client-driven economic model. There was an awareness of cultural capital, especially in the form of symbolic capital in the guise of chartered status that clients recognise, and they discussed criteria that gave a measure of quality and value. Social capital was not discussed by the industry and professional interview set.

The importance of quality was emphasised by the academics, but as the majority of students studying surveying courses have poor academic credentials at entry this affects the final output statistics. Whilst these students fall into the “adding value” and “widening participation” agenda, they are disadvantaged by the present measures imposed by QAA on programmes, in particular, the number of 2:1 and first classifications at graduation and the NSS results on students’ satisfaction (HEFCE 2014). Both these indicators tend to be lower in surveying courses across England when compared to other degree pathways (KIS 2014; Appendix I, A4 Response 21). The skills and knowledge imparted to vocational quantity surveying students are of concern, and the academics feel this warrants close attention by the HE sector as a whole (see Appendix H A3 Response 10; Appendix I, A4 Response 2; and Appendix K, A2 Response 8). This refers back to the role played by the professional body in ensuring quality provision through the use of barriers to practice and the entrance criteria used for recruitment to accredited undergraduate programmes (see Appendix I, A4 Response 6). In this study the reactions of the interview set would be better understood by considering the actions of this group as those of a CoP. This is discussed in the section focusing on key stakeholders.

From this investigation it becomes apparent that the interview cohort valued the attainment of acquiring the chartered status for the QS, and seeks it out as a preferred choice for educating and training new surveyors. This preference was indicated as client driven (see Appendix N, I2 Response 22), a mark of quality assurance (see Appendix L, I3 Response 24) and desirable (see Appendix O, I1 Response 17). Academics are aware of the cultural capital that is attached to RICS-accredited undergraduate programmes (see Appendix K, A2 Response 1and; Appendix I, A4 Response 3 and Appendix G, A5 Response 16 and Appendix G, A5 Response 5). There is an issue surrounding social capital in that whilst it was discussed by the academics it was not mentioned by the two other sample sets of interviewees. There was a point raised as to the validity of using benchmarks designed for employability by the government (QAA) because they failed to take into account vocational course delivery modes, particularly part-time study.

5.9.7 Behaviour of sample

5.9.7.1 *Community of Practice (CoP)*

To better understand the actions and responses of the QSs, consideration of the operations of a CoP needs to be applied to the information gathered. The RICS could be said to operate as a CoP with informal networks which develop knowledge and pass on information. Each member is an individual but has opted to act collectively to solve problems and share knowledge. They agree to award a level of authority to the professional body (RICS); this cooperation may be described as a barrier to entry.

The RICS acknowledged the existence of the HE White Paper 2011 but was unable to begin to explore the impacts of its introduction beyond noting the negative impact the funding changes have had on graduate entry numbers to the profession. The official line has been to make no comment on political changes, but there was an emphasis on dialogue with government and industry to bring professional education to the forefront. In recognition of the role members play in this professional body A4 comments that we only have ourselves to hold to account for this current issue (see Appendix I, A4 Response 31).

5.9.7.2 *Key stakeholders*

The next topic discussed by academics was what can be described as the key stakeholders in vocational education: here they were identified as the student and the future employers of these students. The industry-facing cohort added clients as an important consideration (see Appendix N, I2 Response 22) when directing employees towards the end goal of chartership. There is an acknowledgement of the *rise of individualism*, and from a

vocational-facing undergraduate programme a keen awareness of employers' requirements, particularly employability as explained by A5, A3 and A6 (see Appendix G, A5 Response 5; Appendix F, A6 Response 3; and Appendix H, A3 Response 3). The academics are fully aware of the skills required by the CI for employment of graduates of quantity surveying courses (Perera et al 2010). It became apparent from the academics' discourse that a professionally accredited course helps to suggest quality and industry-facing objectives and outcomes, which then results in a more attractive degree course to students and employers. This too is reiterated by the industry cohort (see Appendix L, I3 Response 24 and Appendix O, I1 Response 21). It is suggested that this approach to quality may not be robust, as RICS procedures for assessing quality are flawed (see Appendix I, A4 Response 3). It was felt that this does not paint a true picture of employability rates in quantity surveying courses. Employers are involved in the design and delivery of quantity surveying degrees through industry forums.

The demand for quantity surveying course by Eastern Europeans has been rising (see Appendix J, A1 Response 5), mostly because they are EU students who are not burdened with the same fee debts as English students. There is also demand from students in other parts of the world but it has been suggested that the Home Office rules on immigration have stunted this demand (see Appendix K, A2 Response 16). Skills are discussed in two ways when applied to HE in this study, i.e. the point of arrival and the exit level. Academics and the professional interviewees feel that there is a low level of academic skills on entrance to study, and some academics and industry interviewees felt that basic technical skills such as mensuration are poor on exit (see Appendix N, I2 Responses 13 and 20, and Appendix I, A4 Response 15). The final point made by the academics in relation to skills was that there should be differentiation between learning in education and those skills employed in the workplace (see Appendix K, A2 Response 6; Appendix J, A1 Response 13; and Appendix H, A3 Response 1). Industry engagement is viewed as paramount but it should not be at the expense of learning. Some liberal ideas of learning as classically styled by Newman are held by academics, but words such as "competencies" are used at the expense of terms such as "knowledge" and exhibit an industry-facing focus. This could indicate absorption of symbolic violence by the professional body, in the form of realignment of competencies over knowing; such language has become common parlance over time.

5.9.7.3 Australia – the end of free HE

These factors form the basis of a comparative analysis, which may point to the future development of professional education in England, as well as addressing KQ3.

5.10 KQ3 What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes?

5.10.1 Analysis

Arising out of the investigation and reflexive analysis of the Australian phenomenon three main points were identified: fees and the involvement of the individual; the involvement of employers and professions; and the structure of the HE sector. On the surface these are simple divisions of parties with an interest in the process of vocational education in the HE sector. A disclaimer for the inability to transfer exactly the Australian experience to England has to be made at this point of the work.

In this instance the use of Bhaskar’s theory around awareness that “what is, is not what is known” (Gorski 2013) was found to affect this research. This was mostly revealed in the underlying goals and the use of political instruments to achieve these political goals by the Australian government – these were on the whole invisible to this research. Also evident is the continual change of ideology and response to economic conditions as discussed in Chapter 2 which alter the interpretation of educational strategies and legislation as is the norm with all states. Critical realism would define this legislation as a triggering mechanism for this social phenomenon, which for this study is central.

Therefore this section of the study is limited to what is known through the documentation provided by reports and articles, although some triangulation was achieved by using the qualitative data gleaned from practising academics through the interviews that took place. It is, however, a simplification to assume that the social phenomenon lies on one plane only; even the qualitative data has taken on a form of subjective interpretation and the individual’s reality is a construct made by the person viewing the facts. The CI is comfortable with the certainty that change happens and this is down to uncertainty and risk; it also accepts that the truth is provisional, as suggested by critical realism (Bhasker 1978, Collier 1993, Gorski 2013), and can be revisited when the facts, context and knowledge change.

We now return to the three main areas of review: fees and the involvement of the individual; the involvement of employers and professions; and the structure of the HE sector.

5.10.2 Fees and the involvement of the individual

Fees now appear to be well embedded in the Australian HE sector; the government have employed a number of strategies with regard to the payment of fees and how they are calculated through HELP (Commonwealth of Australia 2013). By mixing the level of fees charged for a degree programme and relating them to likely end salaries, and offering grants and loans to support students through the process, a non-uniform system was introduced (DEEWR 2009; ATO 2009). Bourdieu would suggest that this framework becomes a vehicle of symbolic violence (policy) which is visited upon the individual and acts to inflict upon the population a set of restrictions or barriers to movement. The government legislation is a fact (symbolic control), whilst its impact on the population and the individual is not certain. Individual Australian students are seen to accept this government policy restriction as a means by which to access a previously restricted HE sector. By engaging thus they improve their cultural capital and increase their prospects of employment through skills and knowledge learnt at the workplace (TES, 2014). Using the undergraduate degree route adds to their cultural capital but these students are also aware of the importance of workplace experience as discussed by A5 and A6.

A5 Response 5 *“... it’s not the dollars, you know, the issue is that if they don’t get the work experience then they won’t get employed”.*

A6 Response 3 *“Yeah. I mean everybody ‘employment, employability, stats and stuff’, you know, I think the one at Uni SA, for examples, around 94/95 per cent employment. But a lot of that is associated with the 100 days that we do. You know, that’s like an extended interview for them anyway.”*

This recognition of employability skills was emphasised in the qualitative section of the data gathering, and further backed up by the flexible structure when these studies are offered in the HE sector. It appears that the cultural capital is bounded by the field of experience in the workplace, but also the habitus gained in both tacit learning and academic learning. This choice of learning is supported by Eraut (2000) and is adopted by

the student to be employed as cultural capital later in the practice of employment and subsequently the economic capital to be gained from specialist knowledge (Schön 1983) and skills. There is also the reflection of the *rise of individualism* through the application of neo-liberal policies (Bernstien 1998, Ball, 2007, Offer 2008) where the individual believes that investment in this type of learning results in cultural capital and subsequently economic reward. As A5 and A6 say:

A5 Response 15 *“And students, you know, in surveys, everything confirms that their priority is their work. You know, they have to do their work and that puts the pressure on them. So it’s bad in that sense but, you know, I’m a great believer in experiential learning and, you know, the ability to take what their learning in class and test it on site and that they bring the site experience back in to class and test the theories and ideas, it is essential.”*

A6 Response 5 *“Certainly I do know that if you go for the AIBS accreditation, for example, if you step off after three years you only get what’s called a level two accreditation, but if you stay for all four years then you get a level one which is the highest one you can get anyway, so/” and “Oh, ok, so level one is highest. Will that make a difference to the amount of money they can earn? Yes, it does. If you are accredited as an AIBS building surveyor you can do the full range, but if you’ve only got level two then there’s only certain, you know, things you can do.” and “Reduced Scope.”*

5.10.3 Involvement of employers and professions

There is little evidence to link employers directly to the HE sector or the professions, but these links should not be discounted as they become more evident by the behaviour of the student in the vocational undergraduate courses.

A6 Response 2 *“... but part of that course you have to demonstrate that you have done at least 100 days of work experience. You won’t get your degree unless you’ve demonstrated 100 days, and those 100 days are outside of University study.”*

A5 Response 6 *“... in that in our programme 30 per cent of first years now are employed already in the industry, and 90 per cent of the final year would be working full*

time.” and the students prioritise “we’ve had colleagues doing studies that show explicitly the anecdotal understanding that students prioritise work.”

Whilst the whole HE sector does not actively adopt the use of experiential learning, the flexibility in its registration systems and expected learning outcomes ensures that learning must take place in the CI. The HE system uses its power to ensure that the individual must enter a field of knowledge and gain a position in the field through habitus which adds to the individual’s perceived capital in the form of social and symbolic capital (Bourdieu 1973). The professions are heavily involved with the HE sector, specialising in vocational undergraduate degrees; here the professions such as the RICS construct barriers to entry and use their power to restrict access to practice using expert knowledge (Schön 1983) and tacit learning (Eraut 1997, 2000). An explanation for the choices made by graduates could be that individuals invest in this pathway to access Bourdieu’s idea of capital resulting in symbolic, social, cultural and economic worth; in short, they undertake a professionally accredited degree, with, in this instance, the accreditation provided by the RICS.

5.10.4 Structure of the HE sector

The HE sector in Australia fits within the tertiary sector of education (Australian Education Network 2013), developed by Dawkins (1988) using his White Paper. This can be described in terms used by Bourdieu as an act of symbolic violence (policy) enacted upon the HE sector, and it follows, on the participants within this system. It is apparent that this tertiary sector has grown in size and now appears rather bloated (Australian Education Network 2013; Appendix G, A5 Responses 22, 31 and 34).

Concentrating on the HE sector, universities are seen as the entry port to investment for the individuals’ cultural capital, from which flows employment prospects and entry into the professions. Professional bodies such as the RICS erect barriers to practice, using cultural and social capital which results finally in economic capital. The individual makes the decision to enter into these opportunities in order to enhance their own individual capital, exhibiting a neo-liberal approach to education choices (Offer 2008, Olsen and Peters 2005).

At this juncture it is obvious that universities do not operate on a single and simple plane but also struggle with a clash between neo-liberal approaches to HE (Bernstein 1998, Ball

207, Olsen and Peters 2005) and the ideology of the purpose of education (see Appendix G, A5 Responses 12). Referring back to critical realism, we may state that facts are not universal truths and can be employed through differing ideological perspectives – what is not necessarily what is known. Therefore a limitation is applied to this section of the study acknowledging that there are multi-tiered and complex aspects to the university system but recognising that the sum is greater than the individual parts (Aleveson and Skoldberg 2008).

5.10.5 Answering the aim set for this documentation

Whilst on the surface the Australian experience is similar to that of the English HE context, there are differences too. The quality control by the Australian state is a relatively new development, dating to 2012 and the appearance of TESQA; the consensus among the Australian interviewees is that lessons are being learnt from the application of the UK QAA system, which is seen as being too rigid. The UK quality system is deemed to be process driven rather than quality focused with measures against outcomes in lieu of learning achieved (see Appendix G, A5 Response 19). The purpose of professional education in Australia is employment, which leads the student to identify work experience as carrying cultural capital to aid in securing work after graduation. Fees seem to be well embedded in the HE sector, and the state uses a multi-tier fee and loan system to address financial inequalities through the use of the Higher Education Loan Programme (HELP). There is evidence of the neo-liberal approach to investment by the individual for the purpose of gaining capital advantage over others in the workplace in the form of the increased student numbers (Australian Bureau of Statistics 2013). The Australian government (TES 2014) has removed the student quotas previously placed upon the HE sector in response to reported skill shortages, relying upon individuals to decide whether or not to attend an undergraduate programme.

The UK government has opened up the recruitment targets at the higher grade end of A level entrants in the English HE sector, in particular AAB and now ABB entrants (as at 2014). It is believed (TES 2012) these students will enter Russell Group universities which are less known for their provision of professional education. The impacts upon vocational undergraduate degrees are less obvious and little can be drawn from the Australian experience apart from the increased visibility of *neo-liberal creep* through the *rise of individualism*. This is evidenced by the willingness of students to invest in differentiating themselves and gaining individually rather than collectively, on vocational programmes.

Borrowing by the student is not a long-term concern for Australian undergraduates, and is accepted as the norm; the increased numbers enrolling at present (2013) would support that view. The ideology points to the *rise of individualism* and the positioning of the consumer in an economic market (Offer 2008). To interrogate this position capital in all its forms needs to be used to explain the student's role in the process of engaging with the HE sector. Bourdieu would explain this as cultural capital, describing the student as entering the field and habitus to reach practice. However, the student has sought to invest in capital, which in Bourdieu's terms is formed in the field of these vocational programmes and through habitus gained through workplace experience. The end result for the Australian student is to gain employment. Bourdieu recognises the fluidity of this arrangement; habitus is found in the field but neither is static with respect to each other. As Eraut (2000) elucidates, tacit and experiential learning has a place in the workplace. Whilst opting to study on a professionally accredited programme of study, the student is acknowledging the value of expert knowledge as discussed by Schön (1983). They aim to place themselves in the most advantageous position to collect capital in all its cultural, social and economic forms. This capital has worth not only in economic terms but also in social, cultural and symbolic terms. Noticeably, the Australian documentation exercise has highlighted the *rise of individualism*, which could be an indicator of ideological shifts towards a neo-liberal stance.

The impacts of the Dawkins Review seemed distant to the Australian academics interviewed in 2013. The three main topics which were derived from the HE White Paper 2011 (students financing their own fees, the introduction of private providers and the recognition of part-time study routes) did not appear to cause the Australian academics concern. Students appear to have absorbed the fees, there is only one private provider and no part-time degree courses are offered, due to the flexibility of the existing routes.

5.10.6 Lessons to be gathered from the Australian study

Quality assurance is gathering pace in Australia where government instrumentalism is increasingly making its presence felt, particularly through the application of TESQA across the HEIs. The longest standing method of quality assurance has been through professional institution accreditations. The current Australian government's political ideology is different to that held in the UK at present, and this can be seen through the implementation of imposed policy on the HE sector.

The students exhibit an understanding of the impact of both education and practice upon gaining employment. Overall, the impact of neo-liberal economics has – through a rise in individualism – ensured students focus on the cultural capital of field and habitus to gain economic capital.

5.11 KQ4 What strategies will be adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper, and will they result in effective education and training for professional QSs?

The future is a mixed bag according to this quantity surveying data base set. The QS currently provides a service to the CI, and it is perceived there will always be demand for construction (see M, A2 Response 6) and hence a derived demand for construction-related services of which education is a part. A1 suggests that the QS is ever changing to suit the business environment (see Appendix J, A1 Response 14). To balance this view it is necessary to recognise the economic cycle that the CI is subjected to, especially the phases of boom/bust. Demand for graduates is at the mercy of a very reactive market, and this causes problems for the long-term provision of education to fit these frequent and shortened economic cycles (see Appendix K, A2 Response 3). To investigate this KQ further, headings of funding restrictions, government policy, purpose of higher education and future provision will be used.

5.11.1 Funding restrictions

The majority of the discussion about finance related to the White Paper was about the funding restrictions that drive the policy decisions (see Appendix I, A4 Response 19). The discussion can be dealt with under two subheadings – HEIs and employers. Firstly, the effect on HEIs can be summarised as the consolidation of the marketplace and vulnerability of the HE provision. The interview set were aware that there will be consolidation in the provision of HE in the form of a separation of universities who provide traditional topics such as those in the Russell Group and those who provide vocational programmes (see Appendix H, A3 Response 6).

There may also be collaboration between universities providing similar programmes (see Appendix K, A2 Response 17). A5 believes that in Australia there will also be consolidation and “some blood on the carpet” (see Appendix G, A5 Response 29). A4 suggested that there is a possibility that low entry professional provision may disappear

(see Appendix I, A4 Response 16), something which is indicated in the downturn of students applying for these types of programmes (see Appendix RICS, Response 3). From this it can be seen that the demand for these vocational studies fluctuates, and in a period of flux within the HE system the concern of some academics is that the programmes will be vulnerable.

This vulnerability may come from amalgamations with other vocational programmes on offer, or in collaborations with higher profile professions such as engineers (see Appendix G, A5 Response). It was also suggested that patience will be required by the universities when investigating the flux in student applications to these types of programmes due to their vulnerability to economic cycles (see Appendix I, A4 Response 11). This was felt to be compounded by the introduction of new routes to entry by the professional body (see Appendix I, A4 Responses 3 and 6). Concern was expressed that specialist barriers to entry will be lost, losing the programmes their individuality and expert knowledge. This is the crux of complaints by academics: they fear that the lack of professional institution support will open up competition with other disciplines (see Appendix K, A2 Response 17). In addition, the possibility of private providers breaking into the HE market was discussed; concern was expressed mainly by academics (see Appendix K, A2 Response 2 and Appendix I, A4 Response 22); the other two samples did not believe this might happen, but thought that if it did, the professional body ought to take on this role (see Appendix E Q2a).

Under the next subheading the employers' findings are discussed in respect of the effects of funding restrictions. The employers' response to the changes in funding of undergraduate degrees is to review their employment and training strategies (see Appendix K, A2 Response 3 and Appendix N, I2 Responses 2 and 6). This may take a competency driven NVQ approach to vocational education provision, where education starts in FE and finishes with a final year in an HEI (see Appendix E, Q 4). Their strategies tend to focus on the part-time and sandwich undergraduate degree provision; however, such provision tends to be constrained by geographical factors (see Appendix K, A2 Response 13). There is recognition that training and education budgets must expand but on the proviso that stricter business case driven choices will apply (see Appendix O, I1 Response 7; Appendix N, I2 Response 7; and Appendix K, A2 Response 7).

5.11.2 Government policy

Government policy also has an effect through the funding of programmes and the introduction of alternatives such as the current apprenticeship schemes. Industry is clearly exploring this alternative (see Appendix L, I3 Response 3) and discussed varying forms these apprenticeships take. They have focused upon the part-time study mode and would be able to provide internal training to a level NVQ 3 (see Appendix O, I1 Response 8). It was felt that degree level education would still be better delivered at HEIs, mainly due to the expense and expertise involved in the provision (see Appendix O, I1 Response 13; Appendix P, P1 Response 27; and Appendix L, I3 Response 19). The value of apprenticeships was questioned by academics (see Appendix I, A4 Response 26) particularly in light of the training versus education debate. There appears to be a belief there is a deskilling of the whole person rather than a more liberal education of the whole in this sample. (see Appendix H A3 Response 5).

The next impact of government policy that was anticipated is the deregulation of student numbers; it was felt that this will cause chaos in the sector (see Appendix J, A1 Response 26). The fact that the White Paper may be outmoded in 2014 was also raised. A debate centring upon the worth of a degree (see Appendix G, A5 Response 12 and Appendix J, A1 Response 1) is a future possibility, but this research has refrained from entering that debate. It may be a reason why it has not progressed in the House of Commons. This brings the discussion onto the purpose of education.

5.11.3 Purpose of HE

In this area of the research conflict is exposed between the academic sample and the remaining sample set. It was agreed by all the data set that the purpose of HE was to gain employment (see Appendix E, Q1B); however, the education versus training debate became more evident during the course of research. It is exposed in the expected outcomes for individuals to possess at graduation. Whilst the academics follow “the education of the whole person” philosophy (see Appendix H, A3 Response 1), the other sets discuss commercially driven outcomes such as “company flavours” (see Appendix O, I1 Response 17). The debate over the role of society in the provision of HE has become bipolar (see Appendix E, Q5). It could be said that society’s role has decreased in importance (see Appendix E, Q1A) and the individual’s role has risen (see Appendix E, Q8). Following Bourdieu’s later works (2000) about the power of trade unions and the impact of neo-

liberalism, there is the danger of less power being accorded to the individual rather than as a collective. When this is applied to the individual, power has been watered down through a reduction in bargaining power.

Marketisation has had an impact upon the purpose of HE, as shown by the recent history of universities, the reaction to the implementation of the White Paper 2011 and the debate about the economic worth of knowledge (Bernstein 1998, Ball 2007, Young and Muller 2014). Something that is mostly discussed by government is the generation of income by a knowledge marketplace (BIS 2009, Posen 2010). However, this data set does not highlight this trend despite being very much impacted by the results of these discussions.

This returns the discussion to the start: vocational education is seen as the poor relative to liberal non-vocational subjects by the interviewees, although the academics still cling to the idea of educating the whole person rather than narrow training. It can be acknowledged that for these academics there is a disconnect between realisation of a market for education and the purpose of education, indicated also in the sparse literature on the topic of professional education. There is some awareness of change to HE but the impact of neo-liberal marketisation is not understood or discussed.

5.11.4 Future provision

The use of the Delphi Technique questionnaire enabled some study of likely future outcomes to be undertaken, mainly of what form and format HE would adopt for a vocational-facing undergraduate degree; this will be discussed in the next section. Consensus was reached on the following areas: the preferred route for professional education is required to be within HEIs (see Appendix E Qs2, 2a, 3); the undergraduate programme is most prized when it has a professional body accreditation attached to it (see Appendix E Q6); and the preferred manner of delivery is in a mixed style of delivery (see Appendix E Q2), and through part-time and sandwich modes. Academics state that problems have occurred and are mainly down to the CoP's own lack of strategic planning and subsequent forward planning (see Appendix K, A2 Response 15 and Appendix I, A4 Response 31). Others feel that the legislative instrument has had its day (see Appendix J, A1 Response 1). It could be concluded that any response to the introduction of the HE White Paper 2011 is transient, especially when viewed through the lens of critical realism.

5.12 Summary

In this chapter the themes which were identified in Chapter 4 were further explored and then used to answer the KQs set in Chapter 1. To recap, the themes were: marketisation; quality; power and knowledge. Further themes discussed were conflict, uncertainty, neo-liberal creep, inequalities of system and barriers. Lens incorporating cultural capital and critical realism were applied to the themes and used to examine the rich data set. The quantitative data generated was used to triangulate the debate. The outcome exhibits the working practices of a CoP which prefers to absorb instrumental changes (policy) rather than have legislative controls (legal) imposed upon them. There is some blindness to marketisation and knowledge which is perplexing. A worrying and constant dichotomy is found in the arena of societal impact upon HE; this may have further impact upon the professional body (RICS) and its chartered status.

6 Chapter 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

In the introductory chapter I explained my interest in undertaking this research and what I hoped it might make clear to me. There were two underlying presumptions that were made which were challenged during the investigation. I posed a question in relation to the delivery of my own quantity surveying undergraduate programmes: am I doing it right? Based on the evidence drawn from the interview database, the critical literature and the Australian experience the question I had set myself was incorrect; it became apparent that there is no right or wrong way to deliver these programmes. The second presumption was that there was a selection bias for non-cognate degree holders; this may have been so but at present vocational specific degree holders are favoured (see Appendix I, A4 Response 8; Pererra et al 2010). More interesting is the identification of a split between elite education (Russell Group) and those universities who offer vocational education, mostly found in the post-92 institutions. The central question was generated from the problem definition process outlined in Diagram I (page XX)and took the form of the following;

6.2 “What is the potential impact of the Educational White Paper 2011 on Higher Education and professional construction education, and more specifically professional quantity surveying in England?”

