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DOES AN ACCOUNTING DEGREE ADD UP? AN INVESTIGATION INTO THE PROFESSIONAL EXAM PERFORMANCE AND NON-TECHNICAL SKILL DEVELOPMENT OF ACCOUNTING DEGREE GRADUATES.

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A thesis submitted in partial fulfilment of the requirements of

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ABSTRACT

DOES AN ACCOUNTING DEGREE ADD UP? AN INVESTIGATION INTO THE PROFESSIONAL EXAM PERFORMANCE AND NON-TECHNICAL SKILL DEVELOPMENT OF ACCOUNTING DEGREE GRADUATES.

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This thesis investigates why accountancy graduates are not preferred by large accountancy firms. This investigation is underpinned by two key factors sought by large accountancy recruiters: the ability of trainees to pass professional examinations (paper 1) and the development of non-technical skills by prospective trainees at the recruitment stage (paper 2 and paper 3).

Paper 1 investigates the factors influencing the performance of Big 4 trainees in the Institute of Chartered Accountants of Scotland's (ICAS) Test of Professional Skill Examinations with the key finding being that there is no significant difference in performance between accounting and non-accounting graduates.

Through a questionnaire to Big 4 trainees, paper 2 finds that non-accounting graduates perceive their development of intellectual skills at university significantly higher than accounting graduates although accounting graduates perceive their development of team working skills superior to non-accounting graduates. These findings are explored further through interviews with 11 Scottish academics who have oversight of accountancy degrees. The interviewees identify that they needed to prioritise which non-technical skills to develop due to limited space available after satisfying the normative pressure of accreditation. In the remaining unaccredited space, interviewees revealed a priority for interpersonal and communication skills which may detract from intellectual skill development.

Paper 3 expands on the interviews from paper 2 to establish the existence of economic and education logic in Scottish undergraduate accountancy education and investigates how the balance of these impacts on course content decisions made by Scottish accountancy degree providers. Accreditation, a carrier of economic logic, is identified as the key driver of course content. In addition, Paper 3 identifies and explores a number of institutional conflicts between accreditation and carriers of education logic, along with coping strategies employed in relation to these conflicts.

Key Words: Accounting Education; Institutional Theory; Professional Exam Performance; Intellectual Skills; Accreditation

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CHAPTER 1: INTRODUCTION

Does an accounting degree add up? An investigation into the professional exam performance and non-technical skill development of accounting degree graduates.

1.1 An Introduction to Accountancy as a University Subject

For many centuries British universities had a liberal outlook to education rather than being concerned with the training of specific occupations (Paisey and Paisey, 2007). However, a closer relationship between universities and the professions developed in the 20th century with most professions (such as medicine and architecture) requiring study at university as a required element of becoming a member of that profession (Annisette and Kirkham, 2007). Interestingly, accountancy in the UK is somewhat unique in that professional bodies do not require those seeking membership to have an accountancy degree, or even a degree (FRC, 2016). This is in contrast to most western countries which require either an accountancy degree or the study of accountancy at university (Gammie, Hamilton and Cargill, 2010).

Despite there being no current requirement for an accountancy degree to become a professional accountant in the UK, the profession played a key role in the initial development of accountancy as a university subject. The first chair of Accountancy in Scotland (the second in the UK following Birmingham in 1902) was established in 1919 at the University of Edinburgh. This chair position was instigated and subsequently controlled by The Society of Accountants of Scotland (a predecessor to the Institute of Chartered Accountants of Scotland (ICAS)) (Lee, 1996). The appointment of the chair itself, which resulted in accountancy being studied in an academic environment for the first time in the UK (through its inclusion in a new Business Degree), was believed to play a key role in legitimizing the accounting profession and providing professional respectability (Lee, 1996). Accountancy courses in universities have

since seen considerable growth in the last few decades (Napier, 2006) and today thirteen of the nineteen[1] Scottish universities offer accountancy degrees.

Today, a key influence of the accountancy professions on accountancy degrees is through accreditation where graduates get exemption from certain professional accountancy examinations on completion of their degree. All accountancy degrees in Scotland currently seek accreditation from at least one of the UK professional accountancy bodies. Accreditation is viewed as a key marketing tool in attracting students to accountancy degrees (Duff and Marriott, 2012). However, accreditation requirements are believed by some to be primarily technical and thought to detract from non-technical skill development (Duff and Marriott, 2012, Duff and Marriott, 2017). Thus, a number of recent editorials have heavily criticised accountancy degrees for becoming too technical and focused on professional requirements at the expense of developing key intellectual skills (Scott, 2010; Sangster, 2010; Wilson, 2011; Hopper, 2013).

In Scotland, accreditation from ICAS has been identified by academics as the key accreditation sought for Scottish undergraduate accounting degrees as historically degrees were either fully accredited (with the associated status attached) or not. This was in contrast to the other professional bodies[2] which simply awarded graduates certain exemptions from the professional exams (BAAEC, 2000). In addition, of all the UK qualifying bodies, ICAS has the highest percentage of students (96%) holding a degree (FRC, 2016), indicating the key role played by universities in developing ICAS trainees. This formed the basis of selection of the ICAS training contract for this thesis and the next section therefore looks in more detail at the history of ICAS and the relationship between university accountancy departments and ICAS.

[1] Comprising University of Aberdeen; Abertay University; University of Dundee; University of Edinburgh; Edinburgh Napier University; University of Glasgow; Glasgow Caledonian University; The Glasgow School of Art; Heriot-Watt University; University of the Highlands and Islands; The Open University; Queen Margaret University; Robert Gordon University; Royal Conservatoire of Scotland; Scotland's Rural College; University of St Andrews; University of Stirling; University of Strathclyde; University of West Scotland.

[2] Comprising the Association of Chartered Certified Accountants (ACCA); Chartered Accountants Ireland (CAI); Chartered Institute of Management Accountants (CIMA); Chartered Institute of Public Finance and Accountancy (CIPFA) and Institute of Chartered Accountants in England and Wales (ICAEW)

1.2 The History of the Relationship between Universities and ICAS

ICAS is the oldest professional accountancy body in the world with its history dating to 1854 and the incorporation by Royal Charter of The Society of Accountants in Edinburgh (Walker, 2004). In 1951, this society amalgamated with The Institute of Accountants and Actuaries in Glasgow and The Society of Accountants in Aberdeen and renamed, as it is known today, as The Institute of Chartered Accountants of Scotland (Walker, 2004). Today, full membership stands at 17,852 with a further 3,350 student members in training (FRC, 2016) and ICAS is a member of the International Federation of Accountants (IFAC), Chartered Accountants Worldwide and the Global Accounting Alliance (ICAS, 2017a).

Despite being the third smallest UK based professional accountancy body (FRC, 2016), ICAS has been cited as having an elite status in the accountancy profession (MacDonald, 1985; MacDonald, 1995; Stringfellow and Thompson, 2014). Furthermore, ICAS is keen to continue to promote this status as illustrated in the 2016-2018 ICAS strategy document which states:

> *In 1854, ICAS gave rise to the profession – as the professional community continues to grow, ICAS seems to remain at the forefront of the profession and public interest (*ICAS, 2016).

Education has played a pivotal part in this status formation and has long been identified as a key contributor to maintaining a professional status (Abbott, 1988; Friedson, 2001). ICAS affirm this belief noting:

> *'what has traditionally distinguished ICAS as a professional accountancy body is excellence in education, thoughtful and applied research, rigorous but fair regulation and a powerful sense of professional community among our members'* (ICAS, 2011).

Of relevance to this study is the role of the university, and particularly accountancy degrees, in the education of accountants with ICAS. Universities first became part of ICAS's training in 1866 when the Society of Accountants of Edinburgh required law classes to be undertaken

at Edinburgh University (Lee, 1996). However, written examinations were not introduced until 1873 with early oral examinations believed to be more of a public relations exercise rather than the study of any specific knowledge (Lee, 1996). In 1926, this university involvement increased with the requirement of university study of accountancy, economics and law at university (Paisey and Paisey, 2000).

Substantial changes to ICAS educational provisions followed on from the Lister Committee Report in 1955. Driven by a concern for the status of ICAS, due to very few graduates applying for ICAS training contracts, a three year training route was introduced for relevant graduates instead of what was the current five year route for all trainees (Gammie, Allison and Matson, 2017). A relevant graduate being one whose degree gives appropriate coverage of material considered relevant to the first level of ICAS examinations. Despite this key change, the number of graduates remained low and further concern was raised over the speed and completion rate of trainees into full members (Dewer, 1966). Following this, in 1969, two new routes specifically for graduates were introduced. For those with a relevant degree (effectively accounting graduates), a three year training contract with exemption from all but the final level of examinations. For non-accounting graduates, a four year training contract with a requirement to complete all levels of ICAS examinations (Gammie, Allison and Matson, 2017). The impact of these changes saw a small rise in graduates (from 45 in 1966/67 to 70 in 1968/69) but a concerningly large decline in overall trainees (from 370 in 1966/67 to 269 in 1968/69 (Shaw, 1969).

A further review followed which resulted in the publication of the Charles Report (ICAS, 1970) which concluded that an all graduate model should be sought, as there was a view that in order to compete with other professions it was necessary for ICAS to demonstrate an intellectual foundation. The Charles Report also argued that all capable students could now access a university education and therefore this route would not restrict the pool of capable candidates. Whilst not implementing a 100% graduate model, substantial changes were made to make ICAS training more attractive to non-relevant graduates, with a one year diploma at university followed by the same three year route as relevant graduates. This one year diploma

was subsequently dispensed with in 1990 (Lothian, 1985) meaning both relevant and non-relevant graduates completed a three year training programme subsequent to graduation.

A four year training route for those who had completed a Higher National Diploma was introduced in 1973 (Gammie, Allison and Matson, 2017). This route, however, did not prove popular and by the late 1970's graduates accounted for 98% of the student intake (Marrian and Allison, 2004). The Higher National Diploma route was also closed in 1990 although a non-graduate route remained open for special cases.

The three year route for relevant and non-relevant graduates remains today and indeed graduates continue to account for the majority of trainees, comprising 96% of the student population in 2015 (FRC, 2016). This is despite a five year non graduate route for school leavers and for those who do not have a degree but are members of the Association of Accounting Technicians being reintroduced (ICAS, 2017b). However, with only 4% (FRC, 2016) of the student population being non-graduates, uptake of these routes appears low.

Another interesting trend in the ICAS training environment is the decrease in the percentage of ICAS trainees who hold a relevant degree. This fell from 71% in 1996 (AFRB, 2002) to 35% in 2015 (FRC, 2016). One explanation offered for this is the rise of trainees employed in English offices with 45% of ICAS student members now being based in England (ICAS, 2015). The increase in the number of English based students is the result of two of the Big 4 firms now using ICAS as a training provider for chartered accountancy traineeships in England which was traditionally the sole domain of The Institute of Chartered Accountants in England and Wales (ICAS, 2016). English offices are identified as more likely to recruit from a wide range of disciplines (FRC, 2005). This is illustrated by only 12% of the student body of The Institute of Chartered Accountants in England and Wales holding relevant degrees in 2007 (FRC, 2008).

One possible reason for the firms recruiting more non-relevant graduates to their offices based in England could be the result of the recruitment strategies of the Big 4 firms who focus

their recruitment on the top universities. Indeed, the Russell Group Universities are seen as key recruitment targets for Big 4 firms, accounting for 60-70% of job offers (Social Mobility and Child Poverty Commission, 2015), but many of the top Russell Group Universities, such as Oxford, Cambridge and University College London, do not offer accountancy degrees. Thus graduates from these universities come from other disciplines and are henceforth non-relevant.

1.3. Scottish Accountancy Degrees and Thrust of Research

The same phenomenon, that accountancy employers do not prefer accountancy graduates and actively seek out non-accounting graduates, is not limited to England but is identified as UK wide (Napier, 1996). Ernst and Young (2017, p.1), a Big 4 accountancy firm, highlight this on their recruitment literature commenting 'It's your intellectual ability and natural strengths that matter to us. Some of our highest achievers have studied subjects totally unrelated to the work they do.' Specific to Scotland, Gray et al. (2001) identified, through interviews with Scottish recruiters, a preference by some accountancy recruiters for those who have not undertaken an accounting degree.

This research by Gray et al. (2001) resonated with anecdotal evidence gathered by the researcher from a career working in the profession, including involvement in graduate recruitment for a Big 4 accountancy firm, which formed the basis of interest for this research project. Following a career move to the academic environment as an accounting lecturer, this interest intensified. Accounting graduates have demonstrated an early interest in accountancy, gained four years of relevant technical subject knowledge underpinning and demonstrated an ability in the field through their degree classification. So why after a four year accounting degree were our accounting graduates not preferred by these large accountancy firms?

An initial review of literature to understand what accountancy firms were looking for when recruiting trainees identified the key factors sought were non-technical skills and an ability to

pass the ICAS examinations on the first attempt (Gammie, Cargill and Gammie, 2004). Again, this resonated with my personal experience from a career working in a Big 4 firm that accounting graduates were not preferred for trainees positions as it was believed non-accounting graduates often performed better in professional exams and had better developed non-technical skills. These two factors questioned the value of an accounting degree, in terms of technical knowledge covered and non-technical skills developed, and therefore became the focus of investigating why accounting graduates were not preferred and led to the development of the following aims and objectives.

1.4 Aim and Objectives

Aim

A critical evaluation of the value proposition of an accountancy degree as a foundation for training as a professional accountant.

Objectives

- To investigate the factors influencing the performance of Big 4 trainees in the Institute of Chartered Accountants of Scotland's (ICAS) Test of Professional Skills Examinations[3] (Chapter 2: Paper 1)
- To undertake a critical comparison of the perception of non-technical skills developed at university by accounting and non-accounting graduates who go on to complete a Big 4 ICAS training contract (Chapter 3: Paper 2)
- To investigate the institutional practices and beliefs that influence the development of non-technical skills in Scottish accountancy degrees. (Chapter 3: Paper 2)
- To investigate the balance (or imbalance) of an economic and education logic in Scottish accountancy degrees and the impact of this on course content decisions made by Scottish accountancy degree providers (Chapter 4: Paper 3)

[3] There are three levels of ICAS examinations. Exemptions are available from all or part of the first level of examinations, Test of Competence, for those who have undertaken accredited subjects at university. Test of Professional Skills is the 2nd level of examinations but the first level sat by all trainees.

The overarching purpose of the research was to understand a phenomenon, in that accounting graduates are not being preferred by accountancy recruiters, so as to inform discussion on potential mitigations by providers of undergraduate accountancy degrees who depend on employability of their graduates for the ongoing success and sustainability of their degrees. Different theoretical underpinnings were required for the different aspects of the problem being investigated and thus were considered on a paper by paper basis.