Subsequently with further investigation around this central question four sub questions were identified as key question which aid in the task of addressing the core problem. These are seen below;

6.2.1 The key questions are:

5. What is the potential impact of the government’s White Paper on the provision of construction education? (KQ1)
6. How will the construction industry sector’s key stakeholders react to the changes introduced by the government’s White Paper 2011, particularly with respect to the education and training of the professional quantity surveyor? (KQ2)

7. What lessons are there to learn from the Australian experience of change in their professional undergraduate programmes? (KQ3)
8. What will be the strategies adopted by stakeholders in the construction sector, specifically towards professional quantity surveying, in response to changes brought about by the White Paper 2011, and will they be seen as resulting in effective education and training for professional quantity surveying? (KQ4)

Further to the development of the above KQ's, objectives were designed to facilitate and focus the research to be undertaken. These were the steps deemed necessary to ensure the overarching premise was addressed. These are listed below:

6.2.2 Objectives are:

7. Review the current status of professional undergraduate education in England in the construction sector. (O1)
8. Examine the professional ethos and culture of the professional QS in England and its key drivers. (O2)
9. Identify key influences on future professional education including knowledge and skills. (O3)
10. Investigate the impact of the proposed changes in the White Paper on undergraduate professional education and its provision in England. (O4)
11. Compare the present Australian quantity surveying undergraduate experience to that likely to result from changes that will emanate from the implementation of the White Paper recommendations. (O5)

To address these research objectives, different data collection methods were used; these reflected the most efficient manner to generate such data. A review of critical and pertinent literature was undertaken to address Research Objective 1 (RO1) and following on from this interviews were undertaken to address the Research Objective 2 (RO2), Research Objective 3 (RO3) and Research Objective 4 (RO4). To address Research Objective 5 (RO5) a historical review of the documentation was undertaken, focusing on the Australian experience of a similar process. Finally, to address Research Objective 6 (RO6) the Delphi Technique was used; its form was based on the interview data set and two rounds of a questionnaire derived from the interview analysis. These approaches can be witnessed in

chapters two, three and four. In chapter four data was displayed which had been gathered from addressing the research objectives, followed by analysis and a discussion in chapter five which centred around the four key questions.

6.3 Findings related to the main question

The findings fall under four headings, i) the impact of the HE White Paper 2011, ii) the description and behaviour of a CoP when responding to the above White Paper, viewed as shifts in the position of power, iii) the role of quality in a vocational undergraduate degree programme focused upon Key Statistical Information (KSI) and iv) the unexpected blindness of knowledge in the CoP.

Factoring in the role of capital in its differing forms enabled a model to be built which informs the rationale for investment in HE. The introduction of a knowledge market to English HEIs is discussed in the critical literature but in very few other sources: financial aspects in this investigation are revealed by the rich data set and through the funding changes of undergraduate programmes, in particular the introduction of student fees. From this information, research was further carried out to look at the impact of marketisation; the notion of neo-liberal creep was also introduced.

“What is the potential impact of the Educational White Paper 2011 on Higher Education and professional construction education, and more specifically professional quantity surveying in England?”

6.3.1 Impact of the HE White Paper 2011

The impact of the HE White Paper 2011 on HE provision for quantity surveying undergraduate degrees is shown most clearly by the academic providers of the programmes. On interrogation of the rich data set, it became clear that industry participants are preparing strategies to deal with its impact. There are three particular points which have attracted most attention; these are the redefinition of the purpose of a university education, the introduction of market competition into the HE sector, and a fundamental funding restructure. Most importantly is the fact that White Paper has not been made into an Act of Parliament. It therefore remains policy and is not enshrined in legislation. The present legislation remains in place in the form of the Teaching and Higher Education Act 1998 (HMSO 1998), which was implemented by Tony Blair’s government.

6.3.2 Purpose of HE

Surprisingly, the biggest disconnect between HE providers in all their forms and the 2011 HE White Paper is the purpose of education. HE representatives such as the GuildHE (2012) and the Church of England Education Board (2012) emphasis the UK's need for a mass education system and widen access for all parts of society. Some would refer to this as egalitarian in approach as discussed in the Robbins Report (1963). The HE White Paper 2011 is focused upon a select "few traditional high achieving school leavers" (GuildHE 2012). The discussion on the White Paper has been based upon the present system of widening participation, where in a mass education system the traditional school leaver is marginally in the majority (52.6% HESA 2008/9). The focus of the HE White Paper 2011 and the subsequent implementation and monitoring systems installed, has on the whole ignored the non-traditional student. This is evident in the KIS selected as indicators of quality and information and as the source of future policy decisions

Whilst this study has focused upon the policy changes brought about by the White Paper, some wider issues surrounding the purpose of HE have also been investigated. The majority of the interviewees believed that the purpose of education was employability. The resultant changes in funding to reflect market forces were the main focus of debate that emerged from the interview data set. Academia is generating a debate about the changing role of HEIs as income generators, and their impact upon the national economy as direct income providers, brought about by the policy changes in the White Paper (as seen in the discussion held in chapter five.) There is a lot of confusion and disconnect around the implementation of the HE White Paper 2011. The terminology in use has not been clarified and is often construed by different parties to have a different meaning. This leads to an opaqueness of the aims and goals expected of a state run HE sector providing undergraduate education. This is especially so in the debate surrounding the purpose of education in the present day and the near future. The government has relegated the future policy of the sector to DBIS a business focused government department.

Reform is deemed to be required in the HE sector to address the requirements of 21st century provision and to match the requirements of the dominant ideology in place. There is some credence afforded to the causal link between the economy and knowledge by Dearing (1997) and the DBIS (2010). Whilst the idealistic liberal education proposed by Newman in the 19th century is heralded as the pinnacle value of knowledge, "which is for

free men and women and not slave.” economic benefit is expected too. Economic benefits can be viewed as a part of human capital as described by Bourdieu (1973), which is gained through the environment of HE and, as also shown in this study, through professionally accredited vocational courses. These forms of capital are economic, social and cultural. In this study overarching importance was attached to economic capital by industry (see Appendix E, Q8), whilst social capital carried more weight with members of the academic data set as evidenced by references made to a duty to society. This would indicate a lack of alignment between academia and industry over the expected output of vocational education. Under the heading of the purpose of education, the industry cohort discussed the results in terms of “for what?”, whilst the academics addressed the point “for whom?”

6.3.3 Funding

Raising of student fees is the most visible impact of the White Paper; however, evidence gathered from the study on the Australian experience indicates that this is an exaggeration of probable impacts on the system. The changes in the economic expectations of HEIs by government will probably result in a restructure of provision across England. How such restructuring will occur has generated different responses. The same discussions are currently being held in Australia, and therefore little can be drawn from the experiences of there. A concern, raised by all academics, is of a rise in elite education chosen by students over that of vocationally focused provision. This reflects a choice made by students to invest in their own cultural capital.

However, regarding the provision in the White Paper that enables private providers to enter and compete in the university sector, Australia’s experience can be drawn upon. Australia has one private university which has its origins in the Dawkins Reforms of 1988; this remains the only private provider identified by this research. The English data set concurred that entry to the HE sector carries a high cost of entry and would not be considered.

6.3.4 Community of Practice

Bourdieu (Waquant 2008) suggests that political ideology in the form of neo-liberalism has impacted upon the working class in France, using individualism to negate the power of collective bargaining. In the UK there is evidence that a similar assault is occurring on professions which act as Communities of Practice (CoPs); here transparency and

explicitness are used to impact barriers to practice. This research identifies the RICS as a CoP which is made up of individuals but operates as a homogenous body. The reaction of the CoP to the changes in the provision of undergraduate quantity surveying programmes exhibited a flux in the holding of power. Power was observed to rest with the parties who held knowledge of the event; this would over time settle into a response which would see power return to the professional body to disseminate the outcomes. In this instance power moved between academia and industry. The model suggested is that of a body which in absorbing this policy's impacts acts to prevent further restrictions placed upon its ability to self-regulate.

6.3.5 Quality

Quality is of greatest concern to this set of interviewees; the gold standard identified is the attainment of "fitness to practice", prized over the state quality provisions through both the QAA and HEFCE provision by QSs. Professional body accreditation is identified as the benchmark from which to select an undergraduate programme; this is backed up by the Australian data set. A driving factor is the employability derived from embarking upon this mode of study. Cultural capital was used as a basis from which to explain the generation of different types of capital valued by students and QSs and their employers.

With the focus on quality it is noticeable the importance government has placed upon the measurement of quality in HE by employing an instrument referred to as KIS. The design of this benchmark approach does not bode well for vocational facing programmes; as these benchmarks are modelled around the structure of traditional undergraduate programmes. Recruitment to the first year full time professional quantity surveying programmes from the UK is such an example. Most recruitment of undergraduate QS's will take place directly into second year and normally onto a part time route. The student typically will not have A level grades, instead having BTEC equivalence and be older than 20 years of age. The only KIS that records well for this type of programme is the employability criteria, however part time students are not included in this dataset at present. Overall the present data collection sets used to inform potential students of the quality of the programmes discriminates against this type of programme. It is apparent this is not a like for like comparative scale nor that this "one size fits all" approach is helpful in responding to the changes imposed on vocational programmes.

6.3.6 Knowledge

Knowledge was expected to play a pivotal role in the outcome of this research but was found to play a minor role; it appears more readily identifiable as competencies. The differences which occurred between the academics and industry tended to centre upon societal good and types of professional knowledge. Competencies were a much more readily accepted manner of assessing entry to practice for all parties. These outcomes may be a product of the ideological effects of the government's neo-liberal policies on CoPs.

The global marketplace is discussed as a positive influence as it offers opportunities for commerce. For the academics the global market is viewed as a dynamic market where the product for sale is knowledge and the uniqueness of knowledge needs to be recognised. It is also seen as a very expensive market in which to develop and is a costly product to support. The challenge set by government for HEIs is to develop new competitive income streams, but this is tempered by the need to enable knowledge to grow and adapt to new markets where the context and constraints are different. If knowledge is unable to transform it loses its validity. The knowledge market is evolving and new modes of delivery may affect its success.

The initial question was posed to investigate the role and impact of policy, but what became apparent is that the guidelines are muddled and difficult to interpret. The structure used to set the rationale for this policy is narrow and focused upon an ideal form of education rather than the vocational-facing undergraduate provision. It has disadvantaged these types of education and hints towards a favouring of Newman's purpose of education through the mechanism of measurement. Rewards for outputs have been set which favour strategic education, the most relevant measure for vocational education provision is the acknowledgement of part-time studies. This reveals a disconnect between policy and practice when studying a vocational-facing undergraduate degree.

6.4 Anticipated outcome

The proposed outcome of the study was to develop an understanding of the changes to the provision of undergraduate professional education in England, its curriculum, the types of demand and patterns of these demands, thus enabling programmes to be structured to accommodate professional education as a result of implementation of the White Paper's recommendations. The outcome was, additionally, to be set in the context of the overall professional development of chartered Qs in England.

Both the academic and industry dataset expressed concern which focused upon the source of funding for professional education it is no longer in the majority taken from HEFCE full time students contributions. The concern mainly arises from a change from the cross subsidy of funding drawn from the full time as now part time funding available under the HE White Paper. Traditionally, part time study has been treated as an “extra over cost” based upon the full time undergraduate fees collected from the government. In this manner, the part time route and employers were indirectly subsidised. Typically a part time student would study five years and pay around 60% of the fee of a full time home student. When compared to full time overseas students this would reduce to about 20% (UoG, 2010). Under the HE 2012 White paper this has been revised and the flow of monies, follow the student and as such the fees for part time students now are on par to a home undergraduate student who under takes a three year programme of study.

These changes to the financing of attending HE have implications for the provision of funding for part time professional programmes, especially for the employers of these types of students. Such employers have to firstly be informed and then select an approach which suits their business case. The HE sector it emerges is struggling to come to terms with the implications of the HE White Paper 2011 and also the purpose that government has designed for HE through this instrumental approach. The question which emerges is whether or not employers of non-traditional students are aware of the changes and its subsequent impact. Employers need to be aware of the true costs for HE programmes. In the past there has been a lower cost attributed to part time courses, mainly as education institutions do not know how to charge for the provision of part time education. This has changed, as each student now brings with them fees as if they were privately funding their own studies. There is exhibited a disconnect between funding and repayment of part time degrees highlighted by the HE White Paper (2011). Which whilst it offers funding of fees for part time studies the repayment structure imposed would indicate that a full rather than part-time model is still considered as the norm.. This is exemplified through the mechanism of payback which commences at year 4 of a part time course, most are 5 years long.

The study was successful in gleaning information from a set of key stakeholders (for more information on the sample set see Appendix B). The aim was to understand the anticipated changes brought about by the White Paper, identified as funding, purpose of education, quality of provision and globalisation of the knowledge market. There were also two topics raised by the sample that indicate a dichotomy of opinions: apprenticeship (for what?) and

societal benefit (for whom?). This dichotomy could be argued as representing distinct differences in the purpose of education held by academia and both industry and the professional body.

After consideration of the initial premise, there was an investigation into the likely impact of the government's provision for vocational undergraduate programmes, it was highlighted that quality and funding are the measures emphasised by the present government. It was noted in this study that *widening access* has been replaced by *fair access*. This opens up a debate around the re-emergence of elite education positioned mostly out with the post '92 institutions. When reviewing the Browne report, which forms the basis for the HE White Paper (2011), from the position of vocational undergraduate mostly delivered in post 92 institutions perhaps the title of *Students at the heart of the system* could be rewritten as *Certain bright A level school leavers at the heart of the system*. This would give a better indication of the focus and direction envisioned by government, for the HE sector in the 21st Century.

6.5 Original contribution to knowledge

When focusing on the CI (CHOBE 2010, BEAR 2010) and the surveying sector in particular, it transpired that there has been very little discussion on the implementation of these educational changes (RICS 2011, 2012). It is from this lack of information that questions arose about the need to investigate the surveying sector and in particular the QS's view on the changes to the HE sector and how it would respond to those changes. This forms the basis of the claim to originality for this research.

It is anticipated that a strategic response to the findings can be synthesised from responses by interested parties. The impact of cultural and social capital on the knowledge worker in the 21st century has added an extra dimension to the research. To do this, a novel approach was used to seek out the possible future importance of emerging findings; this involved constructing a Delphi Technique questionnaire and applying descriptive statistics to the results addressing the aims of Future Studies.

The new pragmatic style of mixed method was used as a rationale for selecting the research methods. The ideas of Roy Bhaskar were adopted, especially *epistemic fallacy*, and the ideas of cultural capital as explained by Pierre Bourdieu were applied to the topic, providing the main lens through which to view the data collected. The topic enabled a

development of the structure of professions and the role of university level education in this process; for the construction industry this is novel.

A framework was specifically designed for this research to facilitate investigation of the critical literature (Figure 2.3).

Instrument	Economic legislation	E D U	P R O	P O L
Philosophy	Cultural capital	C A T	F E S	I T I
Society	20 th and 21 st century	I O N	S I O N	C S

Figure 2.3 Research framework developed for the investigation of this thesis

Another claim to originality of work was the application of Pierre Bourdieu’s cultural capital to the study of a UK-based professional body (the RICS). After identification of the workings of the professional body as a CoP, the use of boundaries was investigated and related to RICS professional standards and fitness to practice. A diagram was adapted to reflect this analytical framework; it was then used as a basis to examine the effects of the HE White Paper (2011) on the associated undergraduate vocational provision for the RICS.

Bourdieu’s analytical framework (1986) as it relates to this research (Figure 2.2).

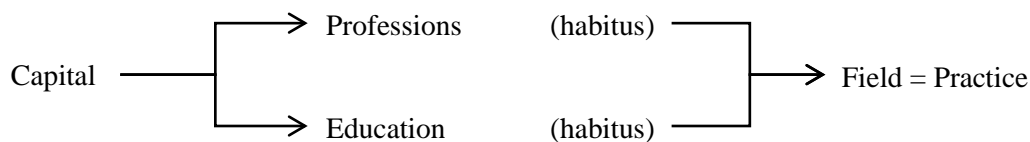


Figure 2.2 Bourdieu’s analytical framework of capital - Adapted

The claims to contribution of originality can be made under the headings of methodology and philosophy which have been applied to an under researched area of professional education, in particular construction facing quantity surveying. There is also the adaption

of existing models – Bourdieu and Bhaskar applied to explain the role of power and that of the behaviour of the profession in its response to the changes brought about by the HE White Paper (2011).

6.6 Limitations of this study

As the topic of the study has been focused upon the provision of vocational degrees for Qs, there was difficulty in locating relevant published literature. The White Paper was specifically applicable to England which restricted the sample of knowledgeable people it was possible to approach for qualitative data; as has been pointed out, this resulted in a small sample consisting of nine individuals. This could have led to bias of the sample data and therefore offering a generality of findings is problematic. The topic being studied is a policy, the nature of which seeks to effect development and change within a fixed time therefore preventing a longitudinal study. Policy on the whole has a limited lifespan, in this instance the policy has not progressed into an Act of Parliament as at 2016.

This study, in hind sight would have benefited from the input of a representative of BIS or the authors of the White paper. The input could have come either in an interview or an invitation to partake in the Delphi process. This approach would have added another dimension to the study and provided a different position to view the HE White Paper from. This would have provided a prism, rather than solely a lens, from which to dissect the purpose and subsequent implications of the Policy document. The inclusion of a relevant government representative could have raised the profile of this research and introduced an example of the possible effects upon professional undergraduate programmes to decision makers. This research has a grass and roots perspective and may have been of benefit to BIS policy makers. On a more personal level including a BIS representative may have also saved time in the research period as well as endorsing or dismissing the findings. In future research approaching the authors or representatives of a policy document is to be considered good practice

6.7 Recommendations

There are a range of recommendations that arise from this investigation into the impact of as follows: governmental policy upon the provision of vocational undergraduate programmes. These are

- Monitoring and attention to the possible reduction in the provision of undergraduate quantity surveying vocational programmes.

- Investigate further the impact of the cyclical nature of the CI alongside the impact of the long lead-in time for construction-related vocational degrees.
- Investigate a mechanism for funding students through vocational-facing courses and further development, particularly in the CI.
- More investigations are needed into the longer term impacts of marketisation of the HE sector and its impacts on vocational undergraduate programmes.
- Investigate the possibility of collaboration of programme provision across England's HEIs and its impact on professional education.
- Investigate how the CI could develop an industry-wide strategy for funding vocational undergraduate courses.
- Undertake an industry-wide review of professional education in parallel with government, as proposed by the professional body and industry representatives interviewed in this study.
- Revisit the debate surrounding the purpose of professional education in the 21st century.

6.8 Future research

Quantity surveying programmes have been used as an exemplar to consider the effects of the HE White Paper 2011 on professional education and training within England, and a number of conclusions have been generated from this research. Could these results and conclusions be generalised and applied to all professional education and training across the whole spectrum of vocational courses in HE in England? It may be possible to run a comparison of similar vocational undergraduate provision for other professional bodies to look for differences and similarities. Another possible research project could be a study of the same vocational undergraduate provision in Scotland, (where the White Paper was not implemented).

6.9 Effect of the whole research project on professional development

“My mission in life is not merely to survive, but to thrive; and to do so with some passion, some compassion, some humor, and some style.” Maya Angelou (*Guardian*, July 2014)

Whilst undertaking this study I have developed as a researcher and find I am a very different person from the one who commenced the work four years ago. A simple example of this is I now know the difference between reflexive and reflection. I find I have

constructed a set of skills and deconstructed some assumptions about the way to produce research. There have been moments of elation and despair, not to mention a few tears of frustration on the way to completion. I have benefitted from support, and not always from the most obvious places. Through the application of tenacity and good project management skills I built my hopes that the work would be completed, to realise this work has a life of its own and I had to be responsive to this.

Joining the dots has been immensely time consuming, and with so many avenues to follow from the rich data set the difficulty has been confining the boundaries of the study. Finally, I have learnt that time is finite, that it must be spent wisely and an end to this work has to be drawn. I found that competing demands would interrupt the flow of work but also that the research has interrupted other parts of my life.

I have enjoyed the self-satisfaction and ego-driven absorption into a topic which few others are interested in. I have made new friends, and good friends have supported me through the process. I have experienced the kindness of strangers. For all of this I am grateful.

7 REFERENCES

- Abudayyyeh, O., Russell, J., Johnston, D., & Rowings, J. (2000, May-June). Construction Engineering and Management Undergraduate Education. *Journal of Construction Engineering and Management*, 126(3), 169-175.
- Ainley, P. (2004). The new "market- state" and education. *Journal of Education Policy*, 19(4), 467-514.
- Ainley, P. (2012, November 20). Lecture to Doctoral students. (U. o. Greenwich, Interviewer)
- Alavi, M., & Leider, D. (2001, March). *Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundation and Research Issue*. Retrieved September 15, 2011, from citeseerx: www.citeseerx.ist.psu.edu
- Alesson, M., & Skoldberg, K. (2009). *Reflexive Methodology*. London: Sage.
- Alvesson, M. (2012). *Understanding Organisational Culture*. London: Sage.
- Alvesson, M., & Deetz. (1996). *Doing Critical Management Research*. New York : Sage Publications Ltd.
- Andrews, M. (2011, August). Hot topic- Reflection on the HE White Paper. *AVA Newslink*, p. 9.
- Archer, M. (2007). Introduction:Realism in the social sciences. In M. Archer, R. Bhaskar, CollierA, T. Lawson, & N. A, *Critical realism essential readings* (pp. 189-205). London: Routledge.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T., & Norrie, A. (1998). *Critical Realism; Essential Readings*. London: Routledge.
- Ashworth, & Hogg. (2007). *Willis's Practice and Procedure for the Quantity Surveying* . London: Wiley- Blackwell.
- Ashworth, A. (1994). *Cost Studies of Buildings*. Harlow: Longman Scientific & Technical.
- Ashworth, A. (2007). *Resourcing programmes for the Built Environment* . Salford: CEBE and CHOBE.
- Atkinson, A. R. (2003). Focus versus strategy - two models of education for built environment professionals. *Building Education and Research* (pp. 279-285). Salford: The University of Salford, UK.
- Australian Bureau of Statistics. (2005, January 21). *1301.0- Year Book Australia, 2005*. Retrieved November 22, 2013, from Australian Bureau of Statistics : www.abs.gov.au/ausstats/abs
- Australian Education Network. (2013). *Universities*. Retrieved October 1, 2013, from AustrlianUniversiites: [www.australianuniversiites.com.au/university courses/australia](http://www.australianuniversiites.com.au/university_courses/australia)
- Babcock, M. (2002). In H. o. Lords.

- Ball, S. (2007). *Education plc: Understanding private sector participation in public sector education*. Abingdon: Routledge.
- Bell, J. (2008). *Doing your Research Project*. Maidenhead: Open University Press.
- Benz, V., & Shapiro, J. (1998). *Mindful inquiry in social research*. Thousand Oaks, CA: Sage.
- BERA. (2011). *Ethical Guidelines for Educational Research 2011*. Retrieved September 14, 2013, from British Educational Research Association: www.bera.ac.uk
- Bernstein, B. (1996). *Pedagogy, symbolic control and identity*. London: Taylor & Francis.
- Bhasker, R. (1978). *Realist Theory of Science*. Sussex: The Harvester Press Ltd.
- Bhasker, R. (1993). *Reclaiming Reality: A Critical Introduction to Contemporary Philosophy*. London: Verso.
- BIS. (2011, June). *Higher Education: Students at the Heart of the System White Paper*. Retrieved June 30, 2011, from Department for Business, Innovation and Skills: www.nds.gov.uk
- BIS. (2013). *UK Construction : an economic analysis of the sector*. Retrieved May 11, 2014, from Department of Business , Innovation and Skills : www.gov.uk/..bis-13-958-uk
- BIS. (2013, September 1). *unistats.direct.gov.uk*. Retrieved February 24, 2014, from KIS: <http://www.unistats.direct.gov.uk>
- BIS Department for Business, Innovation,Skills. (2009). *Higher Ambitions: The future of universities in an knowledge economy*. London: HMSO.
- BIS Department for Business, Innovation,Skills. (2010). *Going for growth: our future prosperity building Britian's future*. London: HMSO.
- Blewitt, A. (2006). Promoting the global accountancy professional. *Demos*, 123.
- Bourdieu, P. (1973). Knowledge, education and cultural change. In R. Brown, *Papers in Sociology of Education* (pp. 71-112). London: Tavistock Publications Ltd.
- Bourdieu, P. (1986). The Forms of Capital. In J. G. Richardson, *Handbook of Theory and research for the Sociology of Education*. New York: Greenwood Press.
- Bourdieu, P. (1987). *In other words: essays towards a reflexive sociology*. Cambridge: Polity Press.
- Bourdieu, P. (1990). *The Logic of Practice*. Cambridge: Polity press.
- Bourdieu, P. (1993). *Field of cultural production*. Cambridge: Polity Press.
- Bourdieu, P. (2001). *Practical Reason - on the theory of action*. Oxford: Blackwell Publishers.
- Bourdieu, P. (2008). *Distinction: A social critique of the judgement of taste*. London: Routledge.
- Bourdieu, P., & Passeron, J. (2000). *reproduction in edcuation, society and culture*. London: Sage.

- Bourdieu, P., & Wacquant, L. (1992). *An invitation to Reflexive Sociology*. Cambridge: Polity Press.
- Bowen, P., Cattell, K., Distiller, G., & Edwards, P. (2008). Job Satisfaction of South african quantity surveyors: an empirical study. *Construction Management and Economics*, 26(7), 765.
- Bradley, D. (2008). *Review of Australian Higher Education*. Canberra: Commonwealth of Australia.
- Brady, N. (2013). *Unpublished Doctorate*. London: University of Greenwich.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 77-101.
- Brinkley, I. (2010). *Mapping and defining the Knowledge Economy: Changes in the official industrial classifications*. London: The Work Foundation.
- British Broadcasting Corporation. (2014). State Opening of Parliament.
- British Broadcasting Corporation. (2013). *The Welfare State*. Retrieved May 19, 2013, from GCSE Bitesize:
www.bbc.co.uk/schools/gcsebitesize/history/mwh/britain/welfarestaterev_print.shtml
- Brown, R. (2011, October). Policy Watch. (G. Brown, Ed.) *Perspectives Policy and Practice in Higher Education*, 15(4), 132.
- Brown, R., & Carasso, H. (2013). *Everything for Sale? The Marketization of UK Higher Education*. London: Routledge and the Society for Research into Higher Education.
- Browne, L. e. (2010). *Browne Report*. London: BIS.
- Burgoyne, J. (1997). Stakeholder Analysis. In C. Cassell, & G. Symon, *Qualitative Methods in Organizational Research* (pp. 187-207). London: Sage Publications Ltd.
- Cable, V. (2012, November 15). Bruising but Beneficial. *Times Higher Education*, p. 32.
- Cable, V., & Willetts, D. (2013, January 11). Higher Education Funding For 2013-14. *Letter to Tim Melville-Ross CBE HEFCE*. London: Department for Business Innovation & Skills.
- Carr, D. (1995). The Dichotomy of Liberal Versus Vocational Education: Some Basic Conceptual Geography. *Philosophy of Education*.
- Carter, R. (1985). A Taxonomy of Objectives for Professional Education. *Studies in Higher Education*, 135- 149.
- Cartlidge, D. (2006). *New Aspects of Quantity Surveying Practice*. Oxford: Butterworth-Heinemann.
- Cartlidge, D. (2013). *Quantity Surveyor's Pocket Book*. Abington: Routledge.

- Cassel, C., & Symon, G. (1997). Qualitative Research in Work Contexts. In C. Cassel, & G. Symon, *Qualitative Methods in Organizational Research* (pp. 1-13). London: Sage Publications Ltd.
- Cassel, C., & Symon, G. (2005). *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage Publication Ltd.
- CCT. (1988). Compulsory Competition Act. London: HMSO.
- CGP. (2013). *Key Stage Three History The Study Guide*. Kirkby-in-Furness: CGPbooks.
- Chan, E. H., Chan, M. W., Scott, D., & Chan, A. T. (2002, January). Educating the 21st Century Construction Professionals. *Journal of Professional Issues In Engineering Education and Practice*, 128(1), 44-51.
- CIPD. (2010, November). *PESTLE analysis*. Retrieved October 02, 2013, from CIPD: <http://www.cipd.co.uk/hr-resources/factsheets/pestle-analysis>
- CIRIA. (1989). *The Iberian Peninsula*. London: HMSO.
- Clark, B. R. (2000). *Places of inquiry: Research and advanced education in modern universities*. Emerald Group Publishing Limited.
- Clegg, S. (2000). Knowing through reflective practice in higher education. *Educational Action Research*, 8(3), 451-469.
- Clifford, G., & Guthrie, J. (1990). *Ed School - A brief for Professional Education*. Chicago: University of Chicago Press Ltd.
- Cohen, L., Manion, L., & Morrison, L. (2009). *Research Methods in Education*. Abingdon: Routledge.
- Collini, S. (2011). *What are Universities for?* London: Penguin Group.
- Commonwealth of Australia. (2013). *Higher Education Support Act 2003*. Canberra: Commonwealth of Australia.
- Concise Routledge. (2000). *Concise Routledge Encyclopedia of Philosophy*. London: Routledge.
- Construction Industry Board, . W. (1996). *Educating the professional team*. London: Thomas Telford.
- Construction Taskforce. (1998). *Rethinking Construction*. Retrieved May 20, 2013, from Constructing Excellence: http://www.constructingexcellence.org.uk/pdf/rethinking%20construction/rethinking_construction_report.pdf
- Cresswell, J. (2003). *Research Design Qualitative, Quantitative and Mixed Methods Approaches*. London: Sage Publications Ltd.
- Cresswell, J. (2007). *Qualitative Inquiry & Research Design; Choosing Among Five Approaches*. London: Sage Publications Ltd.

- Cresswell, J., & Tashakkori, A. (2007). Editorial: Differing Perspectives on Mixed Methods Research. *Journal of Mixed Methods Research*, 1, 303.
- Davis, Langdon, & Everest. (1991). *QS 2000*. London: RICS.
- Dawkins, J. (1998). *Higher Education: a policy statement*. Canberra: Australian Department of Education, Employment and Training.
- de Ridder-Symoens, H. (1992). *History of the University in Europe Volume 1 Universities in the Middle Ages*. Cambridge: Cambridge University Press.
- Dearing, R. (1997). *The National Committee of Inquiry into Higher Education; Higher education in the learning society*. Retrieved July 20, 2010, from bei: <http://www.bei.leeds.ac.uk/Partners/NCIHE>
- Denzin, N., & Lincoln, Y. (2008). *The Landscape of Qualitative Research*. London: Sage Publications Ltd.
- Department for Business, I. a. (2011). *Higher Education : Students at the Heart of the System*. London: The Stationery Office Limited.
- Department of Education, Employment and the Workplace Relations. (2009, January 1). *What you pay*. Retrieved January 4, 2014, from goingtounifees: www.goingtouni.gov.au
- Department of Education, Employment and Workplace Relations. (2009). *Students 2005 selected Higher education statistics*. Retrieved December 20, 2013, from Department of Education, Employment and Workplace Relations: www.deewr.gov.au
- Department of Employment and Learning. (2009). *Skills*. Northern Ireland: HMSO.
- Dewey, J. (1916, April). Nationalising Education. *New Republic*, 6(22 and 29), 311.
- Dewey, J. (1916). *The public and its problems*. Washington.
- Dewey, J. (1916). *The public and its problems*. Washington: Government of the United States of America.
- Dewey, J. (1916,1980). *Democracy and Education*. Carbondale: Southern Illinois University Press.
- Doidge, C., Sara, R., Parnell, R., & Parsons, M. (2000). *THE CRIT- an Architecture students's Handbook*. Oxford: Architectural Press, Butterworth-Heinemann.
- Downie, R. (1990). Professions and Professionalism. *Journal of Philosophy of Education*, 23(2), 147.
- Drost, W. (1967). *David Snedden and Education for Social Efficiency*. Madison: University of Wisconsin Press.
- Editor. (1998). The external examiner system. *Biochemical Education*, 26, 101-102.
- Egan. (1998). *Rethinking Construction*. London: HMSO.

- Ellis, R. (1995). An Action-Focus Curriculum for the Interpersonal Professions. In R. Barnett, *Learning to Effect* (pp. 69-86). Buckingham: The Society for Research into Higher Education, Open University Press.
- Engers, J. (2013, August 15). Political experiment must not reduce education to a commodity. *Times Higher Education*, p. 11.
- Eraut, M. (1985). Knowledge Creation and Knowledge Use in Professional Contexts. *Studies in Higher Education*, 117- 133.
- Eraut, M. (1995). Developing the Knowledge Base: A Process Perspective on Professional Education. In R. Barnett, *Learning to Effect* (pp. 98-120). Buckingham: The Society for Research into Higher Education.
- Eraut, M. (2000). Non-formal learning tacit knowledge in professional work. *British Journal of Educational Psychology*, 70, 113-136.
- ERSC . (2008). *Rducation,globalisation and the knowledge economy; Acommentary by the Teaching andLearning Research programme*. ESRC.
- Eurostat. (2012). *Economy and Finance*. Retrieved June 1, 2012, from Statistics: epp.eurostat.ec.europa.eu
- Evans, L. (2008, March). Professionalism, Professionality and the Development of Education Professionals. *British Journal of Educational Studies*, 56(1), 20-38.
- Fanshawe, S. (2011, November 29). AVA Golden Jubilee Guest Lecture- Simon Fanshaw Chair of Governors Sussex University. London.
- Farlex. (2012). *Farlex Financial Dictionary*. Retrieved July 1, 2002, from Farlex: www.farlex.com
- Ferry, D., & Brandon, P. (1991). *Cost Plannig of Buildings*. Oxford: BSP Professional Books.
- Floes-Mateo, & Argimen. (2007). Evidence based practice in postgraduate healthcare education: A systematic review. *BMC Health Services Research*, 7-119.
- Fong, P. S., & Choi, S. K. (2009). The processes of knowledge management in professional services firms in the construction industry: a critical assessment of both theory and practice. *Journal of Knowledge Management*, 13(2), 110.
- Forsetlund, L., Bjordal, A., Rashidian, A., Jamtredi, G., O'Bavis, D., Odgaar-Jensen, J., et al. (2012). *Continuing education meetings and workshops;effects on professional practice and healthcare outcomes*. The Cochroane Library - Wiley & Sons.
- Frazer, M. (1997). *Report on the Modalities of External Evaluation of Higher Education in Europe:1995-1997*.
- Friedman, & Friedman. (1980). *Free to Choose: A Personal Statement*. New York: Harcourt.

- Furedi, F. (2010). Introduction to the marketisation of higher education and the student as a consumer. In M. Molesworth, Scullion, & E. Nixon, *The Marketisation of Higher Education and the Student as a Consumer*. Taylor & Francis.
- Garrison, J. (1995). Distinctions, Dualisms and Deweyan Pragmatism: A Response to David Carr. *Philosophy of Education*.
- Gartner. (1976). *The preparation of Human Science professionals*. New York: New York Human Science Press.
- Gibbs, G. (13, July 27). *Coding in Qualitative Data*. Retrieved July 27, 13, from Youtube: [youtube.com/watch?v=30082cBJIEY8list=](https://www.youtube.com/watch?v=30082cBJIEY8list=)
- Gibbs, G. (2011, October 24). *Coding*. Retrieved July 27, 2013, from youtube.com: www.youtube.com/watch?v=7X7VuQxffpk
- Gliem, & Gliem. (2003). *Calculating, Interpret and reporting Cronbachs alpha reliability coefficient for Likert-type scales*.
- Goldthorpe, J. (1982). On the Service Class, Its Formation and Future. In A. Giddens, & M. G, *Social Class and the Division of Labour*. Cambridge: Cambridge University Press.
- Gorski, P. (2013). What is Critical Realism? And Why Should You Care? *Contemporary Sociology*, pp. 658-670.
- gostudyaustralia. (2012, September 6). *Skills Australia*. Retrieved October 1, 2013, from Gostudyaustralia: www.gostudyaustralia.com.au/blog/skills-shortage-in-australia
- Grundy, T. (2006). Rethinking and reinventing Michael Porter's five forces model. *Strategic Change*, 213-229.
- Haigh, R. (2008). Interviews: A negotiated partnership. In A. Knight, & L. Ruddock, *Advanced Research Methods in the Built Environment* (pp. 111-121). Oxford: Wiley-Blackwell.
- Hall, N. (2012, November 14). Doctoral session. (Simpson, Y, Interviewer)
- Hammersley, M. (2013, May 5). Reflexion. (Y. Simpson, Interviewer)
- Handy, C. (2002). *The Age of Unreason : New Thinking For a New World*. London: Arrow.
- Hanlon, G. (1998). Professionalism as enterprise: service class politics and the redefinition of professionalism. *Sociology*, 32(1), 43-63.
- Hare, J. (2012, May 19). *Mass education changes the face of university*. Retrieved November 22, 2013, from The Australian: www.theaustralian.com.au/higher-education/mass-education-changes-the-face
- Hargreave, A., & Moore, S. (2000). Educational Outcomes Modern and Post Modern Interpretations. *British Journal of Sociology of Education*, 21(1), 27-42.
- Hart, C. (2008). *Doing a Literature Review; Releasing the Social Science Research Imagination*. London: Sage Publications Ltd.

- Harvey, L. (2002). Evaluation for What? *Teaching in Higher Education*, 7(3), 245-263.
- Haskins, C., & Lewis, L. (2002). *The Rise of the Universities 1923*. New Jersey: Transaction Publishers.
- Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32(4), 1008-1015.
- HEFCE. (2009, December). *Future arrangements for quality assurance in England and Northern Ireland*. Retrieved July 10, 2010, from HEFCE: www.hefce.ac.uk/pubs/hefce/2009/0947
- HEFCE. (2014). *Higher Education in England*. Retrieved 2014, from www.hefce.ac.uk/england/2014
- Helyer, R., Lee, D., & Evans, A. (2011). Hybrid HE: Knowledge, Skills and Innovation. *Workbased Learning ejournal*, 1(2).
- HEPI. (2011). *response to the government's proposals for higher education funding*. www.hepi.ac.uk/478-1871: HEPI.
- Hillbrandt, P. (2000). *Economics Theory and the Construction Industry*. London: Palgrave Macmillan.
- HMSO. (1944). *Education Act 1944*. London: HMSO.
- HMSO. (1946). *National Insurance Act 1946*. London: HMSO.
- HMSO. (1948). *National Health Service (NHS) 1948*. London: HMSO.
- HMSO. (1998). *The Teaching and Higher Education Act 1998*. London: HMSO.
- HMSO. (2004). *The Higher Education Act 2004*. London: HMSO.
- Holmwood, J. (2011). *In Defence of Public Higher Education*.
- Hoxley, M. (2000). Measuring UK construction professional service quality: the what, how, when and who. *International Journal of Quality & Reliability Management*, 17(4-5), 5111-526.
- Hoxley, M. (2007). The fee tendering and service quality issue revisited. *Property Management*, 25(2), 180-192.
- Hsu, C., & Sandford, B. (2007). The Delphi Technique: Making Sense of Consensus. *Practical Assessment, Research & Evaluation*, 12(10).
- Huberman, M., & Miles, M. (2002). *The Qualitative Researcher's Companion*. London: Sage publications Ltd.
- Hughes, C. (n.d.). *Quantative and Qualative Approaches to Social Research*. Retrieved October 9, 2013, from Quantative and Qualative Approaches to Social Research: www2.warwick.ac.uk/fac/soc/sociology/staff/academicstaff/chughes
- IACR. (2013). *epistemic fallacy*. Retrieved November 1, 2013, from Critical realism blog: www.criticalrealismblog.blogspot.co.uk

- IDPHE. (2011). *In Defence of Public Higher Education: A response to the White Paper 2011*. Cambridge: IDPHE.
- Ingirige, B., & Sexton, M. (2007). Understanding construction alliances: their rationale and design. *RICS Research paper series*, 7(4).
- Institute, T. D. (2003). *Quality procedures in European Higher Education*. Helsinki: European Network for Quality Assurance in Higher Education.
- Institution of Civil Engineers. (2013). *ICE 2013 conferences*. Retrieved from ICE conferences: www.ice-conferenc.com/
- ISSE correspondent. (2007, August 22). *University education in Australia and the impact of free market reform*. Retrieved November 12, 2013, from World Socialist Web Site: www.wsws.org/en/articles/2007/08stud-a22html
- Jarvis, P. (1983). Professional Education. In P. Hills, *New Patterns of Learning Series*.
- Jick, T. (1979). Mixing Quantative and Qualatitive Methods: Triangulation in Action. *Adminstrating Science Quarterly*.
- Jones, G. (2004). *A Thesis Collaborative Working in Construction Project Teams: a Non-Axiomatic Approach to Success, Trust and Cooperation*. Nottingham Trent: Unpublished Professional Doctorate.
- Khalil, A., & Ghagly, A. (1999). Important causes of delay in public health utlity projects in Saudi Arabia. *International Journal of Project Management*, 647-655.
- Kinchington, K. (2009). Pushing Back the Boundaries; The case for the Advanced Professional Development. *The International Journal of Learning*, 1-16.
- King, A. (1997). The Qualitative Research Interview. In C. Cassel, & G. Symon, *Qualitative Methods in Organizational Research* (pp. 14 -36). London: Sage Publications Ltd.
- Krathwohl, D. (2002). Revising Bloom's Taxonomy. *Theory into Practice*, 41(4), 212 -218.
- Kulig, E. (2012, December 12). *e-petition to Condemn the White Paper Students in the Heart of the System" and call on Government to consider the proposals of Alternative White Paper*. Retrieved December 16, 2011, from HM Government: <http://epetitions.direct.gov.uk/petitions/25458>
- Kurul, E., Colantonio, A., & Otsuka, N. (2004). *Influences of Social Capital on Knowledge Creation*. Oxford: Oxford Brookes University.
- Kus, B. (2006). Neoliberalism, Institutional Change and the Welfare State: The case of Britian and France. *International Journal of Comparative Sociology*, 488-525.
- Latham, S. M. (1994). *Constructing the team*. London: HMSO.
- Lave, J., & Wenger, E. (1991). *Situated Learning. Legitimate peripheral participation*. Cambridge: University of cambridge Press.

- Lee, J. (2012, December 13). Construction Industry in China. *Lecture slides*. London: University of Greenwich.
- Lees, M., & Ashworth, A. (2005). Construction and the market for education supply in the United Kingdom. *Queensland University of Technology*. Brisbane: RICS.
- Lewis, M. (2001). *Surveying Instruments of Greece and Rome*. Cambridge: Cambridge University Press.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic Inquiry*. London: Sage Publications Ltd.
- Linstone, H., & Turoff, M. (2002). *The Delphi Method*. Newark: New Jersey Institute of Technology.
- Love, P., Holt, G., & Li, H. (2002). Triangulation in construction management research. *Engineering Construction and Architectural Management*, 294-303.
- Lowe, D., & Leiringer, R. (2005). Commercial management in project-based organisations. *Journal of Financial Management of Property and Construction*, 3-18.
- MacBeath, J., & Moos, L. (2009). First Editorial. *Educational assessment ,Evaluation and Accountability*, 1-4.
- Maes, J; Sels, L; Roodhooft,F. (2005). Modelling the Link Between Management Practices and Financial performance . Evidence from Small Construction Companies. *Small Business Economics*, 25(1), 17.
- Mangez, E., & Hilgers, M. (2012). The Field of Knowledge and Policy Field in Education: PISA and the production of knowledge for policy. *European Educational Research Journal*, 189-205.
- Maton, K. (2005). A question of autonomy: Bourdieu's field approach and higher education policy. *Journal of Education Policy*, 687-704.
- Maxwell, J. (2012). *A Realist Approach to Qualitative Research* . Sage Publication Inc.
- McLaclan, M. (2009). *Further education as a business?* Oxford: University of Oxford.
- Mcquire, D. (2012, February 10). *Implications of the BIS White Paper Students at the Heart of the System for the University of Greenwich; Part 1 and 2*. Retrieved February 25, 2012, from University of Greenwich Vice-Chancellor: <http://blogs.gre.ac.uk/vc/>
- Miles, M., & Huberman, A. (1994). *Qualitative Data Analysis*. Sage Publications.
- Milward, P. (2006). *What is a University?* London: Shephard-Walwyn Ltd.
- Morgan, J. (2013, January 24-30). Sector forced to play wild variations on a recruitment theme. *Times Higher Education*, pp. 6-7.
- Morris Hicky Morgan Agathon Associates. (2007). *Vitruvius (1st Century BC) Ten books on Architecture*. Boston: bostonleadershipbuilders.
- Morton, R. (2002). *Construction UK: Introduction to the industry*. Oxford: Blackwell Science.

- Mroz, A. (2012, February 24). *Leader: a big paper but no grand plan*. Retrieved February 20, 2012, from Times Higher Education: <http://timeshighereducation.co.uk/story.asp>
- Myers, D. (2004). *Construction Economics: A new Approach*. London : Spons Press.
- NBER. (2010). *The National Bureau of Economic Research*. Retrieved May 11, 2014, from UK Construction Sector: www.nber.org
- Nethercot, D. (1999). Professional Accreditation in the Construction Sector: The Role of the UK's JBM. *European Journal of Engineering Education*, 24(2), 133.
- Newman, J. (1852). *University*. New York: The National Institute for Newman Studies.
- Nolan. (1995). *The Committee on Standards in Public Life*. Retrieved November 15, 2013, from official documents: www.thecommitteeonstandardsinpubliclife.gov.uk
- Nonaka, I., & von Krogh, G. (2009, May-June). Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in Organizational Knowledge Creation Theory. *Organizational Science*, pp. 635-652.
- North, J. (2010). *Building a Name: The History of the Royal Institution of Chartered Surveyors*. London: Arima Publishing.
- NSO. (2011). *Construction Indicators*. Retrieved May 11, 2014, from National Statistic office: www.nso.gov.mt
- NUS. (n.d.). *Ethnography*. Retrieved June 7, 2010, from www.nus.edu.sg
- OCED. (1989). *Education and the Economy*. OCED.
- O'Donnell, H., Karallis, T., & Sandelands, e. (2008). Reflecting on the skills agenda: a construction industry perspective. *Education and Training*, 50(1), 59.
- Offer, A. (2008). British Manual Workers: From Producers to Consumers c.1950-2000. *Contemporary British History*, 557-571.
- Olssen, M., & Peters, M. (2005, May). Neoliberalism, higher education and the knowledge economy: from the free market to knowledge capitalism. *Journal of Education Policy*, 20(3), 313-345.
- Ontology*. (2012). Retrieved November 2, 2013, from international Association for Critical Realism : <http://criticalrealism.wikispaces.com>
- Open University. (2012, August 2). *Masters of Money- Keynes*. Retrieved May 19, 2013, from Open University: <http://www.open.edu/openlearn/whats-on/tv/ou-on-the-bbc-masters-money-keynes>
- Pedersen, O., & North, R. (1997). *The first universities: Studium generale and the origins of university education in Europe*. Cambridge: Cambridge University Press.
- Perera, S; Pearson, J; Robson, S; Ekundayo, D. (2011). Alignment of academic and industrial development needs for quantity surveyors: the views of industry and academia. *RICS COBRA Research Conference*. Salford: RICS, London.

- Pheng, L. S., & Ming, K. H. (1997). Formulating a strategic marketing mix for quantity surveyors. *Marketing Intelligence and Planning*, 15(6), 273.
- Pollard, A. (2010). *Professional Pedagogy; a contemporary opportunity*. London: A commentary by TLRP and GTCE.
- Poon, J. (2006). Professional Ethics for UK Construction Professionals. *Construction Information Quarterly*, 8(2), p. 70.
- Porter, E. (1980). *Competitive Strategy*. New York: The Free Press/Macmillan.
- Possen, A. (2012, July 9). Professional Lecture Medway. (U. o. Greenwich, Interviewer)
- Powell. (2001). In M. Packer, *Interpretive Research Philosophical Grounds* (pp. 884-8).
- QAA. (2004). *Code of practice for the assurance of academic quality and standards in higher education*. Retrieved June 10, 2010, from QAA: www.qaa.ac.uk/academicinfrastructure/codeofpractice
- QAA. (2004). *Code of practice for the assurance of academic quality and standards in higher education*. Retrieved June 10, 2010, from QAA: www.qaa.ac.uk/academicinfrastructure/codeofpractice
- QAA. (2008). *Competency for Construction, Property and Surveying*. London: QAA.
- QAA. (2010, February). *Evaluation of academic infrastructure : a discussion paper*. Retrieved July 10, 2010, from QAA: www.qaa.ac.uk/academicinfrastructure/evaluation10
- Quantity Surveyors Research Group. (1992). *The Core Skills and Knowledge Base of the Quantity Surveyor*. London: RICS.
- Quantity Surveyors Research Group. (1992). *The Core Skills and Knowledge Base of the Quantity Surveyor*. London: Royal Institution of Chartered Surveyors.
- QS Division, Royal Institution of Chartered Surveyors. (1992). *The core skills and knowledge base of the quantity surveyor*. London: RICS, The Environmental Studies Resource Centre, Nottingham Trent University.
- Ratcliffe, J. (2008). Built environment future research: The need for foresight and senario learning. In A. Kight, & L. Ruddock, *Advanced Research Methods in the Built Environment* (pp. 216-228). Oxford: Wiley-Blackwell.
- Redmond, P. (2009, February). Generation Y. Liverpool.
- Rees, C. (2003). *An Introduction to Research in Midwifery*. Cheshire: Books for Midwives.
- RIBA. (2013). *Guerrilla Tactics*. Retrieved 2014, from Royal Institution British Architecture: [www.architecture.com/2013/Guerrilla Tactics](http://www.architecture.com/2013/GuerrillaTactics)
- RICS. (2010). *RICS Surveying 360 Accredited Courses*. Retrieved July 9, 2010, from RICS: www.surveying-360.com/way-in/accredited-courses

- Robertson, I. (2008, January 1). *I've got some interview data! What next?* Retrieved July 27, 2013, from youtube.com: www.youtube.com/watch?v=em3dRhwQEAA
- Ross, J. (2011, October 26). *UK changes not doom and gloom : UUK*. Retrieved November 7, 2011, from The Australian: <http://theaustralian.com.au/higher-education>
- Rothblatt, S. (1997). *The modern university and its discontents the fate of Newman's legacies in Britain and American*. Cambridge: Cambridge Press.
- Rowe, M. (2012, April 2). *The Delphi Method in Clinical Research*. Retrieved May 12, 2013, from /USR/SPACE: www.mrowe.co.za/blog/2012/05/the-delphi-method-in-clinical-research/
- Royal Institution of Chartered Surveyors. (n.d.). *Our Members*. Retrieved May 17, 2013, from RICS website: www.rics.org/uk/wh-we-are/history-and-mandates/our-members/
- Royal Institution of Chartered Surveyors. (n.d.). *History and mandate*. Retrieved May 17, 2013, from RICS website: www.rics.org/uk/about-rics/who-we-are/history-and-manadate
- Royal Institution of Chartered Surveyors. (n.d.). *RICS History*. Retrieved May 17, 2013, from RICS website: www.rics.org/uk/wh-we-are/history-and-mandates/history
- Royal Institution of Chartered Surveyors. (n.d.). *Who we are*. Retrieved May 17, 2013, from RICS website: www.rics.org/uk/wh-we-are/history-and-mandates/rics-at-a-glance
- Rudolph, S., Hiscok, H., Price, A., Efron, D., Sewell, J., south, M., et al. (2009). What research questions matter to Australian paediatricians? National Delphi Study. *Journal of Paediatrics and Child Health*, 704-710.
- Ryan, G., & Bernard, H. (2003). Techniques to identify themes. In *Field Methods* (pp. 85-109).
- Sanderson. (1972). *The Universities and British Industry*. London: Routledgeand Kegan Paul.
- Schon, D. (1983). *Educating the Reflective Practioner*. San Francisco: Jossey-Bass.
- Schon, D. (1983). *The reflective practitioner: how professionals think in action*. London: Temple Smith.
- Scott, P. (1998). The end of the European University? *European Review*, 441-457.
- Seeley, I. (1983). *Building Economics*. Hong Kong: Macmillan Building and Suverying Series.
- Shah, M., & Nair, C. S. (2011, October). International higher education in Australia Unplanned future. *Perspectives Policy and Practice in Higher Education*, 15(4), 129-131.
- Sharapov, K., & Tizard, J. (2011, March). *Getting in, Getting on...in Construction*. Retrieved May 20, 2013, from Construction Skills: <http://www.napier.ac.uk/research/centresandprojects/src/Documents/Construction-Skills-Modern-Apprentices.pdf>
- Shirong, L. (2001). China's construction higher education in transition. *Building Research & Information*, 29(4), 302-311.
- Silverman, D. (2011). *Interpretating Qualitative Data*. London: Sage Publications Ltd.