Paper 1 (Chapter 2) considers the factors which impact the performance of graduate trainees in ICAS's Test of Professional Skills examination. Selection of performance variables were guided by Porter and Lawler's (1968) model of performance. This model incorporates both bio-data factors and factors based on expectancy theory which were identified as key factors in previous performance studies.

Paper 2 (Chapter 3) provides a comparative analysis of the perception of non-technical skills developed at university by accounting and non-accounting graduates who go on to undertake a Big 4 ICAS training contract and investigates, through interviews with Scottish academics, the institutional practices and beliefs that influence the development of non-technical skills in accountancy degrees. This is interpreted through the lens of institutional theory, particularly in relation to securing legitimacy for undergraduate accounting degree programmes.

Paper 3 (Chapter 4) investigates the balance (or imbalance) of economic and education logic, based on institutional theory, in Scottish accountancy degrees and the impact of this on course content decisions made by Scottish accountancy degree providers.

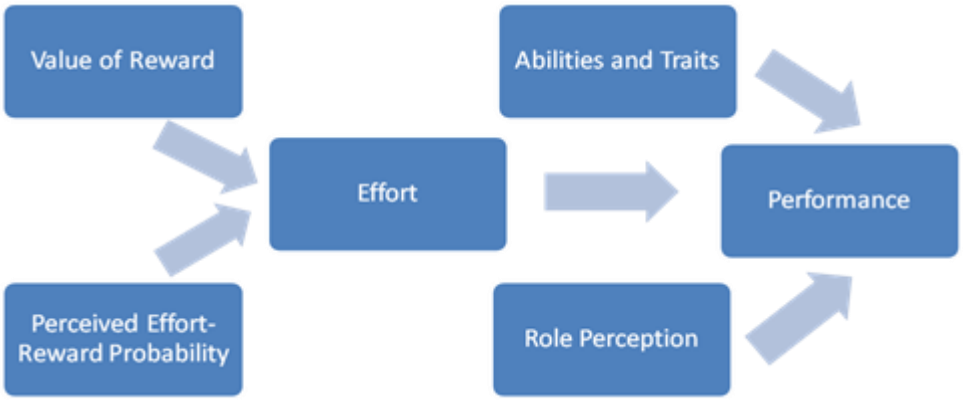
The theoretical underpinnings of these papers are detailed further in sections 1.5 and 1.6.

1.5 Theoretical Underpinning Paper 1 (Chapter 2): Model of Performance

From reviewing the literature, biodata was identified as the most common basis for predicting performance in accountancy exams. Of particular relevance to this study were two previous studies which developed models to predict performance in professional examinations based on biodata factors such as previous academic performance, age and gender (Harvey-Cook, 1995 and Gammie, 1999). The biodata method is underpinned by the long standing view held by psychologists that what we have done in the past is a valid predictor of what we will do in the future (Owens and Schoenfeldt, 1979; Gunter, Furnham and Drakeley, 1993). England (1971) advocates the biodata method for predictive purposes, whereby data is collected from a large data set with a view to determining whether or not it is related to the criterion of interest.

However, the review of literature on performance at undergraduate accountancy level and in the wider educational literature, revealed further factors which could impact performance and which could add to the explanation of professional accountancy examination performance. In particular, expectancy theory, which addresses how well a student expects to perform, appeared to be a common explanatory factor within the education literature generally and a common variable in understanding undergraduate accountancy examination performance (Gul and Fong, 1993; Carpenter and Friar, 1993; Wooten, 1998). After reviewing different models of performance, Porter and Lawler's (1968) model, was selected to inform the variable selection and model development. Porter and Lawler (1968) developed a model to explain the performance of managers in the work environment. Ott, Deines and Donnelly (1988) suggested that part of Porter and Lawler's (1968) model, shown in Diagram 1, could be used to explain the performance of students in university level accountancy education.

Diagram 1: Extract from Porter and Lawler's (1968) Model of Performance



Source: Porter and Lawler (1968) in Ott, Deines and Donnelly (1988)

Porter and Lawlers's (1968) model uses expectancy theory to develop two key drivers of effort, value of reward and perceived effort-reward probability. Applying this to examination performance, this is how much a student values the rewards of passing examinations and the belief that additional effort will lead to the reward(s) on offer (Porter and Lawler, 1968). In addition, abilities and traits, which incorporates the biodata measures previously mentioned, and role perception, reflecting that if effort is exerted into the right activities this effort would lead to improved performance, are identified as additional factors which impact performance. For this study, an adjustment was made to incorporate a further impact on performance, barriers to effort, which was identified by the literature as impacting on performance in accountancy exams (Wooten, 1998; Stinebrickner and Stinebrickner, 2003; Hunt, Lincoln and Walker 2004; Siebert et al., 2006, Roos, 2009).

The variable selection based on Porter and Lawler's (1968) model, which incorporated biodata factors of previous studies of performance at professional level (Harvey-Cook, 1995 and Gammie, 1999), yielded slightly disappointing results. Very few significant explanatory factors were identified and on investigation, the sample of Big 4 trainees appeared too homogeneous. However, this did indicate that for graduates who had secured a Big 4 training contract, there was no difference in performance between accounting and non-accounting graduates. Attention was therefore turned, through paper 2 and paper 3, to the development of non-

technical skills by accounting graduates in order to investigate why accounting graduates are not at an apparent advantage when applying for trainee accountancy positions with larger firms.

1.6 Theoretical Underpinning Paper 2 (Chapter 3) and Paper 3 (Chapter 4): Institutional Theory

Institutional theory was used to underpin the explanation of non-technical skills development by Scottish accountancy degree providers in papers 2 and 3. In this theoretical context, Kraatz and Block (2008, p.243) summarise social institutions as the 'rules of the game' which direct and limit organisational behaviour. Key to both papers 2 and 3 is understanding what directs and limits the behaviour of Scottish academics who are involved in course content decisions in undergraduate accounting education.

Paper 2 investigates institutional practices and beliefs that influence the development of non-technical skills in accountancy degrees. In understanding this, particular consideration was given to the legitimacy of undergraduate accounting degrees within institutional theory. Social institutions operate within an institutional environment and Scott (2014) identifies three elements of this institutional environment: regulative, being the rules which participants have to comply with; normative being social norms which are complied with as participants feel they ought to; and cultural-cognitive, where participants do not actively make decisions on how to behave but where behaviour reflects the taken for granted way of institutional life (Palthe, 2014; Scott, 2014). These elements can drive the behaviour of participants within the institutional environment and can each form a basis for securing legitimacy of institutional practices and beliefs. In this regard, Suchman (1995, p.574) defines legitimacy as:

> *generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.*

The importance of legitimacy to organisations is identified by Friedland and Alford (1991) who identify that organisations who are perceived to be legitimate are better at getting resources from other actors in the organisational field despite potential inefficiencies.

In applying this theory, paper 2 concludes that the normative pressure of accreditation legitimises Scottish accountancy degrees. Maintaining this accreditation means that providers of accountancy degrees have to make prioritisation decisions over which non-technical skills to develop in the limited space of an undergraduate degree. The empirical evidence collected for paper 2 indicates that academics with oversight of Scottish accountancy degree programmes appear to be institutionalised in a common belief of the importance of interpersonal and communication skills. Whilst these are undeniably important skills to develop, paper 2 also finds the failure to prioritise intellectual skills is felt by accounting graduates who perceive their intellectual skills development, key skills sought by employers, as significantly weaker than non-accounting graduates and this could actually threaten the legitimacy of accountancy degrees going forward.

With paper 2 indicating intellectual skills were not the main priority for development, paper 3 used a different aspect of institutional theory, institutional logics, to explore what drives the behaviour of Scottish academics when making course content decisions for accountancy degree programmes. Institutional logics shape the behavior of actors within a social institution (Lander, Koene and Lissen, 2013) and hence were identified as an appropriate theoretical framework for the analysis of paper 3. Thornton and Ocasio (1999, p.804) define institutional logics as:

> *the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality.*

Two conflicting logics were identified from literature for Scottish degree providers: education and economic. This thesis argues that where underpinned by education logic, institutional actors', being academics', behaviour will be guided towards developing programmes that

focus on intellectual skills, which are identified as key skills required by both a vocational and liberal outlook. By contrast, the economic logic will guide actor behaviour towards seeking the financial success of the organisation. Thereby, potential students are viewed as 'customers,' maximising the number of home students and increasing international student numbers is identified as a key driver in increasing revenue and using resources as efficiently as possible.

These logics advocate different actions and goals which results in tension in terms of course content decisions which is investigated in paper 3. In particular, the literature identifies a potential tension between the economic logic driving a technical based education which fails to adequately develop intellectual skills sought under an education logic. This failure to develop intellectual skills due to an overly technical education being a common criticism in literature (Gray et al., 2001; Lister, 2010; Scott, 2010; Wilson, 2011) and explanatory factors from literature for this technical focus include accreditation (Wilson, 2011; Duff and Marriott, 2012), league tables (Hopper, 2013; Humphrey et al. 1996), massification of the university sector (Hopper, 2013) and research prioritisation (Humphry, Lewis and Owen, 1996; Dewing and Russell, 1998) all of which have economic roots. This paper seeks to investigate the tension between economic and education logics, using a theoretical framework to understand what is driving the behaviour of Scottish academics when facing these conflicts.

Extending the finding in paper 2, paper 3 confirms that accreditation is the key driver for course content decisions on Scottish accountancy degree programmes. The key driver for accreditation is traced to economic logic and is identified as in conflict with the development of intellectual skills guided by an education logic. This included conflict between meeting multiple different professional accounting body accreditation requirements, conflict between accreditation and satisfying the requirements of university management and conflict between accreditation and academics' beliefs about the purpose of higher education highlights conflict. Paper 3 identifies these conflicts and also further investigates how the Scottish academics with oversight of degree programmes respond to these conflicts.

1.7 Summary

This thesis is rooted in understanding how well an accounting degree is preparing an accounting graduate for gaining employment, particularly with large accountancy firms, and developing as an accounting professional. It would be reasonable to expect an accounting graduate to outperform a non-accounting graduate in achieving these goals but anecdotal evidence, gathered by the researcher, suggests otherwise. Two key elements desired by those recruiting graduates for professional accountancy positions were identified: potential to succeed in professional exams and the development of non-technical skills.

Professional exam performance was the first avenue of research (Paper 1 in Chapter 2). This was initially planned as a two stage process. Firstly, to develop a statistical model to predict performance in ICAS examinations and secondly, to evaluate differences between accounting and non-accounting graduates. However, the initial model development stage revealed that for graduates who had secured a Big 4 training contract there was no differences in examination performance between accounting and non-accounting graduates which limited any subsequent analysis of differential performance.

Attention was, therefore, turned to the second aspect of non-technical skills development. The literature review in this area revealed a recurring criticism in the lack of intellectual skills demonstrated by accounting graduates. Paper 2 (in Chapter 3) investigates non-technical skill development, from the perception of accounting and non-accounting graduates and academics with oversight of Scottish accountancy degree programmes. The results indicated intellectual skills were not prioritised for development by accountancy degree providers. This was further investigated in Paper 3 (Chapter 4) through the investigation of the balance between economic and education logics in Scottish accountancy degrees and how this impacted the design of the accountancy degree.

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CHAPTER 2: AN EXPLORATORY STUDY OF FACTORS WHICH IMPACT PERFORMANCE IN PROFESSIONAL ACCOUNTANCY EXAMINATIONS

2.0 Abstract

Examinations continue to play an important role in becoming a professional accountant. This study uses a theoretical model of performance to identify factors which impact on the performance of Big 4 trainees undertaking examinations to become members of the Institute of Chartered Accountants of Scotland. Confirming the long held view by psychologists, that past behaviour is the best predictor of future behaviour, academic success at university was found to be the most significant factor in explaining success in passing professional examinations. Despite a range of performances being recorded, the sample population appeared too homogeneous to determine significant explanatory factors across all performance measures. However, the model may be of benefit for future studies of examination performance.

Key Words: Accounting, Education, Examinations, Performance, Profession

2.1 Introduction

Human Capital, including trainees, is a key factor in the success of accountancy firms. This is illustrated by KPMG (2015a, p.1) who note that "people are the key to our success" and Deloitte (2015a, p.1) who identify that "The success of our firm depends utterly on the talent of the people who work here." PriceWaterhouseCoopers, the UK's largest accountancy firm, "invest a huge amount of effort to identity and recruit the most talented students" (PWC, 2008, p.2). When recruiting accounting trainees, one of the most important factors for accountancy firms is the ability of recruits to pass their professional examinations (Gammie, Cargill and Gammie, 2004). Trainees who do not pass their professional examinations first time not only have cost implications for the firm, primarily as a result of a reduction in chargeable hours, but are also unlikely to develop as a key member of staff (Gammie, Cargill and Gammie, 2004). From the perspective of Big 4[4] trainees, the psychological impact of failing an examination is compounded by the strong possibility that their employment contract may be terminated. Whilst the Institute of Chartered Accountants of Scotland (ICAS) allows four attempts at examinations, anecdotal evidence suggest that Big 4 firms have terminated contracts after one or two attempts.

Big 4 firms use a range of recruitment techniques, including application forms, interviews and assessment centres (Deloitte, 2015b; Ernst and Young, 2014; PWC, 2014a; KPMG, 2013) to identify the best graduates. In terms of academic ability, a double hurdle has historically been set[5] by all Big 4 firms in the form of school and university results whereby all require a minimum of between 280-320 UCAS points[6] and at least a second class (upper division) degree at honours level.[7] Despite these academic hurdles, significant numbers of trainees fail one or

[4] Big 4 firms comprise Ernst and Young, PriceWaterhouseCoopers (PWC), KPMG and Deloitte. FRC (2011) states that 808 trainees registered with ICAS in 2010. Big 4 firms confirmed a total of 574 (71%) commenced a training contract with them in 2010. This included 94 trainees on a specialised tax route.

[5] Subsequent to data collection, PWC (2017) and Ernst and Young (2015) have decreased their academic requirements. This is discussed later in the paper.

[6] In the UK, "the UCAS Tariff is the system for allocating points to qualifications used for entry to higher education" (UCAS, 2011, p.1) . For example, 320 UCAS points could be achieved by obtaining one 'A' grade and two 'B' grades in A-Level examinations in England. Students usually require 3 A-Levels to gain access to university education.

[7] This represents the award made at undergraduate level. Depending on performance in a student's honours year, different grades will be awarded to passing students: First Class (representing the highest grade); Second Class (Upper Division); Second Class (Lower Division) and Third Class.

more of their professional examinations. Recent statistics (ICAS, 2014) indicate an average pass rate of 77% for the Test of Professional Skills (TPS) which is the first level of ICAS examinations that all trainees, irrespective of their educational background, undertake.[8]

Examinations have been identified as playing an important role in maintaining the professional status of the accountancy profession (Annisette and Kirkham, 2007). Whilst acknowledging that professional accountancy examinations have been criticised for being too technical and for failing to develop socially and ethically aware accountants (Hatherly, 2007; Sikka et al., 2007), the ability to pass professional accountancy examinations remains an important component in becoming a professional accountant. All seven of the Great British professional bodies[9] require new members to complete professional examinations in order to gain admission.

This study aims to gain an understanding of the potential causal factors of Big 4 trainees' performance in ICAS TPS examinations. Two previous studies have been undertaken in the UK to investigate the causal factors of performance in professional accountancy examinations (Harvey-Cook, 1995; Gammie, 1999). Harvey-Cook (1995) and Gammie (1999) focused on biodata variables commonly found in application forms to develop models to predict examination success. By drawing on different performance models in existence, this study will add to the literature by exploring a wider view of the factors which may impact the performance in ICAS examinations.

In addition to widening the performance explanatory variables, this study will also add to literature by providing an alternative research sample. Harvey-Cook (1995) looked at performance in the Institute of Chartered Accountants in England and Wales (ICAEW) examinations by trainees in medium sized firms (therefore excluding Big 4 trainees) whereas this study specifically examines Big 4 trainees undertaking ICAS examinations as this is where

[8] There are three levels of ICAS examinations. Exemptions are available from all or part of the first level of examinations, Test of Competence, for those who have undertaken accredited subjects at university. Test of Professional Skills is the 2nd level of examinations but the first level sat by all trainees.

[9] Comprising the Association of Chartered Certified Accountants (ACCA); The Association of International Accountants (AIA); Chartered Accountants Ireland (CAI); Chartered Institute of Management Accountants (CIMA); Chartered Institute of Public Finance and Accountancy (CIPFA); Institute of Chartered Accountants in England and Wales (ICAEW), Institute of Chartered Accountants of Scotland (ICAS).

the majority of ICAS trainees work. Whilst Gammie's (1999) study is comparative in relation to the performance measure of ICAS examinations, the composition of ICAS trainees has subsequently changed. This research will therefore explore whether the findings of Gammie (1999) are still relevant to today's trainees. Gammie's (1999) selection model was based only on trainees who had completed the Scottish system of school education. Whilst this represented the majority of ICAS trainees at the time, a number of English firms are now using ICAS as their training provider. The proportion of trainees with a non-accountancy degree has also changed considerably: around 20% held a non-accounting degree when Gammie's (1999) study was conducted compared to 68% more recently (FRC, 2012). In addition, Gammie's (1999) sample comprised only those students who had successfully negotiated the examination hurdles and become ICAS members thus excluding those who had failed examinations and thus had never obtained membership. This study will follow trainees through the examination system and will therefore also include trainees who fail the TPS examinations and do not progress to membership.

2.1.1 The Context of the Study

ICAS is the oldest accountancy body in the world (Bruce, 2004) and is a member of the International Federation of Accountants (IFAC), the Fédération des Experts Comptables Européens[10] and the Common Content Project[11] (ICAS, 2013).

Graduates seeking an ICAS chartered accountancy qualification must complete a three year training contract comprising three stages of ICAS examinations: Test of Competence (which is subject to exemptions if an accredited degree is undertaken); Test of Professional Skills and Test of Professional Expertise as well as undertaking relevant work experience with an approved employer. Trainees can undertake different routes of study for the TPS examination stage which is the focus of this study. This can be done on (a) an intensive basis, with trainees completing an intensive period of study followed by all examinations, (b) on a modular basis,

[10] Fédération des Experts Comptables Européens (FEE) is an organisation comprising 45 professional accountancy bodies from European Countries (FEE, 2013a). Its objectives include advancing the interests of the European accountancy profession, promoting co-operation between members and contributing to public policy (FEE, 2013b).

[11] The Common Content Project is a collaboration of accountancy bodies which aims to develop, maintain and unify benchmarks for accounting education (Common Content Project, 2015).

with trainees completing one or two modules at a time or (c) on a block basis, where trainees take classes over several months, in between periods of work, before sitting all four examinations of the TPS stage.

In 2011, 2,472 trainees were registered with ICAS: 96% of whom were employed in public practice and the remaining 4% in industry and commerce (FRC, 2012). Most (98%) of ICAS trainees hold a degree but only 31% of these hold an accredited accounting degree (FRC, 2012). The sample for this study comprises Big 4 trainees who commenced an ICAS training contract in 2010.

Big 4 trainees made up 71% of the students who had registered with ICAS in 2010.[12] These trainees have a similar academic profile, due to the aforementioned academic selection criteria, and all trainees would have been exposed to a similar training environment. Despite these similarities, some of these trainees pass the ICAS examinations and some do not. By selecting a homogeneous sample such as this, this study aims to pinpoint what determines the differential performance within this particular group of students.

2.2 Literature Review of Factors Impacting Performance

Many of the previous predictive studies of future performance are predicated on a long standing view held by psychologists (Owens and Schoenfeldt, 1979; Gunter, Furnham and Drakeley, 1993) that what we have done in the past is a valid predictor of what we will do in the future. This psychological theory underpins the biodata method for predictive purposes, as advocated by England (1971), whereby data is collected from a large data set with a view to determining whether or not it is related to the criterion of interest. A number of studies have identified the value of using biodata specifically to predict employee performance (*inter alia* Rothstein et al., 1990; Gunter, Furnham and Drakeley, 1993; Stokes et al., 1999; Harold, McFarland and Weekley, 2006). The use of biodata has also been extended to predict student performance (Oswald et al., 2004). Thus, biodata factors have been identified which explain

[12] FRC (2011) states that 808 students registered with ICAS in 2010. Big 4 firms confirmed a total of 574 (71%) commenced a training contract with them in 2010.

the performance of trainees in accountancy examinations at both university and professional level and which are articulated in the following literature review.

2.2.1 Academic Abilities and Traits

Previous academic success, measured by school results, such as UCAS points in the UK or SAT scores in America, is a common explanatory factor for performance level in university level accountancy education (Doran and Bouillon, 1991; Bartlett, Peel and Pendlebury, 1993; Ward et al., 1993; Gist, Goedde and Ward, 1996; Jackling and Anderson, 1998; Wooten, 1998; Koh and Koh, 1999; Gammie, Jones and Robertson-Millar, 2003; Rankin et al., 2003; Duff, 2004; Byrne and Flood, 2008; Al-Twaijry, 2010; Maksy, 2012). Previous academic performance is also identified as an explanatory factor in professional accountancy education with explanatory factors being identified from both school (Harvey-Cook, 1995; Gammie, 1999) and university (Harvey-Cook, 1995; Gammie, 1999, 2000). Outside the UK, Grade Point average has been found to be a significant explanatory variable in the Canadian Certified Management Accountant (CMA) exam (Kapoor and Islam, 2005) and the American Certified Public Accountants (CPA) exam (Howell and Heshizer, 2008; Brahmasrene and Whitten, 2010).

Consideration has also been given to previous academic performance in specific subjects. Undertaking high school accounting has been identified as resulting in superior performance in first year university accountancy education (Lynn, Shehata and White, 1994; Tho, 1994; Naser and Peel, 1998; Rankin et al., 2003; Rowbottom, 2013). However, this benefit appears to be lost in later years' of university with no significant relationship identified between high school accounting and performance in later years' study of accountancy at university (Doran and Bouillon, 1991; Jackling and Anderson, 1998; Bartlett, Peel and Pendlebury, 1993; Gammie, Jones and Robertson-Millar, 2003). Rowbottom (2013) even found that those with high school accounting had a lower overall degree performance, despite initially performing better in first year. The performance in accounting subjects in earlier years at university has, however, been found to be a significant predictor of later degree performance (Byrne and Flood, 2008; Bealing and Baker, 2012; Maksy, 2012). Although this is not necessarily also the case for professional level accountancy examination, Harvey-Cook (1995) for example did not find a relationship between the study of accountancy at university and professional

examination performance although Gammie (1999) subsequently did find a positive relationship between those undertaking an accredited accounting degree and professional examination performance.

At university level, consideration has also been given to previous performance in Mathematics (Gul and Fong 1993; Ward et al., 1993; Tho, 1994; Koh and Koh, 1999; Bartlett, Peel and Pendlebury, 1993; Naser and Peel, 1998; Guney, 2009), English (Gul and Fong, 1993; Ward et al., 1993; Naser and Peel, 1998) and Economics (Bartlett, Peel and Pendlebury, 1993; Tho, 1994). Both Bartlett, Peel and Pendlebury (1993) and Tho (1994) found a significant relationship between Economics and performance. However, contradictory results means that no overall conclusions can be drawn on whether or not there is a significant link between the study of Mathematics and English and subsequent performance in university level accountancy education. Interestingly, it is Mathematics and English which are often set as an entry requirement to gain access to university.

In professional accountancy examinations, performance predictors in Mathematics and Language (English and Foreign) were identified by both Harvey-Cook (1995) and Gammie (1999). However, despite this evidence, only three (Deloitte, Ernst and Young and KPMG) of the four Big 4 firms had requirements for Mathematics and English and these were limited to lower GCSE[13] level with requirements ranging from grades A-C. This indicates a high level of skill in these areas was not perceived as essential by the Big 4 firms.

2.2.2 Personal Traits

Several studies have considered gender as an explanatory variable in university accounting education but the results have again been contradictory. Some studies have found gender does not significantly impact on performance (Buckless, Lipe and Ravenscroft, 1991; Carpenter and Friar, 1993; Gist, Goedde and Ward, 1996; Keef and Roush, 1997; Jackling and Anderson, 1998; Naser and Peel, 1998; Gammie, Jones and Robertson-Millar, 2003; Byrne and Flood, 2008; Guney, 2009). However, work conducted by Tho (1994) and Arthur and Everaert (2012) found that females perform better than males, whereas the studies by Doran and Bouillon (1991) and Koh and Koh (1999) found the opposite and concluded that males

[13] GCSEs are the qualifications studied at school level in England and Wales typically by 14-16 year olds. Those who continue with school education after completing GCSEs will typically go on to study higher level, A-Levels.

outperform females in early years of university study. In professional accountancy examinations, Harvey-Cook (1995) did not find a significant relationship between performance and gender. Gammie (1999) however found that females performed better but this was only significant for graduates holding an ordinary degree and not for graduates holding an honours degree. Roos (2009) also found females performed better in CIMA examinations but this was not found to be significant. Contrasting with this, Brahmasrene and Whitten (2010) found males outperformed females in the CPA examination.

Research into age has also been inconclusive. At university level accounting education, Lane and Porch (2002) and Guney (2009) found performance improved as age increased but this contrasts with Koh and Koh (1999) who found younger students performed better. Naser and Peel (1998), Rankin et al. (2003) and Gammie, Jones and Robertson-Millar (2003) all concluded that age had no significant impact on performance in university level accounting education. Likewise, in professional accountancy examinations, Gammie (1999) and Howell and Heshizer (2008) found no significant relationship between age and performance. This is not however conclusive as Roos (2009) found younger students performed better in CIMA examinations and Brahmasrene and Whitten (2010) found older students performed better in the CPA examination.

Regarding race, Carpenter and Friar (1993) found majority (white) students outperformed minority students, significantly so for males. However, Keef and Roush (1997) did not find race to have a significant impact on performance in university level accounting education. Likewise, Guney (2009) also found no significant differences in performance when looking at country of origin.

Therefore whilst there is evidence that prior performance does impact on future performance, the components of this prior performance tends to vary between studies. Likewise, the evidence on gender, race and age is also inconclusive. This is a criticism of the biodata approach, in that models are not transportable between settings. However, it also raises the question as to whether biodata variables are sufficiently capturing all the explanatory variables of performance. To expand the understanding of performance, consideration is

given to theoretical models of performance which indicate that in addition to biodata factors, there are other factors which can impact performance.

2.2.3 Theoretical Model of Performance

Porter and Lawler (1968) developed a model to explain the performance of managers in the work environment, bringing together abilities and traits with other performance drivers. This model has its roots in Expectancy Theory. Expectancy Theory proposes that a person has behaviour responses based on their expectation of what that behaviour will result in (Porter and Lawler, 1968). The statement and development of Expectancy Theory originated from work by Tolman (1932) and Lewin (1938) with Atkinson (1964) and Vroom (1964) being of particular note in its subsequent development (in Porter and Lawler, 1968).

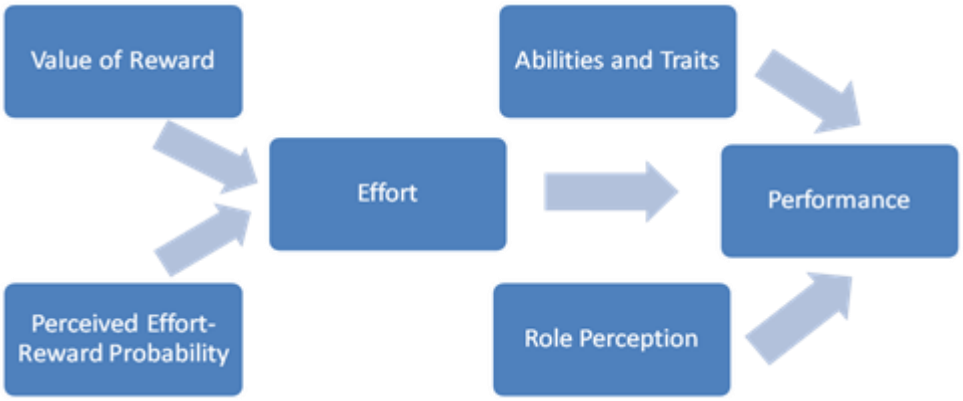
Atkinson (1964) advanced the initial statement and development of Expectancy Theory by separating the value and motives of reward from the self-belief in being able to do what is required to get the reward. Vroom's (1964) Expectancy Theory specifically looked at employee motivation and identified three variables for individuals to be motivated towards certain goals: Valance (the value of rewards of performance), Expectancy (the belief that extra efforts will result in better performance), and Instrumentality (the belief that rewards of performance will actually be gained).