- Simpson, Y. (2010). *Preliminary investigation: Prescribed Education: Valued by whom*. London: unpublished.
- Simpson, Y. (2010). Twenty first century challenges for professional Quantity Surveyors. *COBRA* . Paris: Royal Institution of Chartered Surveyors.
- Simpson, Y. (2011). Critical Review : An investigation into the definition of non-cognate graduates in the context of professional quantity surveying education. *COBRA*. Manchester: Royal Institution of Chartered Surveyors.
- Simpson, Y., & Dye, J. (2009). Value for Money: A Quantity Surveyors perspective of the Quantitative versus the Qualitative. *COBRA*. Capetown, South Africa: RICS Publications, London.
- Skills, D. f. (2011, June 28). *Facts on financial support for part-time students starting courses from September 2012*. Retrieved July 17, 2011, from Department for Buisness Innovation & Skills: <http://nds.coi.gov.uk>
- Skulmoski, G., Hartman, F., & Krahn, J. (2007). The Delphi Method for Graduate Research. *Journal of Information Technology Education, 6*.
- Smith, A. (1998). *An Enquiry into the Nature and the Causes of the Wealth of Nations: A Selected Edition*. Oxford.
- SPSS inc. (2010, September 15). Statistical Package for the Social Sciences. Armonk, New York, United States of America.
- Swain, H. (2011, September 27). *Higher Education White Paper is providing a winter of discontent*. Retrieved September 28, 2011, from The Guardian: <http://guardian.co.uk/education/2011/sep/27>
- Tan, W. (2003). Building Competitive Advantage: Construction Education in Japan. *Engineering, Construction and Architectural Management, 10*(2), 78-87.
- Telegraph . (2010, October 12). More Funding for STEM? *The Telegraph*. The Telegraph.
- THE. (2014, January 23). Lifting the cap: can more mean better too? *Times Higher Education* , pp. 36-41.
- The Guardian. (2014, May 29). Maya Angelou: quotes 15 of the best. London.
- The National Archives. (n.d.). *Brave New World*. Retrieved May 2013, 2013, from The National Archives: www.nationalarchives.gov.uk/pathways/citizenship/brave_new_world/welfare.htm
- The Quality Assurance Agency for Higher Education. (2008). *QAA standards for Construction, Property and Surveying*. Mansfield: Linney Direct.
- The University of Greenwich Research Ethics Committee. (2010, October). *University Research Ethics Committee Application Form*. Retrieved December 10, 2010, from University of Greenwich: www.gre.ac.uk/policy/rep

- Thompson, F. (1968). *Chartered Surveyors - The Growth of a profession*. London: Routledge & Kegan Paul Ltd.
- Thompson, J., & Bekhradnia, B. (2012, August 17). "Higher Education: Students at the Heart of the System" - an Analysis of the Higher Education White Paper. Retrieved August 23, 2012, from Higher Education Policy Institute: <http://hepi.ac.uk/466-1984/>
- Thorley, W. (2009). *Employing Bourdieu's notion of habitus and capital to investigate student experience within the field of further education provision*. Newcastle upon Tyne: University of Newcastle.
- Tlupova, D. (2009). *New approaches to higher education financing in England and their impact on widening participation*. Stafford: University of Stafford.
- Tovey, P. (1995). Context specificity and quality continuing professional education. Part 2: towards a meaningful approach. *Quality Assurance in Education*, 3(3), 22-27.
- Tribe, D., & Tribe, A. J. (1995). The Law Teachers' Dilemma. In R. Barnett, *Learning to Effect* (pp. 87-97). Buckingham: The Society for Research into Higher Education, Open University Press.
- Underhill, N. (2004, March). *The Delphi Technique*. Retrieved May 10, 2013, from British Council: www.britishcouncil.org/eltons-delphi-technique.pdf
- Universities UK. (2005). *Review of the Quality Assurance Framework: Phase one outcomes*. Universities UK.
- Universities UK. (2009). *Changing Landscape: Future Scenarios for Variable Tuition Fees*. Universities UK.
- Universities, U. (2011). *Response to the Higher Education White Paper*. London: Universities UK.
- Wacquant, L. (2008). Pierre Bourdieu. In R. Stories, *Key Sociological Thinkers* (pp. 261-277). Macmillan.
- Wenger- Trayner, E. (2007). *Communities of Practice: a brief introduction*. Retrieved June 14, 2014, from Communities of Parctice: <http://www.wenger-tryner.com>
- Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. . Cambridge: Cambridge University Press.
- Westcott, T., & Burnside, K. (2006). Part time education for property and construction surveyors. *COBRA*. London: RICS.
- Westwood, A. (2013, July 4). Human capital devaluation. *Times Higher Education*, p. 28.
- Wiener, B., Chacko, S., Brown, T., Cron, S., & Cohen, M. (2009). Delphi survey of research priorities. *Journal of Nursing Management*, 16, 532-538.
- Wilkie, R., & Giddings, R. (2003). *The Way Forward for Higher Education in Construction*. Ascot: The Chartered Institute of Building.

- Willets, D. (2011, June 28). *Higher Education Statement 28 June 2011*. Retrieved July 17, 2011, from House of Commons: <http://nds.coi.gov.uk>
- Williams, J. (2009). *The political construction of social inclusion through further education policy (1997-2007)*. Kent: University of Canterbury.
- Winch, G. (2004). Managing Project Stakeholders. In P. Morris, & J. Pinto, *The Wiley guide to managing projects* (pp. 321-339). John Wiley & sons.
- Winch, G. (2010). *Managing Construction Projects*. Chichester: Wiley-Blackwell.
- Wolfery, J. (2000). In perspective: Pierre Bourdieu. *International Socialism Journal*(87).
- Wolstenholme, C. (2008). Experience of completing a PhD: a student's perspective. *Support for Learning*, 23(4), 208-211.
- Yin, R. (2011). *Qualitative Research from Start to Finish*. London: The Guildford Press.
- Young, B. (n.d.). State and market in British University history. In S. Collini, & R. Whatmore, *Economy, Polity and Society British Intellectual History 1750-1950* (pp. 224-242).
- Young, M., & Muller, J. (2014). *Knowledge, Expertise and the Professions*. Abingdon: Routledge

8 APPENDIX

	Page	
A	Introduction to Interviews	263
B	Interview Sample Details	267
C	Delphi Round 1 Documentation	268
D	Delphi Round 2 Documentation	272
E	A Framework of Questions to be Asked of Research – Rees 2003 adapted	282
F	Interview A6 2013	283
G	Interview A5 2013	285
H	Interview A3 2013	293
I	Interview A4 2013	295
J	Interview A1 2013	304
K	Interview A2 2013	311
L	Interview I3 2013	314
M	A framework adapted to situate the analysis review of this research – Wei and Fine (2000)	318
N	Interview I2 2013	319
O	Interview I1 2013	324
P	Interview P1 2013	329
Q	RICS Memo 2013	335
R	Delphi Techniques Flow Chart	337

Appendix A– Introduction to Interviews

Annex1: Letter of introduction to members of the sample

Annex2:Participant information sheet

Annex 3: Participantconsent form

Annex1: Letter of introduction to members of the sample

Address: insert

School of Architecture and Construction
Avery Hill Campus
Mansion Site,
Bexley Road, Eltham
London SE9 2PQ
Telephone: +44(0)208 331 8058

Date

Dearinsert

Re: Request for research interview

I am currently undertaking a Doctorate in Education at the University of Greenwich and have commenced the thesis stage. The aim of my study is to seek, propose and evaluate future strategies for the provision of professional education reflecting changes implemented by the Education White paper 2011.

Therefore, I would ask that you spare me 40 minutes of your time to discuss your views on the two main questions:

9. What is the potential impact of the Government's white paper on the provision of construction education?
10. How will the construction industry sector key stakeholders react to the changes introduced by the Government's White Paper 2011 particularly with respect to the education and training of the professional quantity surveyor?

I am grateful of interest in my research and will treat all the information that you give in a confidential manner.

Please do contact me, at the above address.

Yours sincerely

Yvonne Simpson

Senior Lecturer

Annex2:Participant information sheet

The potential impact of Educational White Paper 2011 on higher education and professional construction education, and more specifically professional quantity surveying in England.

Review the impact of the white paper on professional undergraduate education provision using quantity surveying as an exemplar.

You have been invited to take part in a research project that seeks to propose and evaluate future strategies for the provision of professional education reflecting changes implemented by the Education White paper 2011.

The two questions you will be asked to consider are:

1. What is the potential impact of the Government's white paper on the provision of construction education? (KQ1)

2. How will the construction industry sector key stakeholders react to the changes introduced by the Government's White Paper 2011 particularly with respect to the education and training of the professional quantity surveyor? (KQ2)

You would be invited to give your views on the above questions through an interview of approximately 40 minutes, after which you may be invited to further discuss the findings. Please note you are able to withdraw from this process when you wish.

The outcome of the study is to develop an understanding of the resulting changes to the provision of undergraduate professional education in England, its curriculum, the types of demand and patterns of these demands, enabling programmes to be structured to accommodate professional education as a result of implementation of the White paper 2011 recommendations. This will be set in the context of the overall professional formation of professional quantity surveyors in England.

The information that is collected from those taking part in the research project will be completely anonymous and remains confidential at all times. The data will be stored on computer and held securely by the researcher for one year after the study is complete. It will then be destroyed. You should be aware that a report of the findings from the study may be published in future.

The research is being supervised by William Goddard and Prof Andrew Lambirth at the University of Greenwich, who may be contacted at the address or telephone number below.

William Goddard and Prof Andrew Lambirth

Avery Hill Campus
Mansion Site,
Bexley Road, Eltham
London SE9 2PQ

Telephone: +44(0)208 331 9519/9504

Annex 3: Participant consent form

You have been invited to take part in a research project that seeks to propose and evaluate future strategies for the provision of professional education reflecting changes implemented by the Education White paper 2011.

Title of Research: The potential impact of Educational White paper 2011 on higher education and professional construction education, and more specifically professional quantity surveying in England.

Investigator's name: Yvonne Simpson
--

To be completed by the participant

- | |
|---|
| <ol style="list-style-type: none"> 1. I have read the information sheet about this study Y/N 2. I have had an opportunity to ask questions and discuss this study Y/N 3. I have received satisfactory answers to all my questions Y/N 4. I have received enough information about this study Y/N 5. I understand that I am free to withdraw from this study: Y/N <ul style="list-style-type: none"> • At any time • Without giving a reason for withdrawing |
|---|

6. I agree to take part in this study Y/N	
Signed	Date
Name in block letters	
Signature of investigator	
Date	

This Project is Supervised by: William Goddard and Professor Andrew Lambirth
Contact Details (including telephone number and email address): William Goddard: Phone: 020 8331 9504 Email: w.d.goddard@gre.ac.uk Professor Andrew Lambirth: Phone: 020 8331 9519 Email: A.Lambirth@gre.ac.uk University of Greenwich, Mansion Site, Bexley Road, Eltham, London, SE9 2PQ

Appendix B– Interview Sample Details

Sample information criterion=	9	Interviews
Gender: Male		7
Female		2
Qualifications: undergraduate degree		9
Masters		9
Chartered		8
PhD		4
Years in work:	10	0
	20	1
	30+	8
Employment status:	Industry	3
	Academia	4
	Other roles	2
Job titles:	Vice-Chancellor	1
	Dean	3
	Director	4
	Governor at university level	1
Professional sector:	Surveyor	7
	Non-surveyors	2

Appendix C– Delphi Round 1 Documentation

Dear

I hope this finds you well. I have now completed the interview analysis stage to the point that I can proceed to the next stage of the Delphi technique. Within this technique, there have been a number of industry and academic experts of similar standing, whose opinion has been sought and have agreed to partake in the process. This is the stage which I have reached at present. For this stage of my research, a set of questions have been generated from my analysis of the interviews. This phase takes the form of a questionnaire to give a quantitative approach to the qualitative data collected so far. I am hoping that this process will take one more round after this one. I felt that you may like an indication of the outcomes and the rationale for the questions. I have coded the interviews using a PESTLE framework and then found through thematic analysis a number of issues that fall outside of my listings. As the Delphi technique is ideal for arriving at consensus on future trends this is reason for it to be employed around the enclosed questionnaire. A ranking approach is enlisted to the topics, 11 questions in total. There were, however 4 questions which were raised which were fundamental but which of course did not fit into any ranking or either of my key questions. I have separated these out into two sections. The first section A reflects the 4 questions which arose from the interviews. These were then formulated as statements to enable a Likert scale to be employed here. Section B has taken the form of questions which require to be ranked against the others pertinent to that question. I have chosen to send the questionnaire by email and in word format for you to add your comments as you wish. The ranking I have adopted is numerical with 1 being the most important. Feel free to expand on your replies and make any comments you feel pertinent. I am most grateful that you have agreed to give me your time. I would expect the questionnaire to take about 15 minutes. I anticipate that this Delphi exercise take the form of 2 phases, this and one more, I do hope you would agree to undertake the next round too. If you have any queries please do contact me. I would appreciate that the responses to be emailed to me at [\[redacted\]](#) by the 20th September 2013. I will then be able to feedback the findings to you. The contact details for my supervisors are:

William Goddard and Prof Andrew
Lambirth
Avery Hill Campus
Mansion Site,
Bexley Road, Eltham
London SE9 2PQ
Telephone: +44(0)208 331 9519/8058

I can be contacted on the above email or skype yvonne.simpson41 in the coming 3 months, as I will be working out of the Universidad Complutense de Madrid until Christmas.

Kindest regards

Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich

The purpose of this exercise is to address the following Key Question 2 (KQ2) and arrive at a consensus.

How will the construction industry sector key stakeholders react to the changes introduced by the Government's White Paper 2011 particularly with respect to the education and training of the professional quantity surveyor? (KQ2)

The questionnaire will be formed of two parts A and B.

Part A

These points were raised by some participants but fall outside of the above KQ2.

Answers to statements posed in part A will take the form of a Likert scale 1 -7, with 1 the highest ranking descending to 7 as the lowest.

1	There a role for professional (vocational) education?	1 2 3 4 5
6 7		
2	Professional education is provided to the required academic standards?	1 2 3 4 5
6 7		
3	The provision of professional education needs to change to meet future demands?	1 2 3 4 5
6 7		
4	Societal recognition an issue in professional education?	1 2 3 4 5
6 7		

Part B

The questions set in this section were found in the general views of the interview participants and informed by the critical literature.

Please rank the answer statement to each other within the following questions, where 1 is the most important.

1	What is the future purpose of professional education?	
	To improve professional education	1 2 3 4 5
	To improve vocational employment	1 2 3 4 5
	To improve general employment	1 2 3 4 5
	To improve society	1 2 3 4 5
	Other(please state)	1 2 3 4 5
2	Who will provide future professional education ?	
	Higher Education institutions (universities)	1 2 3 4 5
6		
	Further Education institutions (FE colleges)	1 2 3 4 5
6		
	Professional institutions	1 2 3 4 5
6		
	Workplace	1 2 3 4 5
6		
	Private providers	1 2 3 4 5
6		
	Other(please state)	1 2 3 4 5
6		
3	How will the provision of professional education be offered?	
	Apprenticeships	1 2 3 4 5 6 7 8 9 10 11
	Internships	1 2 3 4 5 6 7 8 9 10 11

National vocational qualifications	1 2 3 4 5 6 7 8 9 10 11
BTEC	1 2 3 4 5 6 7 8 9 10 11
Higher National Certificate/Diploma	1 2 3 4 5 6 7 8 9 10 11
Undergraduate degree	1 2 3 4 5 6 7 8 9 10 11
Postgraduate degree	1 2 3 4 5 6 7 8 9 10 11
Chartership	1 2 3 4 5 6 7 8 9 10 11
Professional body recognition	1 2 3 4 5 6 7 8 9 10 11
Employers	1 2 3 4 5 6 7 8 9 10 11
Other (please state)	1 2 3 4 5 6 7 8 9 10 11

4 How will this professional education be funded in the future?

Government	1 2 3 4 5
Industry	1 2 3 4 5
Employers	1 2 3 4 5
Individual	1 2 3 4 5
Other (give example)	1 2 3 4 5

5 Who are the future stakeholders of professional education?

Society	1 2 3 4 5
6 7	
Government	1 2 3 4 5
6 7	
Industry	1 2 3 4 5
6 7	
Individual	1 2 3 4 5
6 7	
Professional institution	1 2 3 4 5
6 7	
Academic institution	1 2 3 4 5
6 7	
Other(please state)	1 2 3 4 5
6 7	

6 How will the future provision of professional education be facilitated?

Face to face(coaching/mentoring /lectures/seminars)	1 2 3 4 5
E-learning	1 2 3 4 5
In workplace	1 2 3 4 5
Mixed styles	1 2 3 4 5
Other(please state)	1 2 3 4 5

7 How will the future value of professional education be measured by quantity surveyingprofessionals?

Safety to practice	1 2 3 4 5 6 7 8
Expert practitioner	1 2 3 4 5 6 7 8
Professional standards	1 2 3 4 5 6 7 8
Knowledge base	1 2 3 4 5 6 7 8
Skill set	1 2 3 4 5 6 7 8
Duty of care	1 2 3 4 5 6 7 8

Competencies	1 2 3 4 5 6 7 8
Other(please state)	1 2 3 4 5 6 7 8

8 How will the future professional education be recognised by quantity surveying professionals?

Employment	1 2 3 4 5 6 7
Salary	1 2 3 4 5 6 7
Professional regulation	1 2 3 4 5 6 7
Status	1 2 3 4 5 6 7
Awards	1 2 3 4 5 6 7
Lifestyle	1 2 3 4 5 6 7
Other(please state)	1 2 3 4 5 6 7

9 What is the future importance to society of professional education?

Extraordinary knowledge (Schön)	1 2 3 4 5 6 7 8
Expertise (Tacit)	1 2 3 4 5 6 7 8
Duty of care (legal)	1 2 3 4 5 6 7 8
Technical rationality (application of scientific theory and techniques)	1 2 3 4 5 6 7 8
Hard knowledge(technical)	1 2 3 4 5 6 7 8
Soft knowledge (intuition)	1 2 3 4 5 6 7 8
Competence (institutional prescribed)	1 2 3 4 5 6 7 8
Other(please state)	1 2 3 4 5 6 7 8

10 Which skills sets which need to be embedded in future professional education?

Soft	1 2 3 4 5 6 7
Hard	1 2 3 4 5 6 7
Innate	1 2 3 4 5 6 7
Tacit	1 2 3 4 5 6 7
Implicit	1 2 3 4 5 6 7
Collaborative	1 2 3 4 5 6 7
Other(please state)	1 2 3 4 5 6 7

11 Will professional education promote extraordinary knowledge (Schön) through?

General knowledge	1 2 3 4 5 6 7 8
Technical knowledge	1 2 3 4 5 6 7 8
Implicit knowledge	1 2 3 4 5 6 7 8
Behavioural skills	1 2 3 4 5 6 7 8
Technical skills	1 2 3 4 5 6 7 8
Personal skill	1 2 3 4 5 6 7 8
Competencies	1 2 3 4 5 6 7 8
Other(please state)	1 2 3 4 5 6 7 8

Thank you very much for answering the questionnaire.

Appendix D– Delphi Round 2 Documentation

Dear

Thank you for returning the first set of questionnaires. I have set about some analysis of the findings mainly a weighted average – called Average Index Analysis and a standard deviation calculation, the results are attached for your information in Section B, also your original selection in Section C(Section C is now attached as a file to the email).

Mostly the statement and questions were agreed, with regards to ranking the questions. I am aiming to achieve consensus and working towards 70% agreement.

In this next and final stage I would ask you to revisit the enclosed Stage 3 questionnaire found in **Section A** and based upon the reported group results , decide if you would be prepared to change your choice in those items given the latest comments and results from the group.

The first Part A reflects the 4 questions which arose from the interviews. These were then formulated as statements to enable a Likert scale to be employed here; Part B has taken the form of questions which require to be ranked against the others pertinent to that question.

I have again used a word document to enable comments to be made. This seemed to work very well in the previous round and I hope was not difficult for you. The ranking I have adopted is numerical with 1 being the most important. Feel free to expand on your replies and make any comments you feel pertinent.

I am most grateful that you have agreed to give me your time. Based on the feedback from the last round I would expect the questionnaire to take about 30 minutes. If you have any queries please do contact me.

I would appreciate that the responses to be emailed to me at **[redacted]** by the 30th November 2013. I will then be able to feedback the findings to you. The contact details for my supervisors are:

William Goddard and Prof Andrew Lambirth

Avery Hill Campus
Mansion Site,
Bexley Road, Eltham
London SE9 2PQ
Telephone: +44(0)208 331 9519/8058

I can be contacted on the above email or skype yvonne.simpson41 in the coming month, as I am working out of the Universidad Complutense de Madrid until Christmas.

Kindest regards

Yvonne

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich

Section A

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

The purpose of this exercise is to address the following Key Question 2 (KQ2) and arrive at a consensus.

How will the construction industry sector key stakeholders react to the changes introduced by the Government's White Paper 2011 particularly with respect to the education and training of the professional quantity surveyor? (KQ2)

The questionnaire will be formed of two parts A and B.

Part A

These points were raised by some participants but fall outside of the above KQ2.

Answers to statements posed in part A will take the form of a Likert scale 1 -7, with 1 the highest ranking descending to 7 as the lowest.

1	There a role for professional (vocational) education?	1 2 3 4 5
6 7		
2	Professional education is provided to the required academic standards?	1 2 3 4 5
6 7		
3	The provision of professional education needs to change to meet future demands?	1 2 3 4 5
6 7		
4	Societal recognition an issue in professional education?	1 2 3 4 5
6 7		

Elaboration: the value society places on professional education, i.e. doctors, lawyers, surveyors.

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

Part B

The questions set in this section were found in the general views of the interview participants and informed by the critical literature.

Please rank the answer statement to each other within the following questions, where 1 is the most important.