Porter and Lawler's (1968) model draws on Vroom's (1964) Expectancy Theory by identifying two sub-components which impact the effort exerted by managers in the working environment: value of reward and effort-reward probability. How much a student values the reward on offer, also known as 'Valance' (Vroom, 1964), can be either extrinsic, such as a financial incentive, or intrinsic, such as personal satisfaction (Porter and Lawler, 1968). In addition to valuing the reward on offer, for a student to exert additional effort they must also believe that exerting additional effort will lead to the reward(s) on offer, this is known as the perceived effort-reward probability (Porter and Lawler, 1968) and is based on the 'Expectancy' element of Vroom's (1964) theory. In addition to effort exerted, Porter and Lawler (1968) expanded the work of previous theorists by including further variables which recognise that increased effort may not lead to improved performance if the individual does not have the

required abilities and traits or does not exert their efforts in the right activities that would lead to improved performance (known as role perception).

Ott, Deines and Donnelly (1988) suggested that part of the Porter and Lawler's (1968) model could be used to explain the performance of students in university level accountancy education (reproduced in Diagram 2). The unused part of Porter and Lawler's model considered how performance achieved is rewarded in the work place and how satisfied managers were with this reward, feeding back into how future rewards are valued. As this unused part is more applicable to the on-going work environment, this has also been excluded, in line with Ott, Deines and Donnelly (1988).

Diagram 2: Theoretical Model of Performance



Source: Porter and Lawler (1968) in Ott, Deines and Donnelly (1988)

This model of performance extends the biodata approach, which for examination success predictors is most often restricted to the abilities and traits elements, to two further factors which impact performance: effort and role perception. These factors are discussed below.

2.2.3.1 Effort

Porter and Lawler's (1968) model identifies that increased effort should lead to increased performance. Wooten (1998) found this relationship to also hold true when applied to university level accounting education.

Research in accounting education at undergraduate level has identified a relationship between effort and both value of reward (Ott, Deines and Donnelly 1988; Wooten, 1998) and perceived effort reward probability (Geiger and Cooper, 1996). Research at undergraduate level in accounting education has also attempted to assess the impact of effort on performance. Wooten (1998) measured effort through class attendance, homework attempted and study guide usage and found effort to be a strong predictor of performance. Guney (2009), on the other hand, measured effort through the hours spent each week on modules and found a negative co-efficient with performance, which led to the suggestion that students, who have difficulty understanding work, may work harder but fail to get a grade that reflects their additional effort.

2.2.3.2 Role Perception

If a student is going to exert additional effort, they will need to decide how this will be exerted. In relation to this, Porter and Lawler (1968) identified a further factor which impacts performance: role perception. Role perception relates to the kind of activities and behaviours a student believes they should engage in to improve performance (Parry, 1990) or the 'best way to study' (Parry, 1990 p.225). If a student's perception of how to study results in their effort being effectively directed in what is required by the examination, this will result in improved performance. Studies at university level have given consideration to the different ways in which students study (Naser and Peel, 1998; Rankin et al., 2003) and specifically to role perception (Ott, Deines and Donnelly, 1988; Parry, 1990). It is anticipated that this factor may be of relevance despite the fact that the findings from undergraduate performance are not transferrable to professional performance due to the different teaching approaches being used in professional examinations.[14] Indeed, Howell and Heshizer (2008) and Brahmasrene and Whitten (2010) both looked at different ways in which students studied for the CPA examination and found a superior performance for those who had undertaken a review course as opposed to those who did not.

[14] Students in professional training are provided with all the required study materials and the majority of teaching is carried out in the classroom setting through a combination of lectures and workshop exercises (ICAS, 2014). This contrasts to university teaching where students are expected to undertake a high volume of independent research.

2.2.3.3 Barriers to Effort

In addition to the performance explanatory factors identified by the Porter and Lawler's (1968) model, the literature identifies a further potential explanatory factor, namely barriers to effort, which has particular resonance for professional level education. Despite a student highly valuing a reward on offer and perceiving additional effort will lead to this reward, barriers could prevent additional effort being exerted. Porter and Lawler's (1968) model has therefore been revised to include barriers to effort as a further explanatory variable of effort.

The first barrier to effort identified in literature is work commitments. Work commitments could be of particular relevance to ICAS trainees who are expected to be given 'plenty of responsibilities from the onset' (ICAS, 2010a, p.6). A culture of long working hours has long been associated with the accountancy profession. A 2010 survey of ICAS members found that 37% worked between 45-54 hours a week, 12% between 55-64 hours per week and 3% exceeded 65 hours a week (ICAS, 2010b). If CA trainees are also expected to work additional hours, this could potentially impact the effort they are able to exert in examinations preparation.

Whilst no studies examining the impact of work commitments on professional exam performance were identified, work commitments have been found to have a negative impact, therefore posing a barrier to, university level performance (Stinebrickner and Stinebrickner, 2003; Hunt, Lincoln and Walker 2004; Siebert et al., 2006). However, again the literature is not conclusive as Wooten (1998) did not find that work commitments significantly impacted performance in university level accounting education. Siebert et al. (2006) identified a further barrier in that socialising negatively impacted on performance. However, Wooten (1998) did not find participation in extra-curricular activities to impact performance.

Family commitments have also been considered as a barrier to effort and Wooten (1998) found family commitments to have a negative impact on performance for students aged over 25. In professional examinations, Roos (2009) also considered family commitments, measured by marital status and number of children, as a potential barrier to effort but found these to have no significant relationship with CIMA examination results in South Africa.

2.3 Research Method

ICAS have a tradition of granting access to ICAS members for research purposes but not ICAS trainees. However, contacting ICAS members rather than ICAS trainees would have excluded those who had failed their examinations as they would not have become members. ICAS members would therefore not provide a full assessment of performance. The only way to access trainees of ICAS is therefore through individual training firms. ICAS's 2010/11 training directory identified 59 authorised employers, many of which only have one or two trainees at each stage. Big 4 trainees however made up 71% of the trainees who had registered with ICAS in 2010[15] and these trainees are likely to be exposed to similar work environments and therefore any differential in examination performance is less likely to be caused by differences in work environments. Therefore, the research method used was an online questionnaire to all UK Big 4 trainees (n=480) who commenced an ICAS training contract in 2010.[16] Due to data protection, the questionnaire was provided to each of the Big 4 firms who agreed to send this out to their trainees.

An online questionnaires was selected to reach the high number of participants located in geographically disperse offices. The questionnaire was completed at two stages: prior to (in November 2010) and subsequent to (in November 2011) sitting ICAS TPS examinations. Each stage of the questionnaire was distributed, along with a covering email explaining the research, using Survey Monkey in agreement with the Big 4 firms. A copy of both stages of the questionnaire can be found in thesis Appendix A. The questionnaire comprised primarily closed questions which could be coded for statistical analysis. However, open questions were also used when this was not appropriate, such to expand on closed question responses, for example, 'please specify any other factors which negatively impacted on the effort you exerted into studying for your TPS examinations.' The questionnaire used conditional branching to create custom pathways for each participant and hence varied the number of questions for each participant based on earlier responses. For example, respondents who had subsequently left their training provider by the time of the second

[15] FRC (2011) states that 808 trainees registered with ICAS in 2010. Big 4 firms confirmed a total of 574 (71%) commenced a training contract with them in 2010.

[16] With the exception of one group (n=94) from one of the Big 4 firms who were on a specialist intensive tax route and not contactable at the required time.

questionnaire were on a separate pathway from those who were still with their training provider.

The aforementioned model of performance (developed from Porter and Lawler's 1968 model in Ott, Deines and Donnelly, 1988) provided the theoretical basis for variable selection and therefore the basis of the questionnaires. Specific questions within this model were developed from the accounting education literature. For biodata factors, shown as part of abilities and traits in the model, this was driven primarily by the two previous studies at professional level (Harvey-Cook, 1995 and Gammie, 1999), supplemented with studies at undergraduate level. For areas previously unexplored at professional examination level, this was guided by literature at undergraduate level, adapted for the professional environment where necessary. The first questionnaire comprised demographic factors, such as age, sex, degree undertaken and likert ratings (all on a consistent 7 point scale) of trainee perception factors, such as value of rewards. The second questionnaire obtained further variables though likert ratings (all on a consistent 7 point scale) on trainee perception factors, such as effort exerted and the impact of potential barriers. Two performance variables were also gained from the second questionnaire: percentage grade achieved in each TPS subject and a dichotomous measure of whether the trainee passed all their TPS examinations on the first attempt or not.

The questionnaires were piloted and minor adjustments made before being sent to the research population, with a covering letter, via email. Data was entered into SPSS for statistical analysis and tests of significance were performed. Details of tests are shown in appendix 1.

2.3.1 Research Population

104 trainees returned the first questionnaire giving a response rate of 21% but further drop outs on the second questionnaire, which was only sent to those who had completed the first questionnaire, gave a useable response rate of 16%[17] with 78 returned questionnaires. This

[17]This relatively low response rate may reflect the way in which the questionnaire was disseminated. As contact could not be made directly with the trainees all contact was made via the firms. The initial covering email and follow up emails were therefore limited to what each firm was willing to do.

response rate is reasonable compared with other research studies which have utilised an email questionnaire (Gray, 2010, (19.2%) and Howell and Heshizer, 2008 (18%)).

There are four subjects at TPS level: Advanced Finance, Assurance and Business Systems (ABS), Taxation and Financial Reporting. The majority of trainees (n=69) had sat all four examinations. All but four (n=65) of these trainees provided the specific grades achieved in each module. Of the remaining nine trainees, eight had failed one or more examinations and were either awaiting re-sits or had left their training employer. The remaining one student had sat only two examinations and had passed both of these. Statistics were therefore based on the number of trainees who had sat each examination: ABS: n=67, Advanced Finance: n=68, Taxation=72, Financial Reporting: n=71, Pass/Fail: n=77.[18] Consideration is given later in the paper to the impact of the route of study taken on exam success.

Due to the response rate, additional tests for non-response bias were performed. Statistical data on age profile, gender and relevance of degree is published annually by the Financial Reporting Council for the total ICAS trainee population. The sample for this study comes from one year group of the total ICAS population. Chi-Squared tests were performed on all three categories (age, gender and degree relevance) to identify if the sample represented the full year group. No indication of response bias was identified as there were no significant differences between the sample and the population (Gender[19]: $\chi^2(1)=1.244$, p=0.265; Age[20]: $\chi^2(1) = 1.555$, p= 0.212 and Relevance of Degree[21]: $\chi^2(1) = 1.731$, p=0.188). In addition, there is nothing to suggest this year group is not representative of the full ICAS trainee population as the intake of ICAS trainees is homogeneous, with the statistics for age, gender and degree relevance similar in 2009, 2010 and 2011 (FRC, 2010, 2011, 2012).

[18] The 'pass' category includes trainees who have passed all four examinations first time. The 'fail' category includes trainees who have failed at least one examination. This category therefore includes trainees who have not sat all examinations but who have failed at least one examination. The number of trainees in the pass/fail category is therefore higher than the number of trainees in any individual subject category. In addition, 1 trainee had sat and passed only two examinations and hence could not yet be classified as pass or fail.
[19] Based on FRC (2010) Education statistics for full ICAS trainee population. Statistic were similar for 2009 and 2011.
[20] Average age based on FRC (2011) Education statistics as 2011 is the mid way point of a three year training contract.
[21] Based on FRC (2010) Education statistics for full ICAS trainee population. Statistic were similar for 2009 and 2011.

2.4 Results and Discussion

Fifty-six (73%) trainees passed first time and twenty one (27%) failed at least one examination. Descriptive statistics for each subject are shown in Table 1:

Table 1: Performance Descriptive Statistics

	Advanced Finance (n=68)	ABS (n=67)	Financial Reporting (n=71)	Taxation (n=72)
Mean Grade	60.47%	58.06%	62.58%	60.46%
Minimum Grade	41%	34%	41%	38%
Maximum Grade	80%	77%	89%	78%
Standard Deviation	9.155	9.017	11.810	9.292

To identify factors which impact on the grade received, consideration will be given to the various components of the performance model, starting with effort.

2.4.1 Effort

The model identifies two determinants of effort: value of reward and effort reward probability. Two primary rewards were identified for performance in ICAS TPS examinations: passing on the first attempt and achieving high grades. To further understand effort exerted, a number of potential secondary rewards (shown in Table 2) were also identified. The mean values for how important trainees rated (on a 7 point scale) the primary and secondary rewards are shown in Table 2:

Table 2: Mean Value of Rewards

Reward	Mean Importance ($\bar{x}$) on a 7 point scale (n=76)	Median	Minimum	Maximum
Primary Rewards				
Passing on the First Attempt	6.61	7	4	7
Achieving High Grades	4.27	5	1	7
Secondary Rewards				
Financial Incentives (such as a bonus)	4.73	5	1	7
Job Security	5.95	6	2	7
Career Development	6.19	6	3	7
Personal Satisfaction	6.08	6	1	7
Your Employers Opinion of You	5.92	6	1	7
Your Fellow Trainees Opinion of You	5.53	6	1	7
You Family or Friends Opinion of You	5.90	6	1	7

The results shown in Table 2 clearly identify that trainees highly value the rewards on offer. However, Porter and Lawler's (1968) model of performance identifies that as well as valuing the reward on offer, there must be a belief that additional effort will lead to the rewards on offer (the effort-reward probability). Trainees were therefore asked to rate (on a 7 point scale) the level of influence that additional effort would have on passing first time ($\bar{x}$ = 5.99, Mdn=6(3-7)) and achieving high grades ($\bar{x}$=5.17, Mdn=5(1-7)). These high mean values indicate that trainees did believe that additional effort would lead to the aforementioned highly valued rewards.

Despite the high mean values indicating that rewards were highly valued and that it was believed that additional effort would lead to the rewards on offer, Spearman's correlation analysis identified few significant relationships between the actual effort exerted (measured by a 7 point likert scale, with $\bar{x}$=6.24) and these factors. Considering the first reward of passing first time, Spearman's correlation tests found no significant relationship between the effort exerted and how highly the reward of passing first time was valued (p=0.654) and also no significant relationship between the effort exerted and the belief extra effort would lead to passing first time (p=0.229). Whilst this initially may appear to challenge the Expectancy Theory element of this model, a leptokurtic and negatively skewed distribution offers a possible explanation for why those, who highly valued the rewards on offer and believed extra effort would lead to the rewards, did not appear to exert additional effort. Analysis of frequency indicates 84% of trainees rated actual effort exertion as 6 or 7 (96% as 5, 6, or 7) and 94% rated the importance of passing first time as 6 or 7 (both on a 7 point scale). The lack of spread in responses could be masking a relationship between the variables. A lower number (74%) rated the belief that extra effort would lead to passing first time as 6 or 7, which may indicate the value of passing first time is so great trainees are willing to exert additional effort even when unsure if this will lead to the reward. This may be a reflection of the Big 4 firms' recruitment processes which may favour highly motivated individuals. Big 4 firms are looking for people who are willing to "put in the extra effort to succeed" (PWC, 2014b, p.1) and who "keep motivated in difficult situations" (KPMG, 2015, p.1).

For the second reward of achieving high grades, no significant relationship was identified between the effort exerted and the importance of this reward (p=0.437). However, a significant (r_s=-0.354, p=0.002) relationship was identified between the actual effort exerted and the belief extra effort would lead to high grades. Interestingly, the correlation co-efficient is negative; indicating those who perceived exerting more effort would lead to higher grades actually exerted less effort. This could be explained by trainees' main priority being to 'just pass' the examinations. Trainees who felt they could get high grades may have been less motivated to put in extra effort due to being more confident in their ability to pass the examinations. Trainees who had doubts over their ability to achieve high grades may have put in extra effort just to make sure they passed their examinations.

Previous studies into professional exam performance have not considered an effort variable and as such this research gives a new insight into this area. Interestingly, the results conflict with research at university level where it has been found that the value of reward (Ott, Deines and Donnelly, 1988 and Wooten, 1998) and perceived effort-reward relationship (Ott, Deines and Donnelly, 1988, Geiger and Cooper, 1996 and Wooten, 1998) did impact effort exertion. This conflict may arise due to university students displaying a wider spectrum of motivation levels compared to trainees who have chosen and been selected to undertake a training contract with a Big 4 firm and whose job depends on their ability to pass these examinations and progress to the next level.

Whilst gender was not a key focus of this analysis, this was an interesting aside. Descriptive statistics indicated that males (n= 37) appeared more confident both in passing their exams and achieving high grades (rated on a 7-point likert scale with 1 being not confident and 7 being very confident) than females (n=40) but on testing this was not found to be significant (confidence in their ability to pass first time $\chi^2(6)=4.922$, $p=0.609$; achieving high grades $\chi^2(5)=5.739$, $p=0.346$). Very little difference was identified between the two groups in terms of the belief their extra efforts would impact their ability to pass first time ($\chi^2(4)=4.432$, $p=0.373$) or achieve high grades ($\chi^2(6)=3.913$, $p=0.761$). Whilst descriptive statistics indicated males rated their actual efforts higher, again these were not found to be significant ($\chi^2(5)=6.543$, $p=0.193$).

2.4.2 Barriers to Effort

Trainees were asked to rate, on a 7 point scale (1=no negative impact and 7 being high negative impact), how potential barriers (work, family and sport/social commitments) impacted on the effort that was exerted into studying for examinations. Descriptive statistics are shown in Table 3:

Table 3: Potential Barrier to Effort

Potential Barrier	**Mean Impact on Effort ($\bar{x}$) on a 7 point scale (n=74)**	**Median**	**Minimum**	**Maximum**
Work Commitments	1.49	1	1	6
Family Commitments	3.23	1	1	7
Sports/Social Commitments	3.28	1	1	7

Despite a negative correlation coefficient, Spearman's Correlation identified that work commitments have no significant relationship with effort (r_s=-0.163, p=0.161) or performance in any subject (Finance: r_s=-0.163, p=0.183, ABS: r_s=-0.035, p=0.776, Financial Reporting: r_s=-0.191, p=0.110) and Tax: r_s=-0.053, p=0.659). A positively skewed and leptokurtic distribution, with frequency tables showing 88% of trainees rating the impact of work commitments as a 1 or 2 on a 7 point scale, offers some explanation. The majority of trainees (63%) undertake an intensive route of study and the results indicate the Big 4 firms do protect their trainees from the long working hours associated with the profession during this time of study. However, the lack of spread of responses limits the significant relationships which can be identified.

The impacts of family commitments and social/sport commitments on effort and performance were also analysed using Spearman's Correlation. No significant relationships were identified for effort or any subject performance for both family commitments (Effort: r_s=0.149, p=0.203, Finance: r_s=-0.132, p=0.285, ABS: r_s=-0.053, p=0.667, Financial Reporting: r_s=-0.023, p=0.849) and Tax: r_s=-0.044, p=0.713) and social/sport commitments (Effort: r_s=0.004, p=0.973,

Finance: r_s=0.074, p=0.548, ABS: r_s=0.118, p=0.342, Financial Reporting: r_s=0.017, p=0.891 and Tax: r_s=0.165, p=0.169). Although still positively skewed, these potential barriers did show a larger distribution of ratings compared to work commitments, reflecting more variability of trainees compared to the homogeneous work environment.

Consistent with Wooten (1998) it is difficult to explain why social/sport commitments did not negatively impact performance. Interestingly, although not significant, all correlation coefficients for social/sport commitments were positive, indicating that those who had undertaken such activities actually performed better than those who did not. It could be possible that the trainees who engaged in such activities were able to better control stress. Similarly, it is also difficult to explain why family commitments did not consistently impact performance. A possible explanation could be that the trainees with commitments have learned, through their university study, how to effectively manage both commitments so they do not negatively impact performance. The family commitment findings are consistent with Roos (2009) who found no significant relationship with CIMA examination performance in South Africa, measured by marital status and number of children.

2.4.3 Effort and Performance

At an overall level, the relationship between effort exerted and exam performance was examined. Tests of significance (Spearman's Correlation for Scale Variables (Grades) and point-biserial correlation for dichotomous variable (Pass/Fail first time)) were performed between effort exerted and performance. The results are shown in Table 4.

Table 4: Spearman's Correlation/Point-Biserial (2 tailed) for Effort and Performance

	Actual Effort
Grade Finance	r_s=-0.254, p=0.037* (n=68)
Grade ABS	r_s=-0.232, p=0.059 (n=67)
Grade Financial Reporting	r_s=-0.239, p=0.045* (n=71)
Grade Tax	r_s=-0.255, p=0.031* (n=72)
Pass/First Time	r_{pb}=-0.036, p=0.758, (n=74)

*Significant at 5% level

Whilst no significant relationship was found between effort exerted and passing all four examinations first time, the results did, however, indicate a significant relationship between grade achieved and effort exerted for three of the four examinations. Interestingly, the correlation coefficient was negative indicating those who put in more effort actually received lower grades. Similar results have been identified at undergraduate level and the explanation suggested by Guney (2009) was that students who are having difficulties may work relatively harder but fail to get a grade that reflects their efforts. The results indicate this could also be true for professional examinations and in particular for Big 4 trainees who may have been favoured during the selection process for demonstrating a willingness to put in high levels of effort.

It is also worth noting that whilst additional efforts did not lead to higher grades, the results indicate that trainees who had to work relatively harder, perhaps as a result of having difficulties, were rewarded for this in terms of being just as likely as any other student to pass an examination on the first attempt.

2.4.3 Abilities and Traits

The second component of Porter and Lawler's (1968) model identifies abilities and traits as determinants of performance. The literature review identified a high number of abilities and traits which could be possible explanatory variables for examination performance. A full list

of variables tested, along with their tests of significance in relation to examination performance, can be found in Appendix 1.

2.4.3.1 Personal and Social Factors

The sample was quite evenly split between males (n=37) and females (n=40)[22]. Females performed better than males in all examinations but this was only significant for the Financial Reporting examination (t(71)=-2.242, p=0.028). Previous research by Gammie (1999) and Roos (2009) identified some indication that females outperform males in professional examinations. Whilst the limited significant relationship between the variables means no definitive conclusions can be drawn, the research offers some support for this, indicating little change in the last decade despite changes in the composition of ICAS trainees.

The age of trainees at the start of the research ranged from 21-29, with the majority (70%) being 21-23. No significant relationships were identified between age and professional examination performance. This confirms previous research into professional examination performance by Gammie (1999) and Howell and Heshizer (2008). Whilst the impact of age at undergraduate level (*inter alia* Tho, 1994, Koh and Koh, 1999 and Guney, 2009) and for professional examinations outside the UK (Howell and Heshizer, 2008; Roos, 2009; Brahmasrene and Whitten, 2010) have been inconclusive, the results of this study, combined with those of Gammie (1999), indicate that age becomes less relevant for ICAS examinations as trainees move into their early twenties. Guney (2009) identified that older students performed significantly better in undergraduate accounting and suggested these students had become more disciplined in their study. Perhaps by the time professional examinations are undertaken, all trainees have reached a similar level of maturity and discipline.

Due to the low number of trainees from different ethnic backgrounds, trainees were categorised into the two categories of majority (white) and minority. This was consistent with the classification of Carpenter and Friar (1993) when explaining performance in university level accountancy examinations. The results were inconclusive, with minority trainees performing better in Finance and ABS, and majority trainees performing better in Tax,

[22] With a further one respondent not disclosing this information.

Financial Reporting and at an overall pass/fail level. Minority trainees achieved a significantly higher grade in ABS ($t(67)=-2.363$, $p=0.021$). Majority trainees were found to be more likely to pass their examinations on the first attempt. However, the low number of minority trainees who failed examinations at the first attempt (<5) limits any significant conclusions being reached.

2.4.3.2 Prior Education and Ability

School Education

No meaningful relationship was detected between school performance and performance in ICAS examinations. School performance was measured generally, through UCAS points (ranging from 240-600), number of school resits, and through the number of UCAS points gained in analytical,[23],scientific,[24] language[25] and other[26] subjects. Only one significant relationship was identified, being that between performance in ABS and UCAS points achieved ($p=0.046$, $r=0.266$). The results initially appeared to conflict with previous research which found a relationship between UCAS/UCCA[27] points and performance in UK professional examinations (Harvey-Cook, 1995 and Gammie, 1999), Grade Point average and performance in the Canadian CMA examination (Kapoor and Islam, 2005) and also the American CPA examination (Howell and Heshizer, 2008, Brahmasrene and Whitten, 2010). However, these previous studies included non-Big 4 trainees[28] and consequently a larger range of UCAS (or equivalent) points as non-Big 4 recruiters do not all require a minimum level of UCAS points as part of selection criteria. The results therefore indicate that Big 4 firms have set an appropriate bar, as variations above this bar have no influence on subsequent performance. In addition, whilst Harvey-Cook (1995) and Gammie (1999) identified significant relationships between specific school subjects and performance in professional exams (Harvey-Cook, 1995: Art/Language A Levels and Maths/Science O Levels, Gammie, 1999: Analytical Highers), the

[23] Based on UCAS points from Accounting, Economics, Mathematics and Engineering (Gammie, 1999).
[24] Based on UCAS points from Chemistry, Biology and Physics (Gammie, 1999).
[25] Based on UCAS points from French, German, Latin and other secondary languages (Gammie, 1999).
[26] Based on UCAS points from English, History, Modern Studies, Art, Geography and other miscellaneous subjects (Gammie, 1999).
[27] UCCA are a predecessor of UCAS points.
[28] Harvey-Cook (1995) included only medium sized firms (therefore excluding Big 4 firms) Gammie (1999) included Big 4 and other trainees.

higher UCAS requirement of Big 4 firms appears to have superseded the benefit of studying specific subjects at school.

The type of school attended (fee-paying or non-fee-paying) also had no significant impact on performance. This is consistent with previous studies (Harvey-Cook, 1995 and Gammie, 1999).

Previous Study of Accountancy

The previous study of accountancy was measured in three different ways: if accountancy was studied at school, if an accredited accountancy degree was undertaken and if an accountancy degree (accredited or non-accredited) was undertaken.[29] The results found no relationship between the previous study of accountancy and performance in any of the subjects. Studying accounting at school or holding an accounting degree, therefore, appears to give no advantage in professional accountancy examinations once the academic requirements imposed during recruitment by the Big 4 firms have been met. The results support Harvey-Cook (1995) and Roos (2009) regarding degree-level accounting and Gammie (1999) regarding school accounting.

University Education

Degree classification was the factor most highly correlated with passing all the examinations on the first attempt. Table 5 shows the number of students with each degree classification passing first time and Chart 1 shows the mean score for those who achieved a first class (n=32-33[30]) and 2:1 degree (n=34-38).[31]

[29] An accredited degree is a degree that provides exemptions from the first level of ICAS examinations (Test of Competence).

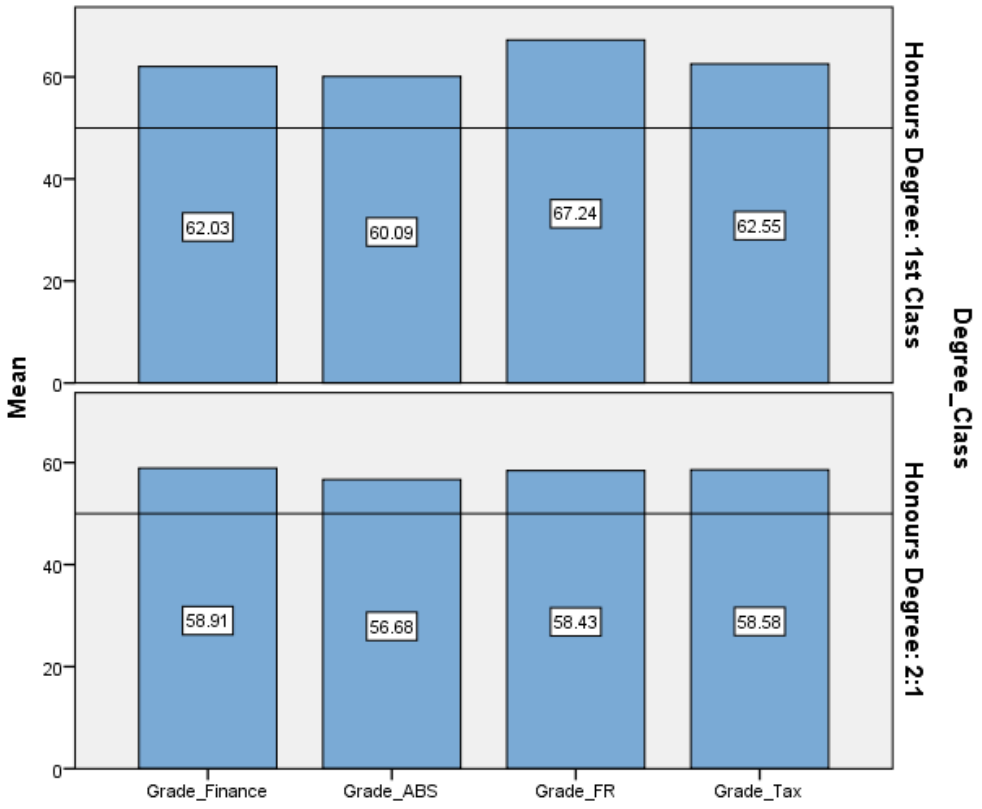
[30] Range due to some trainees not sitting all exams, for example if a trainee failed after 1 exam and could not sit the rest.