1	What is the future purpose of professional education?	
	To improve professional education	1 2 3 4 5
	To improve vocational employment	1 2 3 4 5
	To improve general employment	1 2 3 4 5
	To improve society	1 2 3 4 5
	To develop a body of knowledge that develops to meet society's needs in the future(only by exposing standards to research and innovation will practice move on.)	1 2 3 4 5
2	Who will provide future professional education?	
	Higher Education institutions (universities)	1 2 3 4 5
6		
	Further Education institutions (FE colleges)	1 2 3 4 5
6		

	Professional institutions	1 2 3 4 5
6	Workplace	1 2 3 4 5
6	Private providers	1 2 3 4 5
6	HEIs and employers in collaboration	1 2 3 4 5
6		
2a	Who <i>should</i> provide future professional education?	
	Higher Education institutions (universities)	1 2 3 4 5
6	Further Education institutions (FE colleges)	1 2 3 4 5
6	Professional institutions	1 2 3 4 5
6	Workplace	1 2 3 4 5
6	Private providers	1 2 3 4 5
6	HEIs and employers in collaboration	1 2 3 4 5
6		

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

3	How will the provision of professional education be offered?	
	Apprenticeships	1 2 3 4 5 6 7 8 9 10 11
	Internships	1 2 3 4 5 6 7 8 9 10 11
	National Vocational Qualifications	1 2 3 4 5 6 7 8 9 10 11
	BTEC	1 2 3 4 5 6 7 8 9 10 11
	Higher National Certificate/Diploma	1 2 3 4 5 6 7 8 9 10 11
	Undergraduate degree	1 2 3 4 5 6 7 8 9 10 11
	Postgraduate degree	1 2 3 4 5 6 7 8 9 10 11
	Chartership	1 2 3 4 5 6 7 8 9 10 11
	Professional body recognition	1 2 3 4 5 6 7 8 9 10 11
	Employers	1 2 3 4 5 6 7 8 9 10 11
	HEIs working in collaboration with employers	1 2 3 4 5 6 7 8 9 10 11

4	How will this professional education be funded in the future?	
	Government	1 2 3 4 5
	Industry	1 2 3 4 5
	Employers	1 2 3 4 5
	Individual	1 2 3 4 5
	Mixture of all the above	1 2 3 4 5

Industry and employers are differentiated in this instance as; Industry is the Construction industry sector and can include with professional bodies, Training Boards and other interested parties. Employers can be directly linked to the person in employment.

5 Who are the future stakeholders of professional education?

	Society	1 2 3 4 5
6 7	Government	1 2 3 4 5
6 7	Industry	1 2 3 4 5
6 7	Individual	1 2 3 4 5
6 7	Professional institution	1 2 3 4 5
6 7	Academic institution	1 2 3 4 5

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

6 How will the future provision of professional education be facilitated?

	Face to face(coaching/mentoring /lectures/seminars)	1 2 3 4 5
	E-learning	1 2 3 4 5
	In workplace	1 2 3 4 5
	Mixed styles	1 2 3 4 5
	Mixture of all the above	1 2 3 4 5

7 How will the future value of professional education be measured by quantity surveying professionals?

	Safety to practice	1 2 3 4 5 6 7 8
	Expert practitioner	1 2 3 4 5 6 7 8
	Professional standards	1 2 3 4 5 6 7 8
	Knowledge base	1 2 3 4 5 6 7 8
	Skill set	1 2 3 4 5 6 7 8
	Duty of care	1 2 3 4 5 6 7 8
	Competencies	1 2 3 4 5 6 7 8
	Reputation	1 2 3 4 5 6 7 8
	Ability to work independently	1 2 3 4 5 6 7 8
	Ability to adapt	1 2 3 4 5 6 7 8
	Ability to learn and innovate	1 2 3 4 5 6 7 8

Comment: Competencies through the APC and Graduate Assessment centres

8 How will the future professional education be recognised by quantity surveying professionals?

	Employment	1 2 3 4 5 6 7
	Salary	1 2 3 4 5 6 7
	Professional regulation	1 2 3 4 5 6 7

Status	1 2 3 4 5 6 7
Awards	1 2 3 4 5 6 7
Lifestyle	1 2 3 4 5 6 7
International expansion	1 2 3 4 5 6 7
Comments: status seems anachronistic nowadays	

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

9 What is the future importance to society of professional education?	
Extraordinary knowledge (Schön)	1 2 3 4 5 6 7 8
Expertise (tacit)	1 2 3 4 5 6 7 8
Duty of care (legal)	1 2 3 4 5 6 7 8
Technical rationality (application of scientific theory and techniques)	1 2 3 4 5 6 7 8
Hard knowledge(technical)	1 2 3 4 5 6 7 8
Soft knowledge (intuition)	1 2 3 4 5 6 7 8
Competence (institutional prescribed)	1 2 3 4 5 6 7 8

10 Which skills sets which need to be embedded in future professional education?

Soft	1 2 3 4 5 6 7
Hard	1 2 3 4 5 6 7
Innate	1 2 3 4 5 6 7
Tacit	1 2 3 4 5 6 7
Implicit	1 2 3 4 5 6 7
Collaborative	1 2 3 4 5 6 7

Clarification: Innate– Learning by exposure to knowledge and processes
Tacit–Learning by doing
Implicit–Expected level of knowledge gained through experience

Delphi Techniques Round 3 of 3 Questionnaire
Yvonne Simpson University of Greenwich Section A

11 Will professional education promote extraordinary knowledge (Schön) through?	
General knowledge	1 2 3 4 5 6 7 8
Technical knowledge	1 2 3 4 5 6 7 8

Implicit knowledge	1 2 3 4 5 6 7 8
Behavioural skills	1 2 3 4 5 6 7 8
Technical skills	1 2 3 4 5 6 7 8
Personal skill	1 2 3 4 5 6 7 8
Competencies	1 2 3 4 5 6 7 8

Clarification:

General knowledge	basic building block of knowing on which to build understanding, comprehension, application(Bloom’s taxonomy)generalisteducation
Technical knowledge	Knowledge used by the professional for business
Implicit knowledge	Learnt through experience and of an expected level
Behavioural skills	Soft interpersonal skills such as collaboration andteamwork
Technical skills	Hard – technical skills, i.e. measurement, structural calculations
Personal skills	Soft – soft skills, i.e. self-reliance, time keeping, presentation
skills	Competencies measured technical abilities NVQs RICS usually measured in a tick box manner, i.e.can do/cannot do

Thank you very much for answering the questionnaire.

**Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich
Results – Section B**

The purpose of this exercise was to address the following Key Question 2 (KQ2) and arrive at a consensus. Here are the results from this round

How will the construction industry sector key stakeholders react to the changes introduced by the Government's White Paper 2011 particularly with respect to the education and training of the professional quantity surveyor? (KQ2)

The questionnaire was formed of two parts A and B.

Part A

These points were raised by some participants but fall outside of the above KQ2.

Answers to statements posed in part A took the form of a Likert scale 1 -7, with 1 the highest ranking descending to 7 as the lowest.

	Rank	Agreed/Not	AIA	St Dev
1 There a role for professional (vocational) education?	1	Agreed	6.50	0.92
2 Professional education is provided to the required academic standards?	2	Agreed	6.20	1.07
3 The provision of professional education needs to change to meet future demands?	3	Agreed	5.75	0.89
4 Societal recognition an issue in professional education?	4	Not Agreed	5.00	1.85

Comment: Statement 4 not clear

Part B

These are results to the questions that were set in this section B

	Rank	Agree/Not Agree	Av	St Dev
1 What is the future purpose of professional education?				
To improve professional education	1	Agreed	3.00	1.41
To improve vocational employment	2	Agreed	3.00	0.76
To improve general employment	3	Agreed	2.50	0.53
To improve society	4	Not Agreed	2.38	1.30

New Comment: To develop a body of knowledge that develops to meet society's needs in the future only by exposing standards to research and innovation will practice move on.

Vocational by the RICS, education always should change, society recognising diversity issues.

**Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich
Results – Section B**

	Rank	Agreed/Not Agreed	AI	St Dev
2 Who will provide future professional education?				
Higher Education institutions (universities)	1	Agreed	4.75	0.46
Further Education institutions (FE colleges)	2	Agreed	3.38	0.97

Professional institutions	4	Not Agreed	2.381.30
Workplace	3	Agreed	3.000.92
Private providers	5	Not Agreed	2.121.13

Comments: HEIs working in collaboration with employers

Answers would be different if the question was should provide.

3 How will the provision of professional education be offered?

Apprenticeships	4	Not Agreed	6.882.30
Internships	8	Agreed	4.502.62
National Vocational Qualifications	10	Agreed	5.501.66
BTEC	8	Agreed	4.752.31
Higher National Certificate/Diploma	6	Agreed	6.381.51
Undergraduate degree	1	Agreed	9.880.35
Postgraduate degree	2	Agreed	8.252.12
Chartership	4	Not Agreed	5.004.07
Professional body recognition	6	Agreed	4.883.64
Employers	3	Agreed	5.752.36

Comments: HEIs working in collaboration with employers

Colleges/universities are the best places to provide academic courses.

4 How will this professional education be funded in the future?

Government	4	Not Agreed	2.381.19
Industry	3	Agreed	3.000.92
Employers	2	Agreed	3.750.46
Individual	1	Agreed	4.880.35

Comments: mixture of all the above

Are Industry and Employers the same? Add clarification here:

Delphi Techniques Round 2 of 3 Questionnaire

Yvonne Simpson University of Greenwich

Results – Section B

	Rank	Agreed/Not Agreed	AIAS ^t
	Dev		
5 Who are the future stakeholders of professional education?			
Society	5	Not Agreed	4.382.26
Government	6	Agreed	4.381.92
Industry	1	Agreed	6.630.53
Individual	2	Agreed	6.500.76
Professional institution	4	Agreed	5.131.13
Academic institution	3	Agreed	5.001.19

Comment:

6 How will the future provision of professional education be facilitated?

Face to face (coaching/mentoring /lectures/seminars)	1	Agreed	3.500.53
E-learning	4	Agreed	2.881.36

In workplace	3	Agreed	2.880.83
Mixed styles	2	Agreed	4.000.00
Comment: mixture of the above			

7 How will the future value of professional education be measured by quantity surveying professionals?

Safety to practice	7	Agreed	4.001.31
Expert practitioner	6	Not Agreed	5.001.93
Professional standards	2	Agreed	6.251.83
Knowledge base	3	Agreed	5.881.88
Skill set	3	Agreed	6.001.60
Duty of care	5	Not Agreed	4.131.96
Competencies	1	Agreed	7.500.76

Comment: Reputation

Ability to work independently. Ability to adapt. Ability to learn and innovate.
Competencies through the APC and Graduate Assessment centres

Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich
Results – Section B

	Rank	Agreed/Not Agreed	AIAS _t Dev
8 How will the future professional education be recognised by quantity surveying professionals?			
Employment	1	Agreed	6.880.35
Salary	2	Agreed	6.380.74
Professional regulation	5	Not Agreed	4.122.23
Status	4	Agreed	5.000.92
Awards	6	Agreed	3.381.30
Life style	3	Agreed	5.121.55
Comments: International Expansion Status seems anachronistic nowadays			
9 What is the future importance to society of professional education?			
Extraordinary knowledge (Schön)	6	Not Agreed	4.502.51
Expertise (tacit)	1	Agreed	6.300.74
Duty of care (legal)	2	Agreed	5.501.93
Technical rationality (application of scientific theory and techniques)	7	Not Agreed	4.122.36
Hard knowledge (technical)	3	Agreed	5.501.31
Soft knowledge (intuition)	3	Agreed	4.882.10
Competence (institutional prescribed)	5	Not Agreed	4.622.33
10 Which skills sets which need to be embedded in future professional education?			
Soft	1	Agreed	5.131.13

Hard	2	Agreed	5.001.07
Innate	5	Not Agreed	2.572.07
Tacit	4	Not Agreed	3.281.70
Implicit	6	Not Agreed	3.711.25
Collaborative	3	Agreed	5.620.74

Comment: innate, tacit, implicit – terminology issue

**Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich
Results – Section B**

	Rank	Agreed/Not Agreed	AIASt
11Will professional education promote extraordinary knowledge (Schön) through ?			
General knowledge	7	Agreed	3.571.90
Technical knowledge	3	Agreed	5.571.72
Implicit knowledge	6	Agreed	4.431.40
Behavioural skills	5	Agreed	4.572.37
Technical skills	2	Agreed	5.711.50
Personal skill	3	Agreed	5.141.68
Competencies	1	Agreed	5.001.63

Comment: the headings need application to be clearer
Terminology issues

Overall Comments: What is the future?Duration of the forecast?
Increasingly employers willfund or part fund courses, government will increase reducing funding.
Apprenticeships will continue to rise, perhaps meaning less full time study.
Terminology is an issue. (with questionnaire I assume)

**Delphi Techniques Round 2 of 3 Questionnaire
Yvonne Simpson University of Greenwich
Your Previous Responses – Section C**

Appendix E –A Framework of Questions to be Asked of Research – Rees 2003 adopted

A Framework of Questions to be Asked of Research Evidence
Rees (2003)

Heading	Question to be asked
Focus	In broad terms what is the theme of the article? Is the title a good indicator of the focus?
Background	What argument or evidence does the researcher provide that suggests this topic is worth exploring? Is there a critical review of previous research on the subject? Are the gaps in the literature or inadequacies with previous methods highlighted? Are local problems or changes that justify the study presented? Is there a trigger that answers the question 'why did they do it then?'
Terms of reference	Does the researcher state the terms of reference; the aim or hypothesis? Are there concept and operational definitions for the key concepts?
Study design	What is the broad research approach? Is the study design appropriate to the terms of reference/hypothesis/research question? Have the strengths and weaknesses of the study design been highlighted?
Data collection methods	What tool of data collection has been used? Has a pilot study been conducted? Have strengths and limitations been recognised by the author?
Ethical considerations	Were the issues of informed consent and confidentiality addressed? Was any harm or discomfort to individuals balanced against benefits? Did a local ethics committee consider the study?
Sample	Who or what makes up the sample? Were there clear inclusion and exclusion criteria? What method of sampling was used? Are those in the sample typical and representative or are there any obvious elements of bias? On how many people/things/events are the results based?
Data presentation	In what form are the results presented? Does the author explain and comment on these? Can sense be made of the way the results have been presented or could the author have provided more explanation?
Main findings	What are the most important results that relate to the term of reference/hypothesis/research questions?
Conclusions and recommendations	What is the answer to the terms of reference/research questions? Are the conclusions made based on and supported by the results? What recommendations are made for practice? Are these relevant, feasible, and specific?
Readability	How easy is it to read? Is it written in a clear, interesting or 'heavy' style? Does it assume a great deal of technical knowledge about the subject and/or research procedures?
Practical implications	How could the results be related to practice? Who might find it relevant and in what way? What questions does it raise for practice and further study?

Rees C (2003) *An Introduction to Research in Midwifery*. 2nd Ed. Cheshire: Books for Midwives.

Appendix F–Interview A6 2013

Response 1 *“One of the things happening in Australia that SN was talking about, that AQF framework, that’s really quite problematic because although they’ve done like a national framework, if you like, each individual university is interpreting that differently. And I think you have to be AQF compliant by 2014. So what I want to do with developing these new programmes is I don’t want to be developing something now that’s not AQF compliant in 2014 in 2012. But the problem I have is nobody’s decided what this is going to look like from our institution.”*

Response 2 *“... but part of that course you have to demonstrate that you have done at least 100 days of work experience. You won’t get your degree unless you’ve demonstrated 100 days, and those 100 days are outside of University study.”*

Response 3 *“Yeah. I mean everybody ‘employment, employability, stats and stuff’, you know, I think the one at Uni SA, for examples, around 94/95 per cent employment. But a lot of that is associated with the 100 days that we do. You know, that’s like an extended interview for them anyway.”*

Response 4 *“So I do know this because I often do the open day talks, but our construction management in economics undergraduate degree has – I think it’s either eleven or thirteen accreditations. So that’s Australian Institute of Building Surveyors and Quantity Surveyors. We have RICS accreditation, we have CIOB accreditation, and then the other ones are all kind of like some kind of Hong Kong, Singapore, Institute of Surveyors and all that kind of - I’ve got a list I can print you off.”*

Response 5 *“Certainly I do know that if you go for the AIBS accreditation, for example, if you step off after three years you only get what’s called a level two accreditation, but if you stay for all four years then you get a level one which is the highest one you can get anyway, so/” and “Oh, ok, so level one is highest. Will that make a difference to the amount of money they can earn?”*

Yes, it does. If you are accredited as an AIBS building surveyor you can do the full range, but if you’ve only got level two then there’s only certain, you know, things you can do.” and “Reduced Scope.”

Response 6 *“The way their course works is that you do 4 years, and those 4 years are all taught. So you do programmes called Construction Management and Economics, and then in the final year you can either specialise in QS, BS, or CM.” and “its two common and you can leave after that with an associate degree.*

You can then do a third year, which is called a Batchelor degree. And then you can do four years which is the full honours.”

Response 7 *“... perspective – because there's something called the Open University in Australia, which is again like the OU example here in the UK. There are seven universities that own the Open University in Australia, and Uni SA is one of those. At the moment I'm writing 3D programmes for a particular mode. A massive programme.” and “I'll draw it. So basically we have this triangle of working. So here is the Programme Director level. So this here is the Programme Manager level. Then here is an OUA admin, and then here will be a UNI SA admin.” and “they manage a number of tutors. And each tutor gets around 50 students
maximum.”*

Appendix G – Interview A5 2013

Response 1 *“TEQSA...they have taken over everything. So they will regulate and accredit our research inputs, the quality of the provider, the qualifications framework which determines the level of award, academic standards.”*

Response 2 *“But there are other possibilities, there’s the kind of exit examination, a common exit exam which they use in the States. The Group of 8 have been promoting the idea that we can create a benchmark of academic standards by looking at honours thesis, comparing and addressing honours thesis. Four or five role kind of models that are being promoted.”*

Response 3 *“You know, in Australia there’s 38, I think, Unis. There are the group of 8 who are the top research intensive universities.”*

Response 4 *“But the Government have said ‘oh no, we’re open to any number now’, because they want to increase the number of school leavers going in, or the number of people with degrees to a huge percentage. There was a recent review, the Bradley Review and Bronksi, and they’re all saying, you know, get more and more through. So the Government have got this policy which says, you know, they want – I think there’s about 35 per cent increase in the number of student studying.”*

Response 5 *“... it’s not the dollars, you know, the issue is that if they don’t get the work experience then they won’t get employed.”*

Response 6 *“... in that in our programme 30 per cent of first years now are employed already in the industry, and 90 per cent of the final year would be working full time.” and the students prioritise “we’ve had colleagues doing studies that show explicitly the anecdotal understanding that students prioritise work.”*

Response 7 *“I don’t know. I’m pretty sure it’s been since I’ve been here, which I went here in ‘87/’88, and I’m sure it came in since then.”*

Response 8 *“HECS and that accounts for about 30 per cent of our income. The rest of it comes from full fee students and research and donations and other sources.” And “No, I think the income per building student is the same for every institution. They’re the same, so there’s no differentiation in –no sort of banding.”*

Response 9 *“So what happens to the teaching within those different contexts depends on the university that you’re in. So my university is a research intensive and it will always have a particular view about what it’s doing with its students and it will always attract the better students, it will generate the most international income.”*

Response 10 *“...you can’t get an appointment at any level without a PhD. Typically that means they come and have very limited industry experience, and that flavours the kind of education programme we can run... However, there aren’t many people doing research in our field with practical experience anymore.”*

Response 11 *“You know, a lot of it, I think, is being the industry have kind of required degrees because they want the status that a degree brings them. But you look at the big contractors in Sydney and Australia now and they’ve got enough credibility now, they don’t need to, you know, they could easily do the – it’s a bit like this revision thing – they can do the bachelor kind of level of education themselves now, I think. And so we would have to then go in to kind of the Masters level relationship with the industry as well.”*

Response 12 *“But why would you bother putting them through a university? I mean the whole rationale for our programmes is starting to dry up as well.”*

Response 13 *“... it’s not the dollars, you know, the issue is that if they don’t get the work experience then they won’t get employed”.*

Response 14 *“First of all, there is no accreditation of academic standards by the Government. Different discipline areas, some discipline areas such as construction or architecture or law or medicine, have professional accreditation requirements. And those that don’t have professional accreditation requirements have to demonstrate to their institution that they’re meeting particular standards by comparisons with other providers, you know, the other equivalent kind of university programmes in their field.”*

Response 15 *“And students, you know, in surveys, everything confirms that their priority is their work. You know, they have to do their work and that puts the pressure on them. So*

it's bad in that sense but, you know, I'm a great believer in experiential learning and, you know, the ability to take what their learning in class and test it on site and that they bring the site experience back in to class and test the theories and ideas, it is essential."

Response 16 *"At the moment we get accredited by professional bodies. We would have 7 professional bodies that accredit our programme because of our focus And they all have their own different requirement, and one of the hopes for the Government paying more attention to the learning outcomes is that the professional bodies will move out of that space and focus on being the gatekeeper to professional practice rather than gatekeeper to industry practice."*

Response 17 *"That is good. So the other issue was the accreditation thing and what happens at the moment. At the moment we get accredited by professional bodies. We would have 7 professional bodies that accredit our programme because of our focus And they all have their own different requirement, and one of the hopes for the Government paying more attention to the learning outcomes is that the professional bodies will move out of that space and focus on being the gatekeeper to professional practice rather than gatekeeper to industry practice."*

Response 18 *"But if TEQSA come in and take on that responsibility then I think that will be a very strong argument in for the professional bodies to get out of the space and just UNCLEAR 35:26 continuing professional development to professional practice space. Which is where they should be, but there isn't much money in it. Well there is actually money in it. We've got a professional body who has just set up to run CPD training, Organisation College of building, and they're offering CPD as part of their chartered membership process. So, you know, they see that as a big income stream for them/ Which, you know, it will be nice because then they'll get off our backs."*

Response 19 *"Well, the threshold learning outcomes are different to the QA and I think the Australian Government learnt from some of the concerns about QS and that approach."*

Response 20 *"It's a four year programme, they have to complete in 10 years."*

Response 21 *“But the professional bodies and the industry say that they’re not suitable to be employed as accountants, and so the Government has to increase the quota of programmes they offer in accountancy. And there’s been this kind of vicious circle and a lot of money made on the back of students who don’t get work in accountancy, and so the Government and industry are now, you know – I’m using accountancy as an example because it’s an extreme example, but, you know, in construction also there’s an opinion expressed that the graduates aren’t, you know, what they used to be, or that the standard isn’t, you know, they’re not the students that we want, they’re not kind of ‘work ready’/ And they should be/And so the Government want to be able to find some kind of matrix or some kind of evaluation standards framework that will allow them to confirm that in fact the graduates from that particular programme are indeed suitable or satisfactory for what the expectations of the graduate from that programme should be. And so TEQSA, which is the new body which has been established.”*

Response 22 *“And scalability of education has become a big thing. Well, can we triple the intake here? Well you do your online stuff, and it doesn’t matter how many people take it, you know, it’s just a couple of extra tutors/ Once you’ve got all the material and all the curriculum developed/ It doesn’t matter whether you’ve got a thousand in there or hundreds, you know, very small increase but you’re getting the same amount for additional students.”*

Response 23 *“It cost us about – well they said it cost us about 60 million dollars, but it cost a lot more than that. But, yeah, they pulled the plug. I mean set it all up and, you know, planned to move us all up there, but they pulled the plug, and that’s Australia and Singapore, so Reading and Malaysia you think ‘oh’. No, it is a long way.”*

Response 24 *“Yes, I think its becoming much more global this whole competition of education, which could have some good points, but it loses it if it doesn’t actually develop.”*

Response 25 *“That’s good. One of the things I would think students – I’m not sure how it’s happened, but are they more, not only demanding on their own, are they more watching what other students are doing? Do they police how evenly these rules and regulations are applied, do you think? They’re well networked.” And “They’re well aware*

of what's on, you know, the particular staff, the particular students, you know, and anecdotally what you hear would make your toes curl about what goes on. So they are well networked and aware of what's happening, certainly more than – and I would imagine they're so clued up as to what they can and can't do.”

Response 26 *“But essentially, you know, there isn't a full time/part time distinction. But most of our students would study enough courses to be full time, but they'll also be working. They'd all be full time. Full time and part time isn't differentiated within Australia the way it is here, so students are still enrolled in our – we're a full time programme. Students are still enrolled and progress even if they only take a quarter or in fact an eighth of the full time requirement. But essentially, you know, there isn't a full time/part time distinction. But most of our students would study enough courses to be full time, but they'll also be working.”*

Response 27 *“We're unable to appoint, you know, we've just gone through several rounds of appointments processes. We've been unable to appoint staff because the level of appointment they're able to achieve at other institutions is higher. And at the moment the differences between institutions are not so great that you wouldn't take the higher employment there. I think those differentiations will increase and it will mean we'll be able to attract the sort of staff we want at the level that we want to appoint them. And that will mean we can get away from the data generators and start including some people with some kind of good old experience. However, there aren't many people doing research in or field with practical experience anymore. So whether it's all come too late, I don't know. We are not able to sustain a credible construction management programme with only research intensive staff. There are still those of us who have kind of work experience, but how we would place those staff when they leave or they retire, I don't know. Yeah. Demographics are going to hit us all, I think. Well, as I say, it hits us early because we're not allowed to employ industry people, we're only allowed to employ, you know, the hot researchers.”*

Response 28 *“So, you know, it's a real problem. So that's an issue. The other issue in Australia for us is that there's always been a very strong separation between architecture and construction and engineering, and there's a strong move now towards integrated programmes and combined/*

And singular architecture umbrellas that would kind o soak up the construction. And engineering, civil engineers now areas often as we would be to work in construction companies because construction companies do as much rail and transport as they do houses. And so we're now in competition with the building across them all because our civil engineering school offer construction management, you know, undergraduate course, postgraduate, so all the civil engineering programmes are now seeing this as a huge growth area for them. Engineering has been kind of a difficult demographic to attract. Construction management is a fantastic way of sucking them in, so they're all on a growth profile, and engineering has a credibility that we don't have. Fortunately, thankfully, they also require them to do a lot of maths and so/. It's kind of reflected in the way the industry is going, but it means that the differences between these disciplines, or these areas, are blurring aswell. That's the way the industry is going, you know, there isn't that strong differentiation anymore."

Response 29 *"And so we've already seen that kind of merging of the property development with the building and the quantity surveying with building, and I can see that that's going to be a problem for us going forward. Where we sit in Australia, I don't think there is a typical faculty context for building now, so they're in engineering, they're in management, they're in built environment/. They're in business, you know, they're in a whole raft of different faculty context now.Or you get the big mega faculties and they go with the, you know, established names/Built environment is an established name, building certainly isn't. I mean we were amazed that we got a discipline level, you know, and the building and construction is one of those broad discipline areas."*

Response 30 *"Our university gets more research income then all the other universities put together, bar three. That's all of them combined put in a total don't get what we get. The top 4 make 85% of their research, you know, that huge proportion – I don't know what the actual thing is – but a huge proportion of the research income is across all 5 universities. And that means we're in a pretty privileged position already/ And I think that difference has been kind of – they've tried to ignore it, or they've tried to pretend it didn't exist, but I think it's going to come back and there will be a more recognised and regulated fragmentation of the sector again. So there will be, you know, the crowd pleasing teaching institutions and they'll be the, you know, the international research intensive universities. So what happens to the teaching within those different contexts*

depends on the university that you're in. So my university is a research intensive and it will always have a particular view about what it's doing with its students and it will always attract the better students, it will generate the most international income."

Response 31 *"And so we would have to then go in to kind of the Masters level relationship with the industry as well/ Undergraduate kind of market may dry up. Which is just, you know, it's a continuingly crippling effect on the lower universities, because whatever happens they just kind of keep their head above it and keep breathing and they're getting/ Harder, so they'll be some fall out. So the sector is going to shrink a lot, and they're the ones that will go. And we're not, you know, we're not danger, but there's going to be a lot of blood on the floor before we would."*

Response 32 *"And I think, you know, all of the – in RMIT – they're now what they call a dual sector, so they're a university but they've also got tertiary sector in further education sector. There's higher ed and there's tertiary and further ed, the kind of trades and stuff. RMIT now are a dual sector, they've got a foot in each of those camps/And they've got a huge pipeline of students coming from trade through in to their degrees. They've got massive numbers coming through their degree programmes."*

Response 33 *"And where do they go? They're all going to these lesser universities because the top universities have just, you know, take the cream. That's going to have a real impact on the aspect of fees and the structuring means that those institutions become real factories, you know, they're taught by staff who are, you know, the majority – and I've been around them all – the majority of them are just recent immigrants from overseas and they don't really understand the Australian context of what they're doing. And the quality of the graduate outcomes is going to be a real test, and that's why the academic standards are so important."*

Response 34 *"With construction. 7 universities in the immediate area of Sydney. Sydney Uni is the group 8 but it doesn't have the construction. It offers civil engineering in construction management, but it's a small kind of demographic programme. UNSW is a Group of 8 and we have an intake of about 100, grown from an intake of 75 in 2005 when I was there to 100 now. We are having to reign it back to 100 because they overshot. UTS would take about 100, and they're the second kind of level university. And then Newcastle*

Wollong doesn't take any. And then Newcastle and UWS, Newcastle's a longer term established university, UWS is the latest intake, but their numbers have tripled. So they're taking intakes of 240 now. All within the Sydney area."

Appendix G – Interview A3 2013

Response 1 “... it goes back to what the fundamental reason for universities is, which is to expand knowledge and to create citizens who can contribute to the cultural and economic wellbeing of society.” and “ but universities aren’t about training, they’re more about education and looking after the whole intellect of somebody it is not just our area which is focused.” and “And we’ve had them saying ‘well, you know, when you pass your driving test it’s not a test of competence, it’s a test of safety, and you actually develop competence once you start practicing after period of training’. And I think we agreed to differ at the end of that meeting and may have ended up muttering ‘yes, ok, we see you’ve got a point’, and we end up saying ‘well, you know, if only they would just be a bit more patient and perhaps recognise that its people they’re dealing with’. So, have we seen a shift to more technocratic education, which is your argument. I think in our university, no really.”

Response 2 “And I think there’s a communication issue for universities to communicate with the students about ‘the reason you are doing this is because your education is unique. The reason that’s in there is because, you know, we have got this ethos of education which is different to training institutions’. So I don’t think universities should be shifting their central philosophy. I think we need to communicate it more effectively to the students.”

Response 3 “So I think they will probably go for more vocational types of degree in the future because they’re looking to verify it, by all accounts, to make sure they get a job to pay off this enormous loan at the end of their 3 years.” and “And our mission is widening access , this group of students with poor A levels but gain good degrees, fantastic jobs, at the end of it.”

Response 4 “... think they need to communicate their positions with the students what they’re doing to produce graduates who have got technical skills, but those who have got thinking skills as well.”

Response 5 “... look back over the last sort of 30 years when I started studying in 1968/1970, so we haven’t been around that long. And when they first started they had lots of social science, philosophy, theory, quantitative, qualitative and cultural studies. And I think that gave me a richer education which had some longevity to it, you know, it wasn’t too short term.”

Response 6 “So we might see a divide between non-vocational pure programmes: geography, history, modern languages, and so on in the older universities, and the newer universities dealing with the technical education, which is where they were pre ’92.” and

“No, I think principally old universities have got a good traditional of architecture, history, geography, physics, they do medicine and allied degrees that go along with medicine. So I think we’re going to see a bifurcation of old universities who maintain their position in the top 50 because they’ve got those strong subject areas.”

Response 7 *“... there are lots of training institutions out there which train people to work quicker, to write quicker, to learn from managers and so on,” and “ We’ve tried to resist the training route, but we do have to be industry engaged, but not industry led.”*

Response 8 *“... to create citizens who can contribute to the cultural and economic wellbeing of society.” and “they’re more about education and looking after the whole intellect of somebody it is not just our area which is focused.” and “So I don’ t think universities should be shifting their central philosophy. I think we need to communicate it more effectively to the students.” and “‘the reason you are doing this is because your education is unique’” and “we’re going to be. There’s a big debate about that at the moment. I think we’ve already seen a move away from non-vocational programmes. We’ve closed down modern languages, any programme which you might see as performing badly.
“*

Response 9 *“... size of the university” and “under 6,000 students at the moment, and we need to reconfigure our physical resources for the next 10 years. And we need to decide.”*

Response 10 *“And universities are really going to have to get their act together to get their vocational programmes, the quality of their vocational programmes, increased.”*

Appendix I – Interview A4 2013

Response 1 *“Well, this is a very interesting time period in higher education in general as well. So the whole landscape is at a volatile stage. Everything is changing. And I think all universities are undergoing some kind of change within the universities itself. The funding structure basically triggered this whole process, so we can say we’re trying to implement the Browne Report triggered this whole process of change which is now happening right throughout the university systems.”*

Response 2 *“We hardly teach construction technology now, it is just a couple of slides. We are teaching technology through pictures and slides, that’s all. There’s no hand-on, there’s no drawing. They don’t know how to draw so they don’t know how to interpret a drawing.” and “These are basic things that we were taught, that we learnt when we studied, which therefore we are very comfortable with reading drawings and scales, no problem for us. But our students nowadays can’t understand scaled.” and “So this is the situation we are face with when we cut down the contact time resulting in only bare minimum contact time was allocated. And then on top of that we started introducing more advanced level concepts at undergraduate level. So, what happened was, these advanced level concepts were introduced at undergraduate level means that there was no really postgraduate education. Even what is taught in project management Masters are now taught in undergraduate programmes.” and “We can justify it and saying there were level five learning outcomes which we twist and turn to level 5 and then add Masters level, hardly anything to teach. Actually, those specialised subject should be at the Masters level.” and “And then that is how the specialisation happens. Even in the industry other graduates when they qualify and go they are not doing Value Management they are not doing Risk Management, they are doing basic measurements and dealing with contractors and contract conditions and so on, the more grass route things. And only when they become senior people in their company that they are involved in other advanced things. Why are we not catering for that? In the education system unfortunately we are not doing it. We are doing it in a very fanciful way, in a different way.” and “That is the whole point, we are not thinking in a systematic manner.” and “And when they go out they are in the design office grappling with the day-to-day drawings and creating the designs and so on, and the design calculations. Only when they become senior in the companies they go in to the management. And that is when they do a Masters programme when they want to get the promotion and when they are in the right level of maturity, they go on to do the*

Masters programmes” and “And to give it to those we are pushing down the basics, so technology is pushed down and diluted, if not, and then contracts are minimised as much as possible, and our basic understanding of measurement related topics, estimating, cost planning – how much do we teach cost planning? Very small quantity.” and “its whole role of the quantity surveyor is developed around cost planning.”

Response 3 *“But recently, I think last year or the year before, they abolished this 280 threshold, and we are no longer bound to pick anybody at 280 intake points. It has a result – not as a result actually – so these things all act unfortunately together.” and “RICS is now promoting is the AssocRICS.” and “The Assoc RICS route was introduced. Now that means - Assoc RICS is the shortened form for Associate RICS – so that route means that people don’t have to have RICS accredited degree.”and “He can do that, and then go through that way, within about 5 to 6 years’ time I will be able to get my chartered. Now, I don’t have to go to university at all, but I might do ad-hoc short courses to fast track the route.” and “knowledge and satisfy certain benchmarks set by the RICS. Interestingly these benchmarks are assessed not by professionals, not to my knowledge.”*

Response 4 *“Across board I don’t think built environment related programmes, especially RICS related programmes, with over 70/80 per cent satisfaction rates, generally. But traditional programmes get over 80/90% of satisfaction.”*

Response 5 *“And then that is how the specialisation happens. Even in the industry other graduates when they qualify and go they are not doing Value Management they are not doing Risk Management, they are doing basic measurements and dealing with contractors and contract conditions and so on, the more grass route things. And only when they become senior people in their company that they are involved in other advanced things. Why are we not catering for that? In the education system unfortunately we are not doing it. We are doing it in a very fanciful way, in a different way.”*

Response 6 *“Unfortunately what RICS is doing isn’t helping this process. In the ‘90s RICS had the vision of getting a better inter quality in to quantity surveying and related programmes,” and “they set that threshold of students over 280, I think, was the threshold UCAS points should enter. Now we believe new university system and government are preferring one A and two B’s, that is 320 UCAS points. That threshold has been upgraded again. So what is happening now is that universities are keen to pursue this 320”and “...the idea was high quality intake will produce high quality graduates and will alleviate the provision to a more recognised sphere.”*

Response 7 “... one is the traditional academic stream subjects recruit more academically oriented students and they are geared and hardwired towards studying and doing academic course of study. They value education very much. The students we get aren’t 100 per cent that capable, so we have to motivate and do some things. We all know that, isn’t it? So in that kind of a context NSS doesn’t favour us at all, KIS is good thing to put some kind of indicators to some extent NSS being a key factor in that I don’t think it’s a good thing.”

Response 8 “The other thing is, do you know any other profession where you can do a one year Masters and become eligible to be a member of the professional body?” and “Nobody allows that, only in quantity surveying, and only in the UK for that matter, that is allowed, which is, I think – I mean we do run Masters programmes, your university runs that ,we are going about this, the whole thing, the wrong way.” and “ And what we are saying is one year at Masters level is equal to a four year degree at undergraduate level. Is that right? And if they are getting a undergraduate level in Masters, although they frame it and term it at masters level, they are just getting some knowledge which is to bring them in level, in par, with the undergraduate knowledge and then they are considered for APC and they can go through that same door that the four year graduate goes through. So that is not right. There is something fundamentally incorrect in that practice” and “on question that I posed ‘why only in RICS Masters programmes conversion masters can allow people to come through that and become professionals? No other profession allows that’. “ and “ To give you some background, for example, in Sri Lanka to go in to quantity surveyor programmes you have to have A level maths to be chosen to do quantity surveying, and it is conducted in the top technology university in the country, so the best 1% of the country is selected to do quantity surveying. There are similar statuses there and pretty similar in Malaysia. So these countries can’t understand why this is done in the UK where quantity surveying originated, and that kind of thing is happening and why it is promoted by the professional body.” and “ There is a view that in mid ‘90s – or early 2000, actually, period – big QS companies preferred actually taking these non-cognate graduates in to as quantity surveyors, and they gave them management training level post in their companies, higher level posts in their companies for these kinds of graduates.” and “Now, apparently, what I hear from the industry, that is changing in the industry now, it is less favoured. Interestingly the survey I did a couple of years ago now, in 2010, it clearly showed that the industry across the board, not necessarily the big companies, across the board it doesn’t favour. It is one of the least favoured entry schemes

now, according to the survey. And from my total evidence talking to people in the industry, those who are favouring that before have gone out of favour of that scheme as well. So, probably, that is what is reflected in our intakes in to the masters programmes.” and “think my will is we should have adopted the policy of having Masters defined at Masters level.” and “education routes and gone on to rush too much of high level stuff at undergraduate level.” and “every programme teaches higher level things, including risk management, value management, even whole life costing, even to the advanced techniques a lot of times in teaching those and a lot of time not spent in getting the grass root base level build up.”

Response 9 “... we saw that traditional academic areas of study has been getting a better response than the professional orientated programmes. I think the universities are thinking as to whether they should give more prominence to the traditional streams,” and “... let’s say geography, history, to social sciences, medicine and law, those kinds of traditional areas of study, getting the heavy boost, the heavy push towards that at the expense of more modern professions that were coming in to the system of work . And now the tendency is that built environment is now being pushed aside in the university systems. “ and “universities are now trying to push out and view less priority for other areas of study, built environment related studies, and favouring more traditional studies.”

Response 10 “... face-to-face contact. In my survey it was revealed its average is about 12–14 hours of face-to-face contact a QS programme has at the moment.” and “These are all RICS accredited programmes. In a lot of countries I referred to earlier on, like Malaysia and Sri Lanka, they have 8 til 5, 40 hour per week contact time, in their degree programmes. It’s a hugely different scenario that is there.” and “more than double this contact time for students. What happened in coming in to the mainstream university education system, it came with the same numbers but there were various ways of cutting costs and making these more economical, we went on cutting and cutting and cutting, cutting to the bare bone and ending up with this limited number of hours of teaching.” and “that, is that allowing that cutting down of the contact time to that ridiculous levels, and what it meant was we had very little time to teach the basics. So we don’t have virtually any time to teach them the basics of calculating a centre line to teaching the construction technology.”

Response 11 “What might happen is, if we are kicked out of the university system, what will happen is engineers may, at postgraduate level, specialise in our areas and get those jobs, and we will be basically kicked out of that system” and “The only thing is will our

programmes survive.” and “it’s the universities who didn’t have architecture before and they started adopting and taking in architecture schools, and they want to keep it right at the top, so they are giving all the support, throwing everything there in it, and they are a showcase for it.” and “... higher education level. So that’s basically hitting us badly.”

Response 12 *“Unfortunately what RICS is doing isn’t helping this process. In the ‘90’s RICS had the vision of getting a better inter quality in to quantity surveying and related programmes,” and “RICS is now promoting is the AssocRICS.” and “The Assoc RICS route was introduced. Now that means –Assoc RICS is the shortened form for Associate RICS – so that route means that people don’t have to have RICS accredited degree.” and “He can do that, and then go through that way, within about 5 to 6 years’ time I will be able to get my chartered. Now, I don’t have to go to university at all, but I might do ad-hoc short courses to fast track the route.”*

Response 13 *“So people might think why don’t we do these kinds of things and go in and get qualifications. On top of that, RICS themselves are facilitating that. Did you come across CPD programmes RICS is promoting at the moment?” and “They are the first private provider because they are now actively promoting and they have created a stream of CPD events that suits that as well.”*

Response 14 *“It is totally geared towards getting people who are more member in to the institution. Now, actually, to give some credit to that idea, actually, it originated from the fact that it is sometimes good to get fresh blood in with different perspectives and train them in quantity surveying and make them become quantity surveyors. The idea is good but the implementation, I think, was wrong because that was just a one year Masters.” and “They are upholding quality. If you don’t meet the quality standard, forget it. You are not in the membership you are not getting the chartered. Simple as that. And how difficult to get a chartered in civil engineering “ and “So there’s a different culture in that part of the World and professions are better recognised actually in the society to come to that. Sri Lanka Institute of Quantity Surveyors is very well recognised now, and it’s one of the key professional bodies sitting along with engineers and architects. So that’s quite good. At the same time I know in Malaysia there is very good status as well. So there are different approaches taken and interesting to compare how these different professional bodies take different approaches and what is the social impact of that at the end, because we all work in the society and you’re talking about the professional status of professions and this is a key factor in defining what the profession is.”*

Response 15 *“We hardly teach construction technology now, it is just a couple of slides. We are teaching technology through pictures and slides, that’s all. There’s no hand-on, there’s no drawing. They don’t know how to draw so they don’t know how to interpret a drawing.” and “These are basic things that we were taught, that we learnt when we studied, which therefore we are very comfortable with reading drawings and scales, no problem for us. But our students nowadays can’t understand scaled.” and “And then that is how the specialisation happens. Even in the industry other graduates when they qualify and go they are not doing Value Management they are not doing Risk Management, they are doing basic measurements and dealing with contractors and contract conditions and so on, the more grass route things. And only when they become senior people in their company that they are involved in other advanced things. Why are we not catering for that? In the education system unfortunately we are not doing it. We are doing it in a very fanciful way, in a different way.” and “We don’t teach those skills that much.”*

Response 16 *“... with the fee scheme introduction of the heavy fee schemes and its impact, people will be thinking of alternative routes, won’t they?”*

Response 17 *“... we saw that traditional academic areas of study has been getting a better response than the professional orientated programmes. I think the universities are thinking as to whether they should give more prominence to the traditional streams,” and “... that the universities are now trying to focus more on traditional academic subjects, this all works in favour of the professional programmes that are there in the universities” and “... the traditional redbrick, and Russell Group that sort of group of universities, didn’t have any problem of recruiting. They run traditional programmes, they are not even bothered, they don’t even talk about recruitment, they get their numbers. And the fee didn’t have any impact on them, virtually little impact.” and “Nobody talks about that and everybody’s talking about – it’s more, even though not openly said, it’s more elite education now.”*

Response 18 *“... forget about the quality, forget about the standing of the provision, we get more people.” and “That shouldn’t be the policy of a professional body.” and “The only strategy is making money. I mean that shouldn’t be the case for the professional body because professional body means an organisation that upholds quality as number one, ethics and quality. Those are non-profit and non money-making things. If they are not at the heart of an organisation and commercialism comes in to the organisation then we are out – RICS is like a business company now. “*

Response 19 “... these universities are trying to go in to the mainstream universities and use different emphasis in university systems.” and “In fact, our programmes were the ones that were funding more expensive programmes like architecture, in most universities.” and “It is quite normal, whereas here it is a shock because we didn’t have that before. So it might ease off in the long term. The only thing is will our programmes survive.” and “... with people understanding the cut of the fee scales, and so on.”

Response 20 “... what is the social impact of that at the end, because we all work in the society and you’re talking about the professional status of professions and this is a key factor in defining what the profession is.”

Response 21 “... on what basis do students fill in? They’re filling in based on what happened that week, basically. So if they had good experiences that week they will give a good positive response. If, for example, if they had bad results of coursework with a lot of problems when the results were released and a lot of failures, students aren’t happy, they will give a very low mark to the process.” and “one is the traditional academic stream subjects recruit more academically oriented students and they are geared and hardwired towards studying and doing academic course of study. They value education very much. The students we get aren’t 100 per cent that capable, so we have to motivate and do some things. We all know that, isn’t it? So in that kind of a context NSS doesn’t favour us at all, KIS is good thing to put some kind of indicators to some extent NSS being a key factor in that I don’t think it’s a good thing.”

Response 22 “... think there is a significant possibility of private providers coming in to the market.”

Response 23 “The funding structure basically triggered this whole process, so we can say we’re trying to implement the Browne Report triggered this whole process of change which is now happening right throughout the university systems.”

Response 24 “I have fears that we are now being pushed out of basically the university system little by little with pressures coming from – because of the change in the funding scheme, within the last year’s admissions to the undergraduate programmes.”

Response 25 “So if things are not rebalanced and changes perfected. So that’s the way things are moving with the production of this fee scheme. Now, having said that, actually the impact of the fees, my personal feeling coming in, is actually a shock impact this time.

So what we got as low student numbers, I think that if anybody thinks that's going to be the norm in future, is incorrect."

Response 26 *"So then what is happening is government is promoting heavily the apprenticeship schemes. They have introduced a funding scheme for that, a scholarship scheme where you can get a sponsored apprenticeship in an organisation, go there and work there as an apprentice and then complete."*

Response 27 *"... on what basis do students fill in? They're filling in based on what happened that week, basically. So if they had good experiences that week they will give a good positive response. If, for example, if they had bad results of coursework with a lot of problems when the results were released and a lot of failures, students aren't happy, they will give a very low mark to the process."*

Response 28 *"... traditional redbrick, and Russell Group that sort of group of universities, didn't have any problem of recruiting. They run traditional programmes, they are not even bothered, they don't even talk about recruitment, they get their numbers. And the fee didn't have any impact on them, virtually little impact. And for the majority I have to say, maybe one or two then, but not – all but the major impact is in the new universities sector, and they are running a lot of programmes like RICS accredited programmes."*

Response 29 *"And what happened, the universities like it because our programmes were the cash cows in the past decade, for most universities, our programmes were the most profitable. In fact, our programmes were the ones that were funding more expensive programmes like architecture, in most universities."*

Response 30 *"They are in business and engineering related domains. And it's a tiny component. And at the moment it is happening in lots of other inner cities. Salford is restructuring, it is one of the biggest providers in built environment related programmes. They are re-structuring and doing – our university is in the process of doing lots of – everywhere it is happening, and it's not happening in a favourable way to our profession."* and *"... how they're going to run these architecture programmes in future with so resource intensive demands and no surpluses coming from the QS programmes."*

Response 31 “... no-one else is pushing us really because of our ‘unstrategic thinking’ has resulted in this situation. And the professional body has no strategy at all. The only strategy is making money.”

Appendix J – Interview A1 2013

Response 1 “... whether this is going to be something that is going to reflect in the structures pattern of education through a 3-year degree as we know it today, that is what is debatable. And if that’s what the white paper is trying to address, that’s probably why it’s not progressing through the channels that will take it to legislation, because it may not be necessary. It may fall within this philosophy that ‘is a degree really necessary? And is the value of a degree something that justifies the cost of the degree?’”

Response 2 “There is a lot of controversy at the moment as to whether a degree is necessary, and the value of the degrees, and of course if you’re referring to the quantity surveying profession, for a start you have two flavours of quantity surveyors, you have those that are going to be professional consultants and the ones who are going to be working in the industry and for the industry. And they obviously can make the transition from one to the other, but those who are working in the industry don’t see their degree as essential, they will go for further education qualification and stay there because the benefit of experience will probably be all that they need. Now, quantity surveying is a profession that has been reinventing itself forever and, I” and “And the problem is that any of the programmes that they put together will address only their specific needs, so there will be programmes where they are training people rather than educating people within the wider context of education, so those subjects that we look at which are general principles of law, to understand law and understand what contracts mean, general principal of economics, they don’t really have a direct application in to what they do so they tend to be out of the training programmes and replaced by things that are much more specific. So they have a lack of being able to approach problems from the wider perspective of having a more ample general knowledge.”

Response 3

Response 4 “... and therefore the White Paper will need to address those transitional issues, which is something that doesn’t really touch on. I think the concern is mostly the domestic market and the fees. It’s all about money and how we’re going to handle the money and how we’re going to control the access to higher education, which is contrary to what was promoted by the previous administration where everybody should have a degree, now ‘is a degree necessary?’” and “really reflective of the political underlying situation but is reflective of flavour of the month. But if you go back and you look at what is being

promoted by the government, during the Blair years: education for all, everybody should have access to university, everybody should go to university. Now, it's all about apprenticeships."