[31] The only other degree classification received was an ordinary degree by one student and this was excluded from significance tests.

Table 5: Overall Exam Performance and Degree Classification

Degree Classification	Passed all TPS Examination on the 1st Attempt	Did not Pass all TPS Examination on the 1st Attempt
1st	29 (85%)	5 (15%)
2:1	27 (64%)	15 (36%)

Chart 1: Exam Performance (% Grade) and Degree Class



Trainees with a first class degree performed better in all examinations, significantly so for Financial Reporting (t=3.309, p=0.002) and at an overall pass/fail level (χ^2 = 6.883, p=0.024). The importance of degree classification is consistent with Gammie (1999) who found honours classification to be the most significant factor in professional examination success and supports the long standing view by psychologists that what we have done in the past is a valid

predictor of what we will do in the future (Owens and Schoenfeldt, 1979; Gunter, Furnham and Drakeley, 1993).

Degree classification was also a more important factor than degree subject (classified as analytical, science, language and other) with only a language degree showing a significant superior performance in Financial Reporting ($p=0.048$, $t=2.018$). The importance of university performance was also indicated through trainees who had re-sits at university achieving a lower grade in all subjects, significantly so for Financial Reporting ($p=0.023$, $t=2.656$,) and Taxation ($p=2.114$, $t=0.038$). This is consistent with previous findings by Gammie (1999).

Interestingly, PWC has subsequently, in 2015, announced that UCAS tariff points will no longer be used as an assessment tool for the majority of their graduate opportunities and that the focus will now be on degree performance (PWC, 2017). Ernst and Young (2015) have taken this further, with trainees no longer requiring minimum UCAS points or degree classification. PWC (2017) and Ernst and Young (2015) cite social inclusivity as a key reason for this change. In addition, Ernst and Young (2015) explain their internal research found no link between higher education and subsequent success in professional examinations. The results of this study indicate degree results are more important than school results, suggesting support with PWC's approach to prioritise degree performance but conflicting with Ernst and Young's approach to not prioritise degree performance. However, the sample only includes those who have met the minimum UCAS points and degree classification set by the Big 4 firms at the time of this research. If trainees who had not met these previous requirements had been included, it may have produced different results which could support or oppose the approach by PWC and Ernst and Young.

Non-academic measures of university experiences identified no significant contributory factors to performance. These included undertaking a placement, working during term and/or university holidays and the level of sports/outside interests participated in whilst at university. This conflicts with previous research which has found significant variables in relation to sports and other interests (Harvey-Cook, 1995 and Gammie, 1999). However, these previous studies did not focus on Big 4 trainees and the selection process of Big 4 firms may have favoured

those who had developed the beneficial skills that such sports and other interests may contribute to.

Finally, those who did not progress directly from university to their training contract performed better than those who did, although this was only significant for Financial Reporting (t=2.29, p=0.025). These results conflict with Gammie (2000) who found those who progressed directly performed better in ICAS examinations.

2.4.4 Role Perception

Role perception looks at how trainees exert their study efforts. A number of possible areas where trainees could exert their study efforts were identified and trainees were asked to rate on a 7 point scale the focus they placed on each of these whilst preparing for the examinations. Descriptive statistics for these are provided in Table 6.

Table 6: Focus Placed on Different Study Techniques and Impact of Study Techniques on Performance (Point-Biserial Correlation and Pearson's Correlation)

Study Technique	Mean Focus (Range) on a 7 point scale (n=74)	Pass First Time (n=74[32])	Advanced Finance (n=68)	ABS (n=67)	Financial Reporting (n=71)	Taxation (n=72)
Reading ICAS Notes	4.97 (2-7)	p=0.493 rpb=-0.081	p=0.706 rs=-0.047	p=0.720 rs=-0.045	p=0.225 rs=-0.146	p=0.651 rs=-0.054
Making and Reading Own Notes	4.21 (1-7)	p=0.048* rpb=0.231	p=0.713 rs=0.045	p=0.314 rs=0.125	p=0.214 rs=0.149	p=0.006** rs=0.321
Question Practice	6.21 (2-7)	p=0.667 rpb=-0.051	p=0.756 rs=0.038	p=0.403 rs=0.104	p=0.219 rs=-0.148	p=0.895 rs=-0.016
Further Reading (Outside ICAS provided material)	1.28 (1-4)	p=0.987 rpb=-0.002	p=0.286 rs=-0.131	p=0.820 rs=-0.028	p=0.990 rs=0.001	p=0.603 rs=0.062
Re-Doing Mock Exams	3.99 (1-7)	p=0.040* rpb=-0.240	p=0.021* rs=-0.279	p=0.279 rs=-0.134	p=0.008** rs=-0.313	p=0.144 rs=-0.174

*Significant at 5% level **Significant at 1% level

Frequency tables indicated the most popular study technique was question practice with 83% of trainees placing a high level of focus on this (as identified by a 6 or 7 rating). Further reading was the least popular study method with the majority of trainees placing no focus on this.

[32] Three students from this category did not complete the study technique ratings and were therefore excluded from this analysis.

These skewed distributions may have prevented any significant relationships being identified with performance for these study techniques. The other possible study techniques, as detailed in the table above, received a wider range of ratings indicating trainees did have different opinions on where to exert their study efforts.

The results indicate role perception, the way in which trainees exert their study efforts, may influence performance. Focusing study efforts on making and reading their own notes resulted in higher performance, significantly so for passing first time or not and the Taxation examination. Focusing study effort on reading ICAS notes and re-doing mock exams both resulted in lower performance but not significantly so. Trainees who placed more focus on re-doing mock exams, were significantly less likely to pass on the first attempt and performed significantly worse in Advanced Finance and Financial Reporting. Further consideration could therefore be given to advising trainees on the best ways to exert their study effort in order to maximise performance.

The route of study was also considered. 22% of trainees undertook block study, 66% intensive study and 12% the modular route.[33] No differential performance was identified in relation to the study route: block, intensive or modular. No previous research has considered the route of study despite the choice of route being a key decision for firms. This sample would suggest the decision on which route trainees should take is irrelevant to performance (see Appendix

[33] Modular route is when trainees do not sit all four subjects in one examination diet but split these over two or more diets. Intensive route is when trainees complete all classes and study in the immediate period leading up to the examination. Block route is when trainees attend classes not in one intensive period but over the course of a year.

1 for details) and firms could therefore choose a method most suited to other factors such as to coincide with periods of lower workload.

2.5 Conclusions and Implications

It was initially hoped to develop a statistical model to predict performance. However, a reliable model could not be developed due to the low level of correlation between the intended predictor and outcome variables. The research sample was selected on the basis that Big 4 trainees comprised the majority (71%) of the ICAS trainees and that factors outside the model, such as work environment, were similar. However, these trainees have all been through the rigorous selection processes utilised by Big 4 firms. As well as looking for academic requirements, all four of the firms use a series of selection techniques to identify candidates with specific behavioural competencies (Deloitte, 2015b; Ernst and Young, 2014; KPMG, 2015b; PWC, 2015). As a result, Big 4 trainees are a very homogenous group who subsequently responded in a very similar manner to the data collection questions thus producing a very limited range of responses within each of the explanatory variables.

Despite the failure to develop a model, a significant number of trainees (27%) failed one or more examinations on the first attempt and the reasons for this failure warrant further discussion, albeit in a more explanatory manner. This study has therefore discussed the variables at an individual level in order to further the understanding of performance in professional examinations. In addition, whilst the model did not explain performance for Big 4 trainees in isolation, this does not mean it would not explain performance for the full ICAS student population where there is greater variation in background.

On an individual variable level, degree classification, number of resits and study techniques used are identified as the most significant factors in explaining elements of success in ICAS TPS examinations. University performance was a better indication of success than school performance where only one significant variable (UCAS points) was identified for one subject (ABS). This may indicate the Big 4 firms have set an appropriate bar within their selection process in terms of school education but could look further at the recruitment criteria in terms of university education. Whilst limiting candidates to those achieving a first would reduce the

pool of potential graduates - 47% of UK graduates achieved a 2:1 in 2013/14 compared to 19% achieving a first (HESA, 2014) - further consideration could be given to those with lower UCAS points, who have not met the current bar set by the firms, but have gone on to achieve a first as has been introduced by PWC in 2015 (PWC, 2017).

The results indicate the study techniques used may impact performance and trainees should be guided to exert study efforts into those methods which are linked to improved performance. However, the route taken (block, intensive or modular) was not found to significantly impact performance. The route a firm should choose for its trainees could, therefore, be taken on a more commercial basis, minimising any disruption to the office related activities of its trainees, such as periods of high workload.

This study also considered effort as a possible explanatory factor of performance. The sample of Big 4 trainees valued the rewards of examination success highly and also believed exerting effort would lead to receiving these rewards. Despite this, few significant relationships were identified. This may be explained by the Big 4 firms recruiting highly motivated and ambitious individuals who are willing to exert high amounts of effort even if they are unsure if this will lead to the rewards on offer. This effort exertion may be heightened by the consequence of failing an examination potentially leading to a trainee's contract being terminated.

2.5.1 Limitations

The sample was restricted to Big 4 trainees completing an ICAS training contract. The response rate of 16% was slightly disappointing and whilst non-bias tests were performed, the generalisability of findings must be acknowledged.

Some of the potential explanatory factors in this study are based on the perception of graduates who were undertaking a Big 4 ICAS training contract, such as effort exerted and value of the rewards on offer. These measures are therefore subject to over or under estimation by participants and caution must be exercised to ensure the findings are not overreached.

The TPS examinations were chosen as these were the first examinations sat by all trainees. However, this meant some trainees had undertaken the ICAS first level, Test of Competence (TC), examinations. This may have tempered their responses – perhaps those finding the TC examinations more difficult than expected would subsequently have lower expectations for passing or achieving high grades in the TPS examinations.

2.5.2 Further Work

Research to extend the sample to those who have secured an ICAS contract elsewhere could further extend the insights gained from this study. The research sample could also be further extended by including trainees from other year groups and other professional bodies. In addition, the model could be adapted and tested for undergraduate examination performance.

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2.7 Appendix 1: Significance Tests for Performance Variables

Variable/ Performance Measure[a]	**Grade Finance n=68**	**Grade ABS n=67**	**Grade FR n=71**	**Grade Tax n=72**	**Pass/ Fail n=77**	**Test of Significance for Grades (1st line) Pass/Fail (2nd line)**
Personal and Social Factors						
Gender	p=0.764 t=-0.302	p=0.610 t=-0.513	p=0.028*[b] t=-2.242	p=0.060 t=-1.912	p=0.451 $\chi^{2=}$0.701	Independent Sample t-tests Chi-Squared
Age at Start of Training Contract	p=0.580 r=0.068	p=0.826 r=0.027	p=0.696 r=0.047	p=0.893 r=-0.016	p=0.925 r_{pb}=-0.011	Pearson's Correlation Point-Biserial Correlation
Cultural Background	p=0.230 t=-1.211 (n-1)	p=0.021*[c] t=-2.363 (n-1)	p=0.590 t=0.541 (n-1)	p=0.414 t=-0.823 (n-1)	p=0.046*^[d] $\chi^{2=}$4.964 (n-1)	Independent Sample t-tests Chi-Squared
School Education						
UCAS Points Gained at School from Highers/A-Levels only	p=0.194 r=0.173 (n-10)	p=0.046*[e] r=0.266 (n-10)	p=0.671 r=0.056 (n-11)	p=0.876 r=0.020 (n-11)	p=0.526 r_{pb}=0.080 (n-12)	Pearson's Correlation Point-Biserial Correlation
Adjusted UCAS Points Gained at School from all Qualifications	p=0.258 r=0.151 (n-10)	p=0.261 r=0.151 (n-10)	p=0.502 r=-0.088 (n-11)	p=0.691 r=-0.052 (n-11)	p=0.228 r_{pb}=0.152 (n-12)	Pearson's Correlation Point-Biserial Correlation
Number of Analytical UCAS Points	p=0.355 r=0.124 (n-10)	p=0.178 r=0.181 (n-10)	p=0.076 r=0.231 (n-11)	p=0.801 r=0.033 (n-11)	p=0.351 r_{pb}=0.118 (n-12)	Pearson's Correlation Point-Biserial Correlation
Number of Science UCAS Points	p=0.297 r=0.139 (n-10)	p=0.851 r=-0.025 (n-10)	p=0.574 r=0.074 (n-11)	p=0.801 r=0.033 (n-11)	p=0.455 r_{pb}=-0.094 (n-12)	Pearson's Correlation Point-Biserial Correlation
Number of Language UCAS Points	p=0.613 r=0.068 (n-10)	p=0.230 r=0.162 (n-10)	p=0.520 r=-0.085 (n-11)	p=0.947 r=-0.009 (n-11)	p=0.996 r_{pb}=0.001 (n-12)	Pearson's Correlation Point-Biserial Correlation
Number of Other UCAS Points	p=0.453 r=-0.1 (n-10)	p=0.928 r=0.012 (n-10)	p=0.340 r=-0.125 (n-11)	p=0.852 r=-0.024 (n-11)	p=0.623 r_{pb}=0.062 (n-12)	Pearson's Correlation Point-Biserial Correlation