Response 5 *"And that's how they subsidise their degrees and that's how they go back with something that is of value. And at the moment there are a number of markets that are very active, Eastern Europe is very active, there are a lot of UK companies that are setting up base in Eastern Europe, and quantity surveyors are a known animal to obviously a British company so they are likely to employ a quantity surveyor that has been training in the UK because they can understand each other and they can understand the systems that are being used."*

Response 6 *"The problem with level 4 students, the first year students, is that they're not strategic at all. They come in because last minute they couldn't get the job that they wanted or the place in the university that they wanted, they went through clearing and anything that had the key words that sounded like something that they could do, they came in, and then they suddenly realised that it was a lot harder and completely different from what they expected, and that's why they go."*

Response 7 *"So that is one of the failures of the profession, which is to establish the links with secondary education. There isn't enough that is being done to promote the professionalism of a quantity surveyor. It is not a trade within the construction industry, but it is a professional qualification of managerial level."*

Response 8 *"That's the model that is being used. In fact, the university has got an agreement with – is it British Rail or Transport for London, one of the transport – to provide in-house degrees specially tailored for the needs of their employees. And there is another one of the construction companies, I think it may be MACE, that are doing that, they're putting together their own degree."*

Response 9 *"No. and that's why the structure of the full-time degrees has changed in most universities. If you remember years ago, perhaps when we started, a full time degree a student, except for the Wednesday afternoon sports day, had to be there every day doing lectures, and now the lectures are compressed to 2 to 3 days a week to give people the opportunity to work. So we don't have ownership of the students where we could organise activities at random and you have to come because you're ours because you're a full time student" and "And so the students that come as full time students from overseas, they're not sponsored by anybody but they work 12 hours a day on the days they are not at the university."*

Response 10

Response 11 *“... if you look at Cisco, the telecommunications, having a Cisco certificate is the same within the industry if you work in IT as having a university degree.”*

Response 12 *“So it’s really in-house learning, which is something that was part of the continuing professional development programme before but now is being brought to mainstream getting your degree side of things. It’s now perhaps most widely used within Masters programmes where you’re allowed to do some independent studies modules, which are pre-approved, but where all the learning takes place in the workplace. So workplace learning is something that is being adopted, mainly because people cannot actually spare the time to send people away to do the jobs, or because of the mobility that has hit the industry.”*

Response 13 *“Undergraduate provision, again, it has been this division between those that go in to the industry and those that go in to consultancy, and it may be that the whole thing blurs and blends because really when students go in to the profession they really don’t know where they’re heading. And I think it isn’t fair that the training is done in such a divisive way that it closes the door for one or the other. It’s really curtailing opportunities for the students to direct them in a pathway so early in their lives, and then obliging them to have to come back and do a Master’s degree and spend more money if they want to. If they’ve chosen to be an estimator for a construction company and suddenly they want to be the managing director of the construction company.”*

Response 14 *“There is a lot of controversy at the moment as to whether a degree is necessary, and the value of the degrees, and of course if you’re referring to the quantity surveying profession, for a start you have two flavours of quantity surveyors, you have those that are going to be professional consultants and the ones who are going to be working in the industry and for the industry. And they obviously can make the transition from one to the other, but those who are working in the industry don’t see their degree as essential, they will go for further education qualification and stay there because the benefit of experience will probably be all that they need. Now, quantity surveying is a profession that has been reinventing itself forever and, I think, has been a tool for the architects but has been endlessly promoted by the quantity surveyors that use it as a tool for measurement, and they’re likely to do the same with BIM and they’re likely to gain another position in industry and create another parallel position.”*

Response 15 *“... a basic training that is much better than our students.”*

Response 16 “... havethese other set of skills, skill set. Which is very strange really, when you think about it, they’re educated and they have a skill set and that’s seen as attractive by certain employers, and then we have other employers who want them to be trained but have a different set of skills and knowledge, and have some knowledge, that’s specific to the sector.”

Response 17 “If you’re a quantity surveyor you can be a project manager, you can be a design manager, you can measure, you can supervise works, you can be a site agent, you can be an estimator. There are so many things that they can do, and they keep inventing things. You can be a CDM co-ordinator, you can be an adjudicator, and more things will keep coming up. And now with BIM you can be in charge of BIM, in fact they have taken ownership of BIM. Quantity surveyors feel that BIM is very much theirs, much to the annoyance of the architects.”

Response 18 “... really reflective of the political underlying situation but is reflective of flavour of the month. But if you go back and you look at what is being promoted by the government, during the Blair years: education for all, everybody should have access to university, everybody should go to university. Now, it’s all about apprenticeships.”

Response 19 “It may fall within this philosophy that ‘is a degree really necessary? And is the value of a degree something that justifies the cost of the degree?’”

Response 20 “And if you look at apprenticeship and how an apprenticeship is looked at in universities, it is a step down.” and “If you look at foundation degrees, foundation degrees are kind of the poor relative of a university degree, and more emphasis has been placed on foundation degrees as an intermediate access to employment. So really is addressing skills and employment opportunities at those areas that are now being taken by immigrants. No, they’re no longer immigrants, they’re all migrants, aren’t they?”

Response 21 “People are not coming on spec. But if you look at construction, how many Polish migrants have come in to construction? And they’re excellent. And I’m not talking about the construction end of things, I’m talking about the management side of construction. We have got loads of Polish students that come with a basic training that is much better than our students, and that they fit in within organisations and they blend in without any problems. And they’re really very well accepted and they’re very enterprising and you have a lot of start-ups that are students that have come from Poland and from Eastern Europe.”

Response 22 “Professional institutions work in mysterious ways, and I’m never quite sure when they’re trying to become elitist and restrict access to the profession so as not to over

saturate the market and then get this reputation that there's so many unemployed quantity surveyors, or when they really want to get fees for the professional institution and"

Response 23 *"No, absolutely not. If education, that is the area of impact, is not aware of the white paper, why would industry be aware of the white paper? Industry's only aware of the measures that are put in place, when they're put in place. So the measures are announced and they're then put in place and the industry starts making strategic plans regarding their employment criteria, when the fact that the measures are going to be put in place is announced."*

Response 24 *"And do you think that faced with the choice of going to a Russell Group university and going to an ex-polytechnic for the same amount of fees – where is the student going to go?"*

Response 25 *"... we invite them because we happen to be in Central London. But that's the product of our degree that is the student that we throw out in the world satisfy the requirements of somebody who works in."*

Response 26 *"And one of the things that is going to happen within the next couple of years is this release on numbers, and that's going to be bedlam for absolutely everybody."*

Response 27 *"... as to whether a degree is necessary, and the value of the degrees,but those who are working in the industry don't see their degree as essential, they will go for further education qualification and stay there because the benefit of experience will probably be all that they need."*

Response 28 *"... possibility of firming up on a reduction of the fees to about the £7,000 mark"*

Response 29 *"... and the classification of what HEFCE considers to be graduate employment is really very narrow, so people get employment within the profession and sometimes it's not classed as being graduate employment because it's not part of a graduate programme, because it doesn't offer sufficient training, because it is very specific within one area, or because it is within areas that are not traditionally covered by what the profession usually considers to be its sector."and "So that's an area that the professional body has completely ignored, and it doesn't address the needs and it hasn't done anything to promote an area that is an opening that could absorb an enormous number of graduates. So all this business of Key Performance Indicators and where the final destination is of students, is really quite relative because all the KPIs have got so narrow."*

Response 30 “*Oh they do, they very much follow up. And they come back and they criticise the institution and they start chopping off money because they haven’t met their own KPIs. Oh yes. If you can imagine HEFCE are there to control the way in which they distribute the funds*” and “*At the moment HEFCE decide ‘we give within this particular area, you can take so many students and we’ll give you so much money for so many students’, once they de-regulate that, and that’s coming soon, it means that any university can take any number of students.*”

Response 31 “*... really reflective of the political underlying situation but is reflective of flavour of the month. But if you go back and you look at what is being promoted by the government, during the Blair years: education for all, everybody should have access to university, everybody should go to university. Now, it’s all about apprenticeships*” and “*All the incentives within the industry are giving to apprenticeships.*”

Response 32 “*... the students who come from overseas come to do those degrees that they know and they are recognised in their countries and they have got some kind of validation once they go back*” and “*And so the students that come as full time students from overseas, they’re not sponsored by anybody but they work 12 hours a day on the days they are not at the university*” and “*And that’s how they subsidise their degrees and that’s how they go back with something that is of value. And at the moment there are a number of markets that are very active, Eastern Europe is very active, there are a lot of UK companies that are setting up base in Eastern Europe, and quantity surveyors are a known animal to obviously a British company so they are likely to employ a quantity surveyor that has been training in the UK because they can understand each other and they can understand the systems that are being used.*”

Response 33 “*... the profession is really ~~given~~-driven by the demands of the industry, not by what we do on education and how we manipulate education.*” and “*So that is one of the failures of the profession, which is to establish the links with secondary education. There isn’t enough that is being done to promote the professionalism of a quantity surveyor. It is not a trade within the construction industry, but it is a professional qualification of managerial level.*”

Response 34 “*And do you think that faced with the choice of going to a Russell Group university and going to an ex-polytechnic for the same amount of fees – where is the student going to go? So at the moment what’s keeping an equilibrium within the university sector is the fact that HEFCE are still regulating numbers.*”

Response 35 *“We very much respond to employers requirements, so we have an employer’s forum, the employers come and tell us what they want of their graduates, so they come and say ‘we don’t want people that when they come out of university all they can do is make coffee for others and take photocopies. We want somebody who already knows some of the practicalities’.”*

Appendix K – Interview A2 2013

Response 1 *“There is a language and flexicon, if you like, about viability and sustainability, and we’re talking business viability and business sustainability rather than academic viability and academic sustainability.” and “some other aspects of the education White Paper, the desire to reintroduce sandwich years and so on, is actually quite healthy for our sector. How we’re going to do that, I’m not entirely sure at this stage, but there’s a separate investigation going on about that which is yet to report.”*

Response 2 *“Well it opens the door to the private providers offering much cheaper courses, and therefore partnerships between big organisation and private providers to provide those courses, that is true. Yeah.”*

Response 3 *“And several studies have demonstrated that the balance between part-time education and full-time education is often used by the construction sector as a way of solving it’s manpower problems in peak times”and“... in graduates because there was a drop of interest caused by the recession itself, and then you went through a boom period and there aren’t enough graduates so you get an explosion of part-time education, because if you look at the point at which somebody in education becomes a recruit to the industry, a graduate becomes a recruit to the industry when they get their first job, I mean completed their course, and a part-time student becomes a recruit to the industry when they get their first job when they enter higher education. So the industry solves its problems in that way right through the boom of the late ‘90s and throughout the early 2000s you’ve got healthy part-time programmes. By 2007/8/9 and 10 they begin to fall away.”*

Response 4 *“What I think there will be across the sector is some consolidation, there may even be some trading.”*

Response 5 *“There may be a push then to go flexible, but the sector is fairly resistant to that, particularly where we’re talking about technical skills and practical skills, how would you know it had been done right and so on? Maybe we can create innovative and flexible working systems – well, I’m sure we can – and the technologies exist and we could do that, and there may be a push or a shift away from the conventional part-time day release style in order to fill this gap.”*

Response 6 *“The reality will be there will still be construction, there will still be building, society will still need the services of people, people will still need to be educated and trained. 50 years ago very little of what we now see in higher education was in higher*

education, it was more in the colleges, it's now all in the colleges and none of it's in the universities."

Response 7 *"Some of them have talked about trying to get the lower parts of their education system through colleges and finishing off in universities rather than going the whole hog through the universities."*

Response 8 *"... is higher education is national investment, universities exist because society needs them, not they exist because the people who go to them need what they offer... at this time are asking themselves questions about 'well, what does a competitive market do to higher education?'" and "Somebody somewhere in the system has to have a view about the forward-planning of that commercial activity."*

Response 9 *"And by allowing the market to form base just around student perception is highly dangerous."*

Response 10 *"It's absolutely clear they haven't really thought about it. And the answers have been mixed. Those in the public sector have said 'of course we want to do that', but that means 'but we won't be' because they won't have the money to do it. They've talked about instead of asking the student to take out a student loan, which they could, they might loan the money to the student themselves and effectively **UNCLEAR 23:26** that student in to the company because they can't leave until they've discharged their loan to the company for their education. Whether **UNCLEAR 23:36**, I don't know."*

Response 11 *"The second point is whether big organisations will solve their own problems by becoming their own private provider."*

Response 12 *"The ability to do that will depend largely on the attitude of the professional bodies. If the professional bodies are not prepared to accredit those programmes."*

Response 13 *"... and the problem there has always been with part-time education, is it's geographically constrained, that you have to be within the normal commuting distance of a centre, and we can't predict how that distribution will look if some players have left the field."*

Response 14 *"Part of the problem is the RICS is no longer an institution that is there for the benefit of society, it's there for the benefit of its members."*

Response 15 *"Somebody somewhere in the system has to have a view about the forward-planning of that commercial activity."*

Response 16 *"... we could see an influx of foreign students, but the Home Office is making sure that doesn't happen through the UK BA restrictions."*

Response 17 *“I think there will be some consolidation and they’ll also be some trading. I think we are vulnerable because of the downturn in student numbers, and I think when the boom comes back that will create opportunity but it will also leave the door open to private providers who might be able to do it at a lower fee. If we can’t rely on our professional bodies to give us some protection at that time, then who knows what the future holds!”*

Appendix J – Interview I3 2013

Response 1 *“Well, in truth I know nothing about the White Paper. So I’m a little bit ignorant actually on the detail of that.”*

Response 2 *“... whereas now this move towards apprenticeships, it’s a different remuneration level, and therefore we need to sort of start thinking about what is the right salary for somebody that’s joining us from school, if we’ve got to pay sort of £5,000 or £6,000 a year in college fees.” and “... all the details of the apprenticeship is on the Government’s apprenticeship site. And I think we’re just waking up to that, really, as to whether that is something that will be attractive to us.”*

Response 3 *“... the way that we’re exploring it is that there’s a lot of incentive given by the Government for organisations to take apprenticeships.” and “... large organisations, that are taking young people through this apprenticeship route.” and “... it’s called the London Apprenticeships Company.” and “... it was then that we were sort of made aware of these apprenticeships.”*

Response 4 *“... and clearly there’s a different remuneration structure, there’s incentives for companies to go through one of these licensed apprenticeship companies.”*

Response 5 *“... we’re starting to prepare ourselves, for perhaps fewer graduates being there in the marketplace.”*

Response 6 *“So, basically, the individual is employed by this training company and we are loaned that individual for a period of two years.”*

Response 7 *“... the minimum wage for an apprentice is a lot lower than it is for somebody that’s not on an apprenticeships, so it actually becomes a bit more attractive financially.”*

Response 8 *“... all of a sudden where it used to cost us £2,000 or £3,000 a year to send somebody on a Masters course, now it’s costing us a lot more than that.” and “... then at school leaver level, previously we used to sort of offer a salary and a day off a week and then pay their university fees, and again that’s changing because of the fee levels. So, previously, we’d perhaps pay £14,000 or £15,000 in London for somebody to come and work for us, and then we’d send them on a university course.” and “... a youngster in the summer, somebody that was 18, had Alevels and they didn’t want to go to university. So we looked at this with this individual and we said ‘well, actually, we’re only going to get them for 4 days a week, and we’re going to have to sort of spend – I don’t know whatever it was, £4,000/£5,000/£6,000 a year, on their college fees and their university fees. And*

they'd be on that programme for 6 or 7 years', which is fine, there's no issues with that. But then when we actually worked up that we're going to be paying them sort of £14,000 a year, or whatever it was, plus £4,000/£5,000/£6,000 for their college or university fees and giving them a day off, actually we'd be better off employing a graduate. So."

Response 9 *"I think it will depend on supply and demand. I would have thought that all the time that there is a ready supply of appropriately trained young people coming through the traditional route of college and then university."*

Response 10 *"... it would be two things, wouldn't it, it would either be that the companies didn't think they were being trained appropriately, or secondly that there wasn't a sufficient quantity coming through. so I can't see – I mean we're a big company, part of a bigger organisation, and I can't see us doing that in the next 5 years. That's not to say that we'd never do it, but I just cannot see at the moment as to why we would want to do that, because that's not our core service."*

Response 11 *"And, actually, that in itself adds a huge amount of value to our business, because if we didn't have it we would have to invent something similar, and actually it wouldn't have the credibility that the RICS/APC has."*

Response 12 *"So that's my overriding concern, that the RICS's agenda is about membership numbers, and I think that the senior leadership of the RICS is benchmarked on that: how many members have they got? Have they got 120,000/130,000/140,000? And whereabouts are they? Are they in the UK or are they in Sri Lanka or India, or whatever it might be."*

Response 13 *"So we take on cognate and non-cognate. We take about half and half really, I'd say." and "... we're looking at the potential of an individual as opposed to their accumulated knowledge." and "... broaden the thinking and to broaden the sort of diversity of the business, you've got cognates."*

Response 14 *"So there's quite a lot of uncertainty at the moment, I think is probably fair to say."*

Response 15 *"... would be able to do sort of online modules at their desk and then just sort of submit it and it can all be sort of done by multiple choice, and then they get the letters after their name. And that concerns me greatly, because as soon as you start sort of allowing that sort of route to membership then you just dumb down the quality even further. So that's my overriding concern."*

Response 16 *“... we go through quite a sort of intense process to make sure that we have people that are right for our business, and we get a diverse cohort, diverse skills and diverse mix in every possible way. So, at the moment, there are no issues in so far as we get good people that want to come and work for us.”*

Response 17 *“There would be a school of thought within the business that if you had to choose between the two then I think there’d probably be quite a few people that would say cognates, because they’re more likely to hit the ground running.”*

Response 18 *“... then they can add as much as people with sort of cognate degrees in project management or quantity surveying.” and “The person that’s leading all our BIM work currently, she’s absolutely fantastic. She’s doing a brilliant job in sort of marketing and promoting the business and also sort of developing our skill sets, well she came with an economics degree.”*

Response 19 *“I think, I mean maybe some of the larger companies would get together and put together some sort of package of training, or maybe the RICS would do that, but I can’t see, you know, there’s a huge amount of investment required to make that happen. You need all the resources, you need access to libraries, you need access to IT, all that sort of stuff. I just can’t see.”*

Response 20 *“Well I think the only thing that I’m sort of concerned about is the term – my concern is that RICS seem more – and this is sort of from a million miles away – but, people that we’ve got sort of working on the inside, if you like – my concern is that RICS are just concerned about getting membership up.” and “I think that their drivers are a little bit different to what industry, or the sort of profession in the UK, is actually concerned about. So I’ve not seen anything from them that kind of changes the discussion, if you like.” and “... actually, I think that in itself, the less tinkering they can do with it, the better, in my opinion. But they do keep tinkering with it. They keep trying to sort of like push the edges out so that anybody can come in, and I kind of think that’s actually not a good thing.”*

Response 21 *“... we’re having lots of conversations at the moment about the way in which we position ourselves for the changes that are happening in education and the university sector.” and “... we’re starting to increase and take a greater profile within the business because we’re recognising that something is going to change and we need to be there to react when it starts to impact on us.”*

Response 22 *“... we recruit young talent. So predominantly the way in which we recruit young talent is either straight from school after somebody’s done A levels and they come*

in to our business and they follow sort of a part time education route through college and then university, and we sort of pay for their college and university fees and we give them a day of a week to study part time and they progress their academic education that way. Alternatively, we recruit graduates. So a slightly different model, so we take fresh graduates out of university, either with a cognate or a non-cognate degree, and they join our business at graduate entry level. If they're non-cognate then we, typically, send them on a conversion course or a Masters programme so that they've got the right academic preparation for working life. So it's those two models really that we currently follow."

Response 23 *"... we're looking at the potential of an individual as opposed to their accumulated knowledge."*

Response 24 *"... the APC is a rigorous and robust process. So to become a chartered surveyor you've got to be signed off by your counselling supervisor and your employer and then you've got to go and sit in front of an assessment panel of 3 people. And, a bit like judge and jury, generally speaking they seem to get it right, more often than not. And it's actually a robust process, so if that didn't exist then we would have to invent it." and "We have some really really bright people come out of university and they really struggle with the APC, because it's tough, it's the toughest thing you've had to do in your career, in many respects."*

Response 25 *"... do you remember the Chartered Surveyor's Training Trust?" and "So what used to happen is the Chartered Surveyors Training Trust used to interview people and then used to place them with organisations, and then after two years if they were fit for purpose they would then become a full time member of the company's workforce."*

Appendix M – A framework adapted to situate the analysis review of this research – Wei and Fine (2000)

Wei and Fine 2000	
Should I write what people say or recognise that sometimes they cannot remember or choose not to remember?	Report what is said
What are my political reflexivities that need to come into my report?	Subjective Need to recognise your stance
Has my writing connected the voices and stories of the individuals back to the set of historic, structural and economic relations in which they are situated?	Reflect on own subjectivity
How far should I go in theorizing the words of the participant?	Not overly but some
Have I considered how my words could be used for progressive, conservative or repressive social policies?	Could reflect briefly in write up. Is subjective in view
Have I backed into the passive voice and decoupled my responsibility from my interpretation?	To some extent
To what extent is my analysis and my writing an alternative to common sense or the dominant discourse?	Whose common sense – common sense can be subjective

Appendix N – Interview I2 2013

Response 1 “... know nothing about the government’s White Paper, to be quite frank, so I don’t really know what that impact would be at all.”

Response 2 “And that engagement, I think, between universities and employers and actually the government.” and “And the institutions. We should be a little bit more joined up.”

Response 3 “... government investment, it is going to be around infrastructure.” and “The greatest part of the national infrastructure plan of the £336 billion is around energy. Keeping the lights on, for want of a better phrase.” and “Similarly, rail.”

Response 4 “... one of the primary reasons we’re in business is to make money so our cost value reconciliations is a separate session.” and “... they’ve got to do their cost reconciliation and in fact they’ve got to do their costs and value reconciliations, so they need to know exactly where they are.” and “... we’re going to get paid, we’ve agreed that with a customer.” and “Find out not just the organisation, the individual. Is it by cheque? Is it by BACS? Is it by CHAPS? Find out who actually presses the button, get a relationship with them, make sure you understand the processes that they have to go through in their organisation to get that money out of their account and in to ours so it’s in there on the dot.” and “We want you to march it through to make sure it’s in the account, and ditto making sure you’ve got all your subcontractor payments in the system ready to go out on time. Not before. Not after. On time.”

Response 5 “So you’ve got an obligation to get – it’s one thing saying we’ve got to get the money out of them, well, actually our process to get that cash in to the sub-contractors account is like this, and you’ve got to get it on the system, payment notice, valuation on to the system. Do not, please, leave it to that point to put it on to the system. Why not? Because actually we do cash, weekly cash. They’re conciliations.”

Response 6 “So I don’t think that that’s a factor at all. You know, we’ve got guys who we’ve taken on at a time when we weren’t paying their fees only, but they’ve still racked up a dirty great big debt anyway.”

Response 7 “They’ve worked through the summer and their year outs, and that sort of thing, and then they’ve turned up and they need to get paid as much as they possibly can, so retaining them is fairly difficult if they’re going off to put themselves in the market.

Non-cognates fall in to the same category, it's just that all they have had perhaps is that they haven't had the opportunity to try and reduce that debt in their year out or the summer, working with us anyway."

Response 8 *"... yes, we do pay the fees and they don't build up the same level of debt. We are able to supplement the education, and also manage their cultural side of things as well. We can put them in to a more of a Carillion mode in that 5/6 year period. It's a hard route though. I don't deny it's a hard route."*

Response 9 *"... as I say 5 or 6 years ago when we started to look towards non-cognates and indeed internationally. We went, as an example, we went to South Africa and imported people from South Africa to fill the skill shortage of quantity surveyors."*

Response 10 *"We also brought in non-cognates at that point. I think it's fair to say 2007/2008 has had an impact on the construction industry."*

Response 11 *"... new recruits that we've brought in has been on the decline." and "... we said we'll bring them in on a business need basis, so if we've won a new job and we need a new assistant QS or whatever, we'll bring them in as a specific business case. I'll say 'right, you're going to take 4, and you're going to take 4 or 5' or whatever, and bring in 10/15/20 every single year just to keep it going. Having said that, which meant that therefore we could be a little bit more selective because we're targeting, we're being very specific about who are brought in."*

Response 12 *"So you still feel there's enough supply coming through? At the moment, yes, at that level." and "It will change, and that's why I say we will continue to bring them in on – I want to make sure we keep bringing them in at all times."*

Response 13 *"We end up having to educate, convincing them to go in to these sectors, which are vitally important rather than putting up a big flash building that's all glass and 50 storeys tall." and "Quantity surveyors have got a great place to play in that market." and "You know, Network Rail have been a challenge, haven't they, somewhere between 15–20 per cent efficiency improvement. The national infrastructure plan, you know, they're trying to improve efficiency to the tune of, what, 20 per cent I think it is. I can't believe that there is a huge, you know, a lot of calculation behind it."*

Response 14 *"It was an opportunity for them to mark us down because he was not a chartered member of the ICE. So it can be used against you if your people are not chartered."*

Response 15 *“We end up having to educate, convincing them to go in to these sectors, which are vitally important rather than putting up a big flash building that’s all glass and 50 storeys tall.”*

Response 16 *“We always had a policy to bring in graduates anyway, whether you need them or not, we’re going to bring them in and we’ll put them to work because they are our future.”* and *“I have to say that there are an awful lot of people who come in the intern route as well, which is something that we’d never used before.”*

Response 17 *“... around collaboration. You need to be BS1100 accredited. They’re going down the alliance route.”* and *“BS1100, BIM and alliancing. All cultural.”*

Response 18 *“We are able to supplement the education, and also manage their cultural side of things as well. We can put them in to a more of a Carillion mode in that 5/6 year period. It’s a hard route though. I don’t deny it’s a hard route.”*

Response 19 *“... the provision of education around measurement as a basic understanding we feel as though has diminished over the years and that there seems to be a feeling within the education sector that actually it’s not a big issue, it’s not something you need to be prepared too much with, yes we’ll cover it and give you half a term on it or something.”*

Response 20 *“... from the PQS perspective, it is still an important part of what we do. And we still prepare our own bills, from a builders perspective particularly, and maybe around builders quotes and not directly around SMM’s, but the principle of measurement is still there.”* and *“... when we get in to a valuation and measurement of final accounting of subcontractors,”* and *“So one of the basic courses that we therefore have to put them through, is measurement.”* and *“They take intermediate and then advanced measurement. And that applies to both the building side and the infrastructure side as well. So that is one gap where we have seen get wider, and we’ve had to try and bridge that gap over recent years.”* and *“... some of the training courses that we’ve introduced to try and...”* and *“... some of them are a bit more advanced than others, maximising returns on the NEC, that, you know, it’s quite special.”* and *“... letter writing and record keeping”* and *“ Collateral agreements and insurance.”* And *“... especially the youngsters, ‘can you please explain to us about insurance?’”* and *“... been the insurance creep”* and *“... and BIM was one of them. We do need some form of training,”* and *“BIM is cultural, it is a way of working.”* and *“... around collaboration. You need to be BS1100 accredited. They’re going down the alliance route.”* and *“we feel there are specific areas that really need to be tackled.”* and *“ all about cash flow, and we call it cash management.”* and *“... one thing understanding*

what the cash flow needs to be,” and “... but how that fits in to the corporate accounts is quite important.”