Variable/ Performance Measure[a]	**Grade Finance n=68**	**Grade ABS n=67**	**Grade FR n=71**	**Grade Tax n=72**	**Pass/ Fail n=77**	**Test of Significance for Grades (1st line) Pass/Fail (2nd line)**
School Education (continued)						
Resits taken at School (Yes/No)	p=0.883 t=-0.148 (n-1)	p=0.583 t=-0.552 (n-1)	p=0.121 t=1.568 (n-1)	p=0.105 t=1.642 (n-1)	p=1.000^ $\chi^{2=}$0.023	Independent Sample t-tests Chi-Squared
Private or State School	p=0.756 t=0.312	p=0.119 t=1.579	p=0.975 t=0.032	p=0.766 t=0.298	p=0.767 $\chi^{2=}$0.236	Independent Sample t-tests Chi-Squared
Previous Study of Accountancy						
Accounting Studied at School (Yes/No)	p=0.592 t=0.539 (n-11)	p=0.353 t=-0.938 (n-11)	p=0.564 t=0.580 (n-12)	p=0.485 t=0.703 (n-12)	p=0.160^ $\chi^{2=}$2.420 (n-12)	Independent Sample t-tests Chi-Squared
Accredited Degree Undertaken (Yes/No)	p=0.112 t=1.611	p=0.962 t=0.061	p=0.353 t=0.936	p=0.233 t=1.203	p=0.525^ $\chi^{2=}$1.628	Independent Sample t-tests Chi-Squared
Accounting Degree Undertaken (Yes/No)	p=0.061 t=1.909	p=0.856 t=0.182	p=0.060 t=1.909	p=0.076 t=1.803	p=0.781 $\chi^{2=}$0.165	Independent Sample t-tests Chi-Squared
University Education						
Degree Class Achieved	p=0.168 t=1.394 (n-1)	p=0.116 t=1.595 (n-1)	p=0.002**[f] t=3.309 (n-1)	p=0.074 t=1.811 (n-1)	p=0.024*[f] $\chi^{2=}$6.883	Independent Sample t-tests Chi-Squared
Analytical Degree Undertaken (Yes/No)	p=0.466 t=-0.733	p=0.628 t=-0.487	p=0.444 t=-0.770	p=0.445 t=-0.767	p=0.604 $\chi^{2=}$0.332	Independent Sample t-tests Chi-Squared
Science Degree Undertaken (Yes/No)	p=0.617 t=0.503	p=0.695 t=0.394	p=0.901 t=0.124	p=0.759 t=0.308	p=1.000^ $\chi^{2=}$0.023	Independent Sample t-tests Chi-Squared
Languages Degree Undertaken (Yes/No)	p=0.056 t=1.947	p=0.702 t=-0.384	p=0.048*[g] t=2.018	p=0.087 t=1.735	p=0.610^ $\chi^{2=}$0.437	Independent Sample t-tests Chi-Squared
Other Degree Undertaken (Yes/No)	p=0.627 t=-0.488	p=0.491 t=0.693	p=0.943 t=0.072	p=0.783 t=0.277	p=1.000 χ^{2}=0.038	Independent Sample t-tests Chi-Squared

Variable/ Performance Measure[a]	Grade Finance n=68	Grade ABS n=67	Grade FR n=71	Grade Tax n=72	Pass/ Fail n=77	Test of Significance for Grades (1st line) Pass/Fail (2nd line)
University Education (continued)						
Resit at University (Yes/No)	p=0.788 t=0.270	p=0.912 t=0.111	p=0.023*[h] t=2.656	p=0.038*[h] t=2.114	p=1.000^ χ^2=0.023	Independent Sample t-tests Chi-Squared
Number of Resits	p=0.502 r=-0.083	p=0.336 r=-0.119	p=0.145 r=-0.175	p=0.079 r=-0.209	p=0.159 rpb=-0.162	Pearson's Correlation Point-Biserial Correlation
Post Graduate Qualification (Yes/No)	p=0.780 t=0.281	p=0.117 t=1.589	p=0.316 t=1.010	p=0.159 t=1.423	p=0.168^ χ^2=2.811	Independent Sample t-tests Chi-Squared
Placement Completed at University (Yes/No)	p=0.977 t=0.029 (n-1)	p=0.360 t=0.923 (n-1)	p=0.631 t=-0.483 (n-1)	p=0.260 t=1.136 (n-1)	p=0.795 χ^2=0.139 (n-1)	Independent Sample t-tests Chi-Squared
Part time work while at University (Yes/No)	p=0.106 t=1.638	p=0.934 t=0.083	p=0.085 t=1.749	p=0.698 t=0.389	p=0.613 χ^2=0.367	Independent Sample t-tests Chi-Squared
Number of Hours worked per week during term time	p=0.161 r=-0.175 (n-2)	p=0.261 r=-0.142 (n-2)	p=0.245 r=-0.142 (n-2)	p=0.331 r=-0.118 (n-2)	p=0.936 rpb=-0.009 (n-2)	Pearson's Correlation Point-Biserial Correlation
Work during university holidays (Yes/No)	p=0.854 t=0.185	p=0.513 t=-0.659	p=0.533 t=0.626	p=0.651 t=0.454	p=1.000^ χ^2=0.096	Independent Sample t-tests Chi-Squared
Direct from university to CA training contract (Yes/No)	p=0.093 t=1.706	p=0.771 t=0.292	p=0.025*[i] t=2.290	p=0.267 t=1.119	p=0.302 χ^2=1.311	Independent Sample t-tests Chi-Squared

Variable/ Performance Measure[a]	Grade Finance n=68	Grade ABS n=67	Grade FR n=71	Grade Tax n=72	Pass/ Fail n=77	Test of Significance for Grades (1st line) Pass/Fail (2nd line)
Role Perception						
Focus on ICAS notes (1-7)	p=0.706 rs=-0.047	p=0.720 rs=-0.045	p=0.225 rs=-0.146	p=0.651 rs=-0.054	p=0.493 rpb=-0.081 (n-3)	Spearman's Correlation Point-Biserial Correlation
Focus on own notes (1-7)	p=0.713 rs=0.045	p=0.314 rs=0.125	p=0.214 rs=0.149	p=0.006**[j] rs=0.321	p=0.048*[j] rpb=0.231 (n-3)	Spearman's Correlation Point-Biserial Correlation
Focus on question practice (1-7)	p=0.756 rs=0.038	p=0.403 rs=0.104	p=0.219 rs=-0.148	p=0.895 rs=-0.016	p=0.667 rpb=-0.051 (n-3)	Spearman's Correlation Point-Biserial Correlation
Focus on additional reading (1-7)	p=0.286 rs=-0.131	p=0.820 rs=-0.028	p=0.990 rs=0.001	p=0.603 rs=0.062	p=0.987 rpb=-0.002 (n-3)	Spearman's Correlation Point-Biserial Correlation
Focus on re-doing Mock exams(1-7)	p=0.021*[k] rs=-0.279	p=0.279 rs=-0.134	p=0.008**[k] rs=-0.313	p=0.144 rs=-0.174	p=0.040*[k] rpb=-0.240 (n-3)	Spearman's Correlation Point-Biserial Correlation
Modular Classes Undertaken (Yes/No)	p=0.718 t=-0.362 (n-1)	p=0.887 t=-0.142 (n-1)	p=0.515 t=0.655 (n-1)	p=0.696 t=-0.393 (n-1)	p=1.000^ χ^2=0.062 (n-4)	Independent Sample t-tests Chi-Squared
Block Classes Undertaken (Yes/No)	p=0.727 t=-0.350 (n-1)	p=0.792 t=0.268 (n-1)	p=0.329 t=0.994 (n-1)	p=0.542 t=0.613 (n-1)	p=0.533^ χ^2=0.763 (n-4)	Independent Sample t-tests Chi-Squared
Intensive Classes Undertaken (Yes/No)	p=0.587 t=0.546 (n-1)	p=0.835 t=-0.209 (n-1)	p=0.255 t=-1.149 (n-1)	p=0.797 t=-0.258 (n-1)	p=0.589 χ^2=0.364 (n-4)	Independent Sample t-tests Chi-Squared

*Significant at 5% level **Significant at 1% level

Notes to Appendix 1

^ Expected frequencies less than 5 for some categories and therefore no significant conclusions can be drawn (Field, 2010)

(a) Distribution was reviewed and assessed to be normal for each grade through histograms. In addition skewness and kurtosis were reviewed and converted to z-scores for each subject. Kurtosis was less than 1.96 for all subjects (Finance: 1.09; ABS: 0.021; Financial Reporting: 1.566; Tax: 0.281). Skewness was less than 1.96 for all subjects (Finance 0.206; ABS: 0.389; Financial Reporting: 1.566) except Tax (2.163). This indicated some negative skew but comfort could be gained from this falling below the upper threshold of 3.29 (Field, 2010).
(b) Females have a higher mean grade.
(c) Minority trainees have a higher mean grade.
(d) Majority trainees were more likely to pass all TPS examinations on the first attempt.
(e) Trainees with higher UCAS points have a higher mean grade.
(f) Trainees achieving a first class degree have a higher mean grade and were more likely to pass all TPS examinations on the first attempt.
(g) Trainees with a language degree had a lower mean grade than those without.
(h) Trainees with no resits at university achieved a higher mean grade.
(i) Trainees who did not progress directly from university to their training contract achieved a higher mean grade.

CHAPTER 3: AN INVESTIGATION INTO THE DEVELOPMENT OF NON-TECHNICAL SKILLS BY UNDERGRADUATE ACCOUNTING PROGRAMMES

3.0 Abstract

This paper contributes to the contemporary debate on non-technical skill development by accountancy degree providers. Data was collected through a questionnaire and semi-structured interviews which were then interpreted through the lens of institutional theory, particularly in relation to securing legitimacy for undergraduate accounting degree programmes. The questionnaire was sent to all Big 4 trainees who commenced an ICAS training contract in 2010 with trainees asked to rate their development at university of 31 identified non-technical skills. Interviews were conducted with Scottish academics who had overview of accountancy courses. The results of the questionnaire indicated accounting graduates perceive themselves to have significantly weaker development of intellectual skills that non-accounting graduates and combining these results with the interview results, indicates accountancy degrees are prioritising interpersonal and communication skills, possibly at the detriment of intellectual skills. These results support concerns expressed by academics and employers over the intellectual skill development of accounting graduates and raise a question for accounting degree providers over skill prioritisation.

Keywords: Accounting Education; Intellectual Skills; Interpersonal and Communication Skills; Accreditation; Institutional Theory.

3.1 Background to Study

Accountancy has long been established as an elite profession (Walker, 2004). The quality of those entering the accountancy profession plays an important role in maintaining this professional status (POBA, 2004). Western Europe, the US, Canada and Australia have predominantly all-graduate models for entry into the accountancy profession. This all-graduate model is believed to enhance the professional status of the accountancy profession (Walker, 2004; Annisette and Kirkham, 2007; Gammie and Kirkham, 2008). In America, Canada and many European countries, accountancy bodies require new trainee entrants to have undertaken accountancy at university. In the UK, the professional accountancy bodies do not require trainee entrants to have a degree;[34] and of those who are entering as graduates to the UK professional bodies, many do not hold an accounting degree (FRC, 2016).[35]

When recruiting graduates, the Big 4[36] accountancy firms cite no preference for an accounting, or even a business orientated degree. Ernst and Young (2017, p.1) comment that 'It's your intellectual ability and natural strengths that matter to us. Some of our highest achievers have studied subjects totally unrelated to the work they do' and some accountancy recruiters have expressed a preference for those who have not undertaken an accounting degree (Gray et al., 2001). If non-accounting graduates are preferred over accounting graduates when competing for coveted Big 4 trainee accountancy positions, this will be of concern to accounting degree providers who often advocate their graduates' prowess at obtaining Big 4 appointments as a marketing tool (*inter alia* The Robert Gordon University, 2016, University of Bath, 2016, University of Strathclyde, 2016).

[34] Although none of the UK professional accountancy bodies require student entrants to have a degree, non-graduate student entrants represent only a minority for the professional bodies whose members qualify as Chartered Accountants. Only members of the Institute of Chartered Accountants of Scotland (ICAS), Institute of Chartered Accountants in England and Wales (ICAEW) and Chartered Accountants Ireland (CAI) qualify as Chartered Accountants in the UK. The percentages of members of each of these professional bodies who do not hold a degree are as follows: ICAEW: 23%; CAI: 7% and ICAS: 4% (FRC, 2016).

[35] The number of trainees who hold a relevant degree (being a degree that qualifies the trainee for exemptions from certain examination stages) are as follows: ICAEW: 23%; CAI: 77%; ICAS:35%; The Association of International Accountants (AIA): 43%; Association of Chartered Certified Accountants (ACCA): 25%; Chartered Institute of Management Accountants (CIMA):46% and Chartered Institute of Public Finance and Accountancy (CIPFA): 21% (FRC, 2016)

[36] Big Four firms comprise Ernst and Young, PriceWaterhouseCoopers (PWC), KPMG and Deloitte.

In seeking explanation for why accounting graduates are not preferred by large accountancy firms, consideration is given to the criticisms which have been levied at accounting degrees. A recurring criticism is the detrimental influence of professional accreditation on accounting degrees resulting in an overly technical education which replicates the professional body syllabus at the expense of a more liberally based education[37] (Ferguson et al., 2010; Lister, 2010; Wilson 2011). This overly technical curriculum has also led to accounting degrees being criticised for failing to develop the non-technical skills[38] required by accounting graduates (Zaid and Abraham, 1994; Morgan, 1997; Gray, et al., 2001; Kavanagh and Drennan, 2008; Wilson, 2011). Indeed, there is evidence that graduate recruiters and professional bodies are of the view that non-accounting graduates have better developed non-technical skills (Gray, et al., 2001). Furthermore, editorials and commentaries have heavily criticised the development of intellectual skills by accounting educators (Lister 2010; Scott, 2010; Sangster, 2010; Wilson, 2011; Hopper, 2013).

This research aims to investigate these observations with the collection of empirical data. The objectives and contributions made by this paper are as follows:

(1) To critically compare the perception of non-technical skills developed at university by accounting and non-accounting graduates who go on to complete a Big 4 Institute of Chartered Accountants of Scotland (ICAS) training contract

Worldwide research has been undertaken to assess how employers (Morgan, 1997; Arquero et al., 2001; Gray et al., 2001; Gammie, Cargill and Gammie, 2004; ACCA, 2008, Riley and Simons, 2016), professional bodies (Gray et al., 2001) and academics (Morgan, 1997; Hill and Milner, 2006; Gammie, Hamilton and Cargill, 2010; Lister,

[37] Despite this focus on professional curriculum, graduates with an accounting degree do not outperform graduates with a non-accounting degree in professional accountancy examinations (see Chapter 2).

[38] A variety of terms have been used to describe the development of non-technical skills including 'soft', 'generic' and 'vocational' (Arquero et al. , 2001; Jackling and de Lange, 2009; Crawford, Helliar and Monk, 2011; QAA, 2007). International Education Standard 3 identifies five 'skill' categories that are required to be developed prior to qualifying as a professional accountant: intellectual; personal; interpersonal and communication; organisational and business management; technical and functional (IFAC, 2010). This research identifies four of the five skill categories, with the exclusion of 'technical and functional' skills, as being relevant to this study as non-technical skills and this is the phrase used thereafter in this paper to encompass all these skills. Technical and functional skills are excluded due accounting specific skills being included in this category which are not relevant to non-accounting graduates.