Response 21 *“They’re the technical competencies I would expect to be there, and you don’t have that with non-cogs, you’ve got you, you know, but they’re very very quick learners.” and “In effect these are graduates who don’t have a job. They are looking and searching and they come in for a period of say 3 months or 6 months, and generally it’s a short term contract – well it is a short term contract that hopefully then will get converted in to a full time job.”*

Response 22 *“It was an opportunity for them to mark us down because he was not a chartered member of the ICE. So it can be used against you if your people are not chartered. So I think there is a positive, and I would support it, we do support it. I have a commercial vision for Carillion. One of the targets I have set is that everybody above a certain grade should be chartered or with an institution.”*

Response 23 *“I believe it is a good thing. I think it is important. And I’m not just saying it’s the RICS, I’m not wedded to the RICS, I am FRICS, but if you want to be CIOB, ICE, ICES or CICES now. I do think it demonstrates an extra level of competence and professionalism.”*

Response 24 *“... there’s experience, there’s exposure and education. I think all of those things come in to it.”*

Response 25 *“The reason for education was for people to get a job.”*

Response 26 *“It will change, and that’s why I say we will continue to bring them in on – I want to make sure we keep bringing them in at all times” and “Absolutely, we need them for the future.” and “And there are certain things in here which jumped out to me, employer perspective, technical competency of graduates.”*

Response 27 *“So I think there is a positive, and I would support it, we do support it. I have a commercial vision for Carillion. One of the targets I have set is that everybody above a certain grade should be chartered or with an institution.”*

Response 28 *“... we would expect and the requirements that we would have versus what’s coming out of the universities, that gap has started to widen from what people believe we really need. And what that looks like in the future is probably a time to not only stop that gap from getting wider, but actually bringing it narrower as well.”*

Response 29 *“... and I’m making a big assumption here – the education’s being provided in the universities in preparing some of the students that are coming out, and that’s beyond where we are in real practice.”*

Response 30 *“But one of the big things that I have noticed, and this is more akin to this institution, and when we look at some of the graduates coming out, the level of understanding and education that they’ve been provided with for the infrastructure world, civil engineering, rail, utilities, energy, I don’t think gets covered a great deal at universities.”*

Response 31 *“I have to say, they seem to be broader thinking than somebody who’s come up the pure QS route.” and “Although I know you do need to be educated in this, because I expect you to hit the ground running. You know, when you come out I want to be able to – with supervision and guidance – but I would like to say, you know, do this take off, do a cash flow. They’re the technical competencies I would expect to be there.”*

Response 32 *“Wasn’t that a great opportunity for the RICS to jump on to, or the ICE to jump on to it and actually create a dedicated specific rail method of measurement. Instead, Network Rail’s done it.”*

Appendix O – Interview I1 2013

Response 1 *“I wasn’t aware of the impact of the White Paper per se, because I wasn’t really aware that much of the White Paper. However, I am aware of the increase in fees,” and “The actual White Paper itself, I have no visibility of, no awareness of at all prior to this conversation.”*

Response 2 *“But with the government change in funding and how they fund the apprenticeship programmes, and then all the national skills academies being developed.”*

Response 3 *“But with the government change in funding and how they fund the apprenticeship programmes, and then all the national skills academies being developed. So, for example, ENSER, which is the rail one, has now got a number of suppliers, colleges, on board, develop the qualifications, put the frameworks in place so that we, as a business, have now got people who can deliver these qualifications for us. And, generally, sort of 2/3 years ago you could have got apprenticeships in very traditional subjects, like electrical engineering, mechanical engineering, gas and heating, but it was actually really limited, whereas now - I can’t think, I can’t remember – I think there’s something like 200 frameworks in place in a variety of different areas. So it’s a lot more accessible and it’s a lot easier for businesses like ourselves to say “actually, we really need to get some rail apprentices going. Are the frameworks in place that we can use, and a provider that can deliver that qualification for us?”*

Response 4 *“The actual apprenticeship programme through the colleges is fully funded up to the age of 19, and then 19–24 year olds generally are 50 per cent funded, and then over the age of 24 they’re not funded. There are some restrictions around people’s existing qualifications, so if you’ve got certain qualifications already you can’t get funding.”*

Response 5 *“I have heard of it. It’s not something that, as a business, Carillion would look to do at the moment. We do have our own in-house training team that are currently looking to be accredited to deliver our apprenticeship model, certainly in rail, up to a level 3 qualification.”*

Response 6 *“Yes, because it affects their budgets.”*

Response 7 *“And the biggest impact for us will be the cost of the fees that have to be paid for those people to go a university or college, whatever it is they’re studying. Now, as a business, we generally tend to support 100 per cent of the fees. It was something we’ve discussed recently with the increase in the fee structure as a business as to whether we*

actually wanted to – because we used to have caps in place in terms of the amount that we would support.” and “Now, as a business we’ve made a decision that in the current sectors that that’s not feasible, that we can’t ask our staff to go and do further education, if they want to, but for us to only partly support them. So we’ve made the decision that we will still continue to support them 100 per cent on a list of criteria, so it has to be something that’s relevant to the business and meets the business need, and they have to be achieving a certain standard in their performance ratings, and they have to be with the business for a certain amount of time. So, as long as they meet that good criteria, we will still continue to support them. The impact will be that the budget that we’ve currently got, whilst it’s probably going to increase, it will not increase fully to support that volume of people moving forward.”

Response 8 “So the aim is that in terms of the Carillion input, we have to pay for their salary up to their level 2 or level 3 or level 4 qualification, and then they would go on to do a HND and degree, if they wish to do so.”

Response 9 “... we’ve sort of got the short term fix is somebody who’s gone and got their degree and we just recruit them directly in to a job. The medium term would be our traineeships where we take people on who have done their A levels and they’re going straight on to a HND, hopefully, or a degree part-time, dependant on what level of qualifications they’ve got. And then the long term is the apprenticeship routes.” and “And once that was in place, for us, it made more sense to have this, almost three tier approach, to say ‘well we recognise that we’ve got a shortage now. We need to take graduates on.’ The sort of medium term is taking them on as trainees, but actually in a ideal world there is definitely something about bringing them on from the ground and accepting that a proportion of those will never move beyond that level, but a proportion of those will move up through the ranks.”

Response 10 “... us as a business to decide what’s the right model, dependent on the qualification.”

Response 11 “Because this, in terms of higher education/further education, we do it across all the businesses. If you look at the range of qualifications that we deliver, in terms of the types, whether it’s in civil engineering or quantity surveying, whether it’s a degree or a HNC, or whether it’s SIPS qualification, there’s a multitude of variance. And I think that we are far better served by using the institutions that are there already.”

Response 12 “To give us that choice. I think if we started to bring it in-house, it would instantly reduce the range of qualifications that we can offer. And I think we recognise that

in our business it's not 'one size fits all', there is just too many variables. Even within the construction sector, what our civils business would want would be different to what our building sector would want to what our rail and highways sectors would want. They would all want a slightly different qualification, and so actually to then try and deliver that internally, it's just not feasible for us."

Response 13 *"It's very expensive. And then there's the issue around expertise."*

Response 14 *"And the biggest impact for us will be the cost of the fees that have to be paid for those people to go a university or college, whatever it is they're studying. Now, as a business, we generally tend to support 100 per cent of the fees. It was something we've discussed recently with the increase in the fee structure as a business as to whether we actually wanted to – because we used to have caps in place in terms of the amount that we would support."*

Response 15 *"... so it has to be something that's relevant to the business and meets the business need, and they have to be achieving a certain standard in their performance ratings, and they have to be with the business for a certain amount of time."*

Response 16 *"And once that was in place, for us, it made more sense to have this, almost three tier approach, to say 'well we recognise that we've got a shortage now. We need to take graduates on.' The sort of medium term is taking them on as trainees, but actually in a ideal world there is definitely something about bringing them on from the ground and accepting that a proportion of those will never move beyond that level, but a proportion of those will move up through the ranks."*

Response 17 *"... but the advantage is we've got them from 16 or 17 and they've worked in the business, they've come from the ground up, they understand." and "So these are the people that we see have the potential to be our project managers and our project directors and ops managers of the future." and "Who really understand the business, understand the values, and we're really starting from the ground up with those." and "... actually, if we're prepared to fund it why wouldn't we send them to a good institution that is recognised by a professional body to deliver the qualification to the standard that is set by that institution." and "That's one of the criteria is that any qualification they get has to be recognised by their relevant professional body."*

Response 18 *"What we now do is all roles are advertised and we state what the minimum criteria are in terms of education base that we're looking for, and then people will just apply for those and they will just come in as the job salary for that particular job"*

role. So whatever the benchmark is for the role, that's what they'll get paid. They won't come in on a graduate programme.”

Response 19 “... we would want somebody qualified to degree level. Obviously, if it's a quantity surveyors role that we're filling, somebody with a degree in quantity surveying would be preferable, but if there is somebody who has a degree in accounting or finance or something that's of a similar nature, then we would also consider those people.”

Response 20 “From a business perspective, we're not aware of any particular issues or traits or themes that tend to come out of bringing people in who haven't necessarily got a degree in the field that they're going in to. And I guess it's about the relevancy of the degree that they've got, because on the whole we wouldn't employ somebody, for example, with a media studies degree to do a quantity surveying post.”

Response 21 “Yes, we do. Once they join us, that would be their training programme to get their professional qualification. Yes, so we have all of those in place, and that's offered to any employee, dependant on what level of qualification they have.” and “Absolutely. We see it as a really really important part, certainly for certain job roles. So where there is a professional vocational institution, like civil engineer, ICE, CIOB, RICS, ICES, then we would actively encourage our people to go forward for those qualifications, because we really think there's a real benefit in having them.” and “I guess we've looked at the career path. We've mapped career pathways for somebody who has done their GCSE's, done their A levels, gone to university, got a degree, then got a job and then spent the next 4 or 5 years getting the work experience they need to get their professional qualification.” and “if you mapped the same route through an apprentice quantity surveyor or civil engineer being taken on at the age of 17 – we tend not to take them on at 16, even though we can – but generally on about 17. By the time they complete their level 3/level 4, they would already have credits towards their HND, so they'll probably only have to do one year of the HND, on to their degree. By the time they do all of that they've actually got their work experience all the way through, and by the time they reach 26 there is no reason why they can't have the work experience and the educational base to do the same professional review that the person has done going through a traditional route as going to university full-time.”

Response 22 “... we would measure them against, I think it's 8, key areas. One of those key areas is technical competency that's specific to their job role.” and “So that's the, you know, what is it they need to be able to do to do their job, the actual nuts and bolts of it. But then the rest there's obviously stuff around health and safety, but then there's things

around planning, communication, IT, and so we try to cover the broader competency of the individual alongside the technical competency required to do the job.” and “... behavioural competencies on top of that.” and “people success factors” and “And that’s equally as crucial. You know, you could have somebody who’s come out with a first in their degree and is absolutely, you know, brain of Britain but can’t hold a conversation with somebody, or if they do have that conversation to get that technical and put down in detail, that they just leave the other person behind” and “... there’s the balance of the two.”

Response 23 *“And then there’s the issue around expertise.”*

Response 24 *“And it gives us that confidence that we know that they’ve got this basic understanding, as a minimum, coming in.”*

Appendix P – Interview P1 2013

Response 1 “... think one of the good things, if I can just bring it in to this debate, that’s happened in terms of the government construction strategy raised by Paul Morrel two years ago is that it’s been very much a collaborative approach through the construction industry council and through others to address some of the problems in construction.” and “ think that’s the way forward to encourage stronger government industry institutional debate about these issues in a fully collaborative way.”

Response 2 “... going back to having all your fees paid at University is probably ever going to be a valid option in the foreseeable future in the age of austerity that we’re in, which may last a long time, apparently.”

Response 3 “But I feel that, you know, the government providing education in this country is going to be the norm, but it’s going to be done through rather straightened economic circumstances.”

Response 4 “... the fact that we’ve fallen World League Table’s in O and A levels, for example, needs to be taken into account as well.”

Response 5 “And so I think there’s going to be some adjustment to the way that industry reacts to that in times of more pressing need for individuals within the industry, and I think that they might react to it in several ways. But, I mean at the end of the day if people are involved in, you know, paying perhaps higher salaries for people then it hopefully will create a higher demand for courses in the industry. And supply and demand, to a degree, is a wonderful thing and it is self-balancing. Unfortunately, as I said before, in construction I think it’s the lag effect and the time it takes to make up that gap that’s the problem.”

Response 6 “... because the construction industry always gets it wrong, doesn’t it? I mean there’s a retrenchment in recruitment at the bottom of the cycle when in fact if you take 4 or 5 years to become qualified then you can usually project that that will hit the time when the industry’s coming out of recession and that those people are required.” and “... quite frank, that statistics and no-one can forecast the future, but if you believe the kind of change in the economy that’s forecast by, say 2017, you can see that that situation will probably arise again.” and “And that’s the cyclical nature of the construction industry. And I think a technical profession, like quantity surveying, is always going to be,

to a degree, in that position, but it's a question of trying to even out as much as you can the boom and the bust."

Response 7 "... certain specialist areas, for example again coming back to the Building Information Model in that certain larger contractors are looking at that – the RICS is looking at it as well. So I think where there's specialist niche training that's required, I think that's more likely to be a recipient of private provision."

Response 8 "... think that some universities are almost going back to the old technical college, polytechnic, if you like, model in so far – and its really a response to the £9k fee issue."

Response 9 "So how do we proceed forward from there in an educational sense? Personally I think that in terms of – first of all if I can say what I believe the RICS should be doing in response to that. I think that we're encouraging the formation of UTC's and University Technical Colleges because we see that as a potential application of more dedicated specialist training from an early age, and something that we could perhaps influence and get involved in ourselves. And I think at the same time there's a debate about the future of the Built Environment."

Response 10 "... you know. It's so inextricably linked to lots of other policies, such as immigration and that that in terms of how you meet the market demand for what's perceived to be at the time. And I think the government has some easier fixes."

Response 11 "... they want good value for money as well."

Response 12 "... think they'll be demand for both skills, but from a longer tail of specialist knowledge and in fact strategic. Now when you look at the global marketplace that's obviously developed over the last few years, there are people who definitely need to be educated on a very strategic basis. However, you know, I'm firmly of the view that certainly quantity surveying is a technical profession and that there will be demand for technical services and people who are specialists in those technical skills as well." and "Soft skills are important, and obviously they've come through management thinking in the last 20 years or so. But, I think for example, if you were dealing with a large infrastructure scheme and a plurist client, like in government, then if you had some kind of structured training in stakeholder engagement, it would help you. I can't believe it wouldn't help. It would not not help you. But if you don't know what it is, then you probably don't realise how useful it might be and how you could use it in that situation. So, I do think there are certain tools and techniques that are related to soft skills that actually should probably come in to the course content more. But, again, it's all a question

of, you know, what total course content is there, and can you get this in whilst still maintaining a reasonable technical content?” and “And of course you’ve got Quantity Surveyors working for a large global consultancy who would probably never pick up a scale ruler and measure from a drawing, whilst at the same time you’ve got many SME’s of which make up 80 per cent of our membership who are very interested in the technical quantity surveying aspects of quantity surveying.”

Response 13 *“... think, you know, new technologies, building information, modelling, and all these other aspects which are beginning to affect construction increasingly, and increasing the need for the fact that teams build buildings are a particular issue in the Built Environment.”*

Response 14 *“... profession has become more both specialist in complex.”*

Response 15 *“... integration and collaboration... ” and “... greater need to integrate and collaborate the project performance.”*

Response 16 *“The RICS has in the past taken a very non-prescriptive approach to course content, but it seems to us that actually in a world of austere resources that we probably need to be more prescriptive there.”*

Response 17 *“... providing the right quality of people at the right level for the industry requirements, in terms of both the need to, as I said before, collaborate with the industry and therefore perhaps a change of skills.”*

Response 18 *“... think it’s another solution to a problem, you know. Again, if you use the analogy of PFI, which I know is a bit of a stretched analogy, but nevertheless it’s an issue about reacting to the market in terms of private provision. So, if that provides a solution to the marketplace whilst keeping all the other, you know, constraints in place in terms of qualification bars and meeting the challenges that I talked about earlier.”*

Response 19 *“That debate now needs to be extended in to education in construction and given the same importance that it had in terms of the age of austerity and saving money in construction.”*

Response 20 *“... the end of the day if people are involved in, you know, paying perhaps higher salaries for people then it hopefully will create a higher demand for courses in the industry.”*

Response 21 *“... the fact is that if somebody at 16 could embark on these courses with perhaps a solid understanding of what’s require to be, for example, a chartered quantity surveyor, in terms of a longer term route to get there, which is of course the way the quantity surveyors used to qualify before, generally, then actually it may well be something*

that although we're going full circle is providing that sub-technical base that the profession needs."and "... going back to the thing I said at the beginning, is that I think there's a demand – it's becoming a bit of a bi-polar debate, because I think there's a bit of a demand for this more technical, less graduate entry to the profession, whilst at the same time I'm also aware that there's a demand for a more general built environment degree."and "... think what tends to happen in our construction industry is you reach 35 and then you almost need to deconstruct yourself and realise that it's all about team-working to actually get things done and be more effective than you perhaps were in your narrow technical discipline."

Response 22 *"... they want good value for money as well."and "... it's perceived by students to be – I mean I think it will be increasingly scrutinised, is what I mean, by graduates, because there's not much point them going on a course that they feel is not appropriate for industry or appropriate for the institution that they're trying to get qualified through."*

Response 23 *"Because, you know, is that something that means people are not as numerate and as good as communicating, necessarily, when they start the courses?"*

Response 24 *"I think it's got a lot of potential impacts."*

Response 25 *"... and maybe that comes down to what's been suggested at the moment in collaboration with other professional bodies is that there may be some kind of built environment degree and architectural engineering construction degree that gives a basis for choice within the industry, and then specialisms proceed thereafter."*

Response 26 *"And I think engineers and architects have to address those issues as well as Surveyors, so I think the challenges facing the quantity surveying profession are the same challenges that are facing, to a degree, architects and engineers."*

Response 27 *"But I think if you're trying to replace what it quite and extensive and expensive educational base, then I think that's much tougher."*

Response 28 *"... going back to the thing I said at the beginning, is that I think there's a demand – it's becoming a bit of a bi-polar debate, because I think there's a bit of a demand for this more technical, less graduate entry to the profession, whilst at the same time I'm also aware that there's a demand for a more general built environment degree."*

Response 29 *"... there's always new things coming in all the time." and "... actually see it in a slightly different way, because I think it is a technical logical cover for a collaboration, actually. So, you know, it's a bit of a Trojan horse for change in the industry, in terms of I don't think it's a technological nirvana, but it might become that."*

But I think what it is is a good quote for collaboration because everybody knows it won't be right unless they collaborate more.”and “... where large contractors are using it at the moment they're seeing, you know, other things need to be in place, like they need to be contracted very early. Very early contractor involvement, otherwise it won't work. So that's better and more collaboration and integration and it will work. So, it's actually quite an interesting catalyst for change, I think.”

Response 30 *“... did a sandwich degree and I must admit that a year in industry, I think, was very useful. And I know that there's been a retrenchment in sandwich degrees generally, and I think most people see it as not a good thing.”and“... admit I don't know the view from an educationalist, but from a sort of pragmatic being trained as a surveyor point of view it's very useful to have a sandwich year, I felt. Although, it depends what you're doing in that year, of course.”*

Response 31 *“And, in fact, you know, I was recently in China, and one of the interesting things about the Chinese market is that when you talk to them about cost engineering, a similar term to quantity surveying as we know it, they're talking about very technical skills that are required in the market. So, I think sometimes, you know, we forget that the profession has developed in this country quite a lot from a technical base, but it's quite often the technical base that people want in an overseas context. So we must continue to train professionals in that way, I feel, not least of which because, and the government has rightly pointed out that we are a trading nation and, you know, professional services, exports are actually a very healthy export market and we need to get that right. And also, obviously vice versa for students that come and train in this market. Because if you go to, again, a construction management course, say at the University of Reading, which I went to not long ago, at least 90 per cent of the students in the room were Far Eastern or Chinese in origin and therefore they were coming to the course in the UK because of the, you know, the technical content on these courses. Because when you work overseas, as I have done, some of the boundaries between technical disciplines do tend to merge and blur. But it seems to me that the British model is about being strong in those technical disciplines, and we've got the reputation both from an academic university point of view and from an institutional point of view in providing that technical expertise.”*

Response 32 *“... you could see examples here of perhaps somebody coming out as a quite technically trained quantity surveyor from a UTC, whilst at the same time maybe you've got – and I hate to use this term – but maybe you've got somebody who is perceived to be a highflyer going to a university doing a general built environment degree and then*

specialising in a certain area, coming out at 26 or 27 and going to work for a global consultancy and working in a very strategic globalised way. And therefore, again, the diversity of the profession becomes even wider.”

Response 33 *“... having said all that, you know, you do also have to accept that 18 is a very young age to be signed on a profession, and therefore the idea of a general degree, to me, makes a lot of sense. Not just in that pragmatic sense, but also in the point of view, as I said before, that our industry is quite good at technical work but not so good at working together in teams to build building.”*

Response 34 *“And, as part of that dissertation, I went to interview the Building Design Partnership who, at the time, were the largest multi-disciplinary practice. And I saw the guy who started it, Professor Sir George Grenball-Baines, who said to me in that interview – I always remember it – he said ‘well, it’s quite simple’ he said, ‘the reason there aren’t more integrated practices is because of education. Because we get our narrow deep ales in the UK and then we then do a narrow deep degree, we then join a narrow deep professional institution and then we’re all thrown in to a room and we’re asked to design and cost and deliver a building.’ He said ‘until we get education sorted out, and we need to learn much more about the contributions of each other professions, we won’t have integrated working in the UK.’”*

Response 35 *“Also, because it’s funny, it sounds quite basic, but a lot of those basic things the feedback you get from industry actually. Along with the fact that measurement skills, for example, are not really taught enough, and if you’ve only got 13 hours a week, what are you going to teach?”*

Response 36 *“But there have been, and we know from our statistics, a fall in people undertaking quantity surveying courses, and most people think that that’s actually partly recession generated but probably partly £9k fee generated as well.” and “... but generally speaking I think there’s been a fall in numbers of somewhere between 10–15 per cent on quantity surveying courses since 2009.”*

Response 37 *“... longer specialist sales and knowledge...” and “... competencies that we prepare for the APC, for example, have become more and more specialised as we’ve progressed over the years.” and “... for example, capital tax allowances or value management or some of these other issues associated with quantity surveying have become specialisms in their own right.” and “... there’s always new things coming in all the time.”*

Appendix Q –RICS Memo 2013

Response 1 *“Tuition fees are a difficult area and one which we have avoided making any statements. I would state that tuition fees are a controversial area and there have been some consequences for RICS accredited courses (see below).”*

Response 2 *“... don’t think there is any link between the recent concerns of employers about the technical competency of graduates and the white paper.”*

Response 3 *“Undergraduate tuition fees – fall in undergraduate applications to Built Environment courses (architecture, building and planning subjects) in 2012.*

2011 – 11283 applications

2012 – 9407 applications

These stats are from UCAS and do not cover all RICS accredited courses but are reflective of the situation within the nearest subject group

Entry to RICS accredited courses has fallen in 2012 – potentially due to increased tuition fees

<i>2011</i>	<i>entrants</i>	<i>–</i>	<i>3290</i>	<i>entrants</i>
<i>2012</i>	<i>entrants</i>	<i>–</i>	<i>2841</i>	<i>entrants”</i>

Response 4 *“...think the effect is more on the supply and demand front.”*

Response 5 *“Students – higher fees will raise student’s expectations, more discriminating in choosing which courses to apply to.”*

Response 6 *“Employers – look for alternatives to part-time degrees to train employees such as Higher Apprenticeships”*

Response 7 *“The changes discussed in widening participation and quality assurance do not affect QS education and training although we are supportive of widening access.”*

Response 8 *“Higher tuition fees for part time undergraduate students has seen a reduction in part time student numbers. Longer term – potential impact on postgraduate recruitment as graduates not willing to take on further debt or cannot afford to pay for*

further study. Expectation that student numbers on postgraduate courses will reduce in the long term. Some undergraduate and postgraduate courses may be withdrawn or amalgamated due to falling student entrants.”

Response 9 *“New providers – more choice for students, private providers gaining degree awarding powers (for example CEM), challenge to existing partner universities.”*

Response 10 *“Employers – look for alternatives to part-time degrees to train employees such as Higher Apprenticeships. Professional Bodies – graduate entry will remain the main entry to chartered membership, however professional bodies will develop alternative routes to membership for Higher Apprenticeship and experience routes to offset falling graduate numbers.”*

Response 11 *“... enhancing the quality assurance processes for degree courses in general.”*

Appendix R – Delphi Techniques Flow Chart