2010; Wilson, 2011), perceive the development of non-technical skills on accountancy degrees. Outside the UK, the opinion of graduates has also been sought (Deppe et al., 1991; Zaid and Abraham, 1994; Jackling and de Lange, 2009; Wells et al., 2009). However, the perception of graduates in the UK is more limited. Hassall et al. (2003) and Webb and Chaffer (2016) both sought the opinion of CIMA trainees on skills development. Webb and Chaffer (2016) asked CIMA trainees to rate the extent to which opportunities for skills development were exploited in their degree, and found that accountancy degrees were comparable to other degrees. Hassall et al. (2003) asked CIMA trainees (comprising graduates and non-graduates) to rate the skill development exhibited by their fellow CIMA trainees but did not make a comparison in skill development exhibited between those who held a degree (accounting or otherwise) and those who did not.

This research will contribute to the limited literature in the area by seeking the opinion of ICAS trainees on how well they perceive non-technical skills have been developed during their degrees. The responses of accounting and non-accounting graduates will be critically compared, providing an insight into the comparative non-technical skills development which has previously been highlighted by employers and professional bodies as an issue for accounting graduates (Gray, et al., 2001).

Whilst the comparison in this study is UK based, it is of interest to an international readership in terms of learning from the issues, this study will highlight, regarding accounting degrees. It may also be of interest to other international bodies, such as the Institute of Chartered Accountants in Australia, who have expanded their admission criteria to include non-accounting graduates.[39]

[39] In 2007 an alternative entry route was introduced which required non-accounting graduates to complete an abbreviated accounting course at university. In 2010 a further entry route was introduced for non-accounting graduates with significant work experience whereby entrants are required to pass institute examinations. This option has no requirement for university accountancy education. (Evans, Burritt and Guthrie, 2012; ICAA, 2010)

(2) To investigate the institutional practices and beliefs that influence the development of non-technical skills in Scottish accountancy degrees.

The key impediment to non-technical skill development identified in the literature is a lack of space driven by a belief by accounting degree providers to maximise accreditation (Wilson, 2011). This appears to be a continuing worldwide problem (Apostolou and Gammie, 2014) with Howieson et al. (2014) providing a recent example where it was identified that Australian degrees cannot develop all the attributes desired by stakeholders but do need to do more to integrate non-technical skills into the curriculum. This research will investigate the institutional practices and beliefs that currently influence the development of non-technical skills in Scottish accountancy degrees. This will include if accreditation continues to be an impediment to non-technical skills development in Scotland and if so, the resultant skill prioritisation will be analysed.

This paper will proceed as follows: the next section will provide the context of the study and an overview of institutional theory, particularly in relation to securing legitimacy for undergraduate accounting degree programmes, as the framework for interpretation. A literature review on non-technical skills development by accountancy degree providers, with particular focus on the recent criticism regarding intellectual skills development, will follow. Details of the research methods used, namely a questionnaire and semi-structured interviews will be given and the research findings will be presented followed by the final conclusions.

3.1.1 The Context of the Study

ICAS is the oldest accountancy body in the world (Bruce, 2004) and is a member of the International Federation of Accountants (IFAC), Chartered Accountants Worldwide and the Global Accounting Alliance. Graduates seeking an ICAS chartered accountancy qualification must complete a three year training contract comprising three stages of ICAS examinations (accountancy related graduates are usually exempt from the first stage) and relevant work experience with an approved employer. In 2011, 2,472 students were registered: 96% of which were employed in public practice and the remaining 4% in industry and commerce (FRC, 2012). Most (98%) of ICAS students hold a degree but only 31% hold an accredited accounting

degree (FRC, 2012). The sample for this study comprises Big 4 trainees who commenced an ICAS training contract in 2010.

3.2 Theoretical Framework

Institutional theory, with a particular focus on institutional legitimacy, is used to analyse the pressures exerted on Scottish accountancy degree providers which impact on the non-technical skills developed. Turner (1997 p.6) defines social institutions as:

> *'a complex of positions, roles, norms and values lodged in particular types of social structures and organising relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable societal structures within a given environment.'*

Kraatz and Block (2008, p.243) summarise this as the 'rules of the game' which direct and limit organisational behaviour. A central concept to institutional theory is legitimacy (Deephouw and Suchman, 2008). Suchman (1995, p.574) defines legitimacy as:

> *'generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.'*

Legitimate organisations perform well despite potential inefficiencies as they are better at getting resources from other organisations who perceive them to be legitimate (Friedland and Alford, 1991). In the quest for legitimacy, organisations often become more similar in structure and behaviour as they replicate organisations who they perceive to be legitimate (DiMaggio and Powell, 1991). Scott (2014) identifies three pillars which each form a basis of legitimacy: regulatory, normative and cultural-cognitive.

The regulatory element involves the influence on behaviour through the establishment of rules, inspection of conformity to these rules and resulting rewards for compliance or punishment for non-compliance (Scott, 2014). Palthe (2014, p.61) summarises the regulatory element as the 'have to' and compliance with these rules form a basis of legitimacy. The

normative element includes both values, being the conception of ideal or the desirable, along with the development of a standard which allow current structures and behaviours to be evaluated, and norms, the way things should be done (Scott, 2014). Scott (2014) describes this normative pillar as actors behaving in a way which is believed appropriate given the situation and their role in it rather than what is in their personal best interests. Palthe (2014, p.61) summarises this normative pillar as the 'ought to.' Legitimacy under this pillar comes from moral governance that these social norms are being adhered to (Scott, 2014). The cultural-cognitive element is based on actors behaving in a certain fashion not because they have to or ought to, but because it is taken for granted that this is the way to behave (Scott, 2014). This implies the behaviour is assured without questioning and not an active decision as required for the regulatory element or normative element. This element draws its legitimacy from a shared mind set and understanding based on cultural support (Powell, 2007). Legitimacy comes from conformity behaviour being recognisable, comprehensible and culturally supported (Scott, 2014).

This paper will analyse the driving force for Scottish accountancy degree providers in deciding which non-technical skills are developed. In particular, consideration will be given to what institutional pressures, analysed in the context of the pillars identified by Scott (2014), influence this decision. Crawford, Hellier and Monk (2011, p.122) identified that the views of accounting academics involved in teaching and/or research in the UK university sector should arguably 'constitute a cohesive institutional set of beliefs'. This paper considers a subset of this institutional population namely Scottish accounting academics who have oversight of accounting courses.

3. 3 Review of Literature

3.3.1 Non-Technical Skills Required in Accounting Education

There is little dissent in the literature on the importance of non-technical skills development for accountants (Morgan, 1997; Arquero et al., 2001; Hill and Milner, 2006; Gammie, Hamilton and Cargill, 2010, Lister, 2010; Wilson, 2011). Despite this acceptance, academics (Morgan, 1997, Wilson, 2011) and employers (Morgan, 1997; Gray et al., 2001; Arquero et al., 2001)

have posited that university accounting education has failed to develop non-technical skills to the required level.

Research to date has identified a wide range of non-technical skills required by accountants. Most of these skills can be categorised into the non-technical skills categories identified by International Education Standard (IES) 3 as required to be developed prior to qualifying as a professional accountant: intellectual skills, personal skills, interpersonal and communication skills and organisational and business management skills (IFAC, 2010)[40]. Members of IFAC, which includes all the UK professional accountancy bodies, should ensure their education provisions adhere to IES 3[41]. In addition, the skills falling into these categories have also all been incorporated into the Common Content (2015) Skills Framework.[42] The literature will therefore be discussed in the context of these four skill categories.

3.3.1.1 Intellectual Skills

Intellectual skills are skills which allow problems to be solved, decisions to be made and judgement to be exercised and includes skills such as critical analysis, problem solving and analytical thinking (IFAC, 2010). Researchers have confirmed the importance of intellectual skills in accounting education (Arquero et al., 2001; Hassall et al., 2003; Gray et al., 2001; ACCA, 2008; Kavanagh and Drennan, 2008, Frecka and Reckers, 2010; Crawford, Helliar and Monk, 2011). Intellectual skills are also recognised by Accountancy bodies round the world as being required to be developed by accountancy educators, as evidenced, by example, though the inclusion in the American Institute of Certified Public Accountants' (2013) Core Competencies. However, UK accountancy firms have previously expressed concern over the development of intellectual skills by accounting degrees with 77% of the accountancy firms sampled by Gray et al. (2001) specifically wanting to see an improvement in the critical thinking ability of accounting students. Gray, et al. (2001) also sought the views of the

[40] IES 3 was revised in 2015 post data collection. The skills in the revised standard are broadly the same as the standard used at the time of data collection.

[41] IES 3 in one of eight education standards issued by IFAC. Professional bodies are obligated to comply with all of these standards.

[42] The Common Content (2011) Skills Framework identifies the skills required by entry level professional accountants and has been developed through a collaboration of 9 European accountancy bodies (including ICAS, ICAEW and CAI).

professional bodies as part of the same study and found they shared this concern over accounting graduates:

> *the students that we have the most difficulty with (in) thinking independently are students who have come from universities (with) solid accounting degrees...and if you asked them a challenging question they can't answer it. I don't mean a technical challenging question, but something that requires a discussion of wider issues* (Gray et al., 2001, p. 144).

A question is raised as to whether the criticism levelled at accounting degrees by Gray et al. (2001) is still applicable today. The work of Crawford, Helliar and Monk (2011) would indicate that progress has been made with their study finding that UK academics identified intellectual skills as the most commonly taught skill category from IES 3. Despite this, the aforementioned concern over the failure to develop intellectual skills continues. Lister (2010) and Scott (2010) have both expressed concerns that undergraduate accounting education is a 'technical training camp' which fails to develop the intellectual skills which should be at the heart of university education. Wilson (2011) also expressed concern over the influence of professional training on accounting degrees suggesting that universities should develop capability, which incorporates understanding, analysis and synthesis and application in terms of Bloom's (1956) taxonomy, whilst professional training should develop competence, incorporating knowledge and application in terms of Bloom's (1956) taxonomy. Whilst both capability and competence are required by a professional accountant, Wilson (2011) argues that developing competence at university detracts from capability development.

3.3.1.2 Personal Skills

Personal skills relates to attitudes and behaviours (IFAC, 2010). These skills allow individual learning and personal improvement and include capabilities such as self-management, using initiative and the ability to self-learn (IFAC, 2010). The importance of these skills for accountants has been confirmed by several research studies (Arquero et al., 2001; Hassall et al., 2003; Kavanagh and Drennan, 2008; Hancock et al., 2009).

The ability to self-learn has been identified as one of the most important attributes for accountants (Bedford et al., 1986; AECC, 1990; Patten and Williams, 1990; Adler and Milne, 1997; French and Coppage, 2000; Paisey and Paisey, 2004; Paisey and Paisey, 2007). This is due to the technical requirements of an accountant being subject to change as new technical legislation and guidance emerges (Paisey and Paisey, 2007). The increasing technical demands are also demonstrated by an ACCA (2008) survey which found that 93% of public practice respondents thought their role was becoming more technically demanding and specialised, primarily due to increased regulation and business complexity. In addition to learning new legislation, accountants also need to develop their knowledge in response to role changes as they progress through their careers. An accountant's role can either change in response to changing business practices (Howieson, 2003) or through career specialism and changes. This is illustrated by the fact that although 96% of ICAS students currently complete their training contract in public practice, the majority (53%) of ICAS practising qualified accountants work in industry (FRC, 2016). This indicates accountants move into different roles subsequent to qualification and as such need to be able to learn the required specialised knowledge for each new role they undertake.

Despite the proliferation of research that stresses the importance of 'learning to learn', there is a paucity of literature on how effective university education has been in developing this skill for trainee accountants. One study which did examine this was Arquero et al. (2001). This study found that from the perception of CIMA employers, degree providers have responded to the need to develop a student's ability to learn. This was demonstrated by 'a commitment to life-long learning' and the 'ability to develop methods of effective learning' being identified as the 3rd and 4th (from 20) best skills developed by graduates who go onto complete the Chartered Institute of Management Accountants (CIMA) qualification, surpassed only by two different IT skills (Arquero et al., 2001). This study does not differentiate, however, between those with an accounting degree and those with a degree from another discipline.

3.3.1.3 Interpersonal and Communication Skills

Interpersonal and communication skills are skills, which enable accountants to effectively work with each other, allow information to be received and transmitted effectively and

reasoned judgement and effective decisions to be made (IFAC, 2010). Research has confirmed the importance of being able to work effectively with others (Berry, 1993; Ravenscroft, 1997; Arquero et al., 2001; Hassall et al., 2003; Gammie, Cargill and Gammie, 2004; ACCA, 2008; Kavanagh and Drennan, 2008; Hancock et al., 2009; Jackling and de Lang, 2009; Crawford, Helliar and Monk., 2011). Furthermore, team working was identified as one of the most important skills sought by ICAS employers when recruiting graduate trainees (Gammie, Cargill and Gammie, 2004).

Communication skills are the non-technical skills which have received the most attention in literature with the importance of communication skills for accountants being identified by many (Deppe et al., 1991; Zaid and Abraham, 1994; Morgan, 1997; Arquero et al., 2001; Hassall et al., 2003; Gammie, Cargill and Gammie, 2004; ACCA, 2008; Kavanagh and Drennan, 2008; Bui and Porter, 2010; Jackling and de Lang 2009; Wells, 2009; Frecka and Reckers, 2010; Gray, 2010; Crawford, Helliar and Monk, 2011; Riley and Simons, 2016). Indeed, communication skills are rated as one of the most desirable skills that employers look for in graduate accountants (Arquero et al., 2001; Gray et al., 2001; Gammie, Cargill and Gammie, 2004) and ACCA practitioners rate communication skills as the most valuable skill to their organisation (ACCA, 2008).

3.3.1.4 Organisational and Business Management Skills

Organisational and business management skills are required when managing other people and managing projects (IFAC, 2010). This includes skills such as leadership, delegation and the ability to exercise professional judgement (IFAC, 2010). The importance of organisational and business management skills for accountants have also been confirmed by research (Arquero et al., 2001; Hassall et al., 2003; ACCA, 2008; Kavanagh and Drennan, 2008; Jackling and de Lang, 2009). Despite this, UK academics identify these skills are not commonly taught (Crawford, Helliar and Monk, 2010). The outcome of this is evident in the assessment of graduate development of organisational and business management skills by CIMA employers who identified certain skills, such as organising and delegating tasks, as being poorly rated in terms of skills developed at university (Arquero et al., 2001).

3.3.1.5 Summary

Whilst the literature is conclusive on the importance of non-technical skills for accountants there is debate over how well accounting degrees are developing the non-technical skills of their graduates. If accounting degrees are to retain their currency as an educational platform on which a career as a professional accountant is launched, further consideration needs to be given to non-technical skills development in accounting degrees in order that graduates from this educational background can compete on a more equitable non-technical skills playing field for highly coveted trainee accountancy positions.

3.4 Research Method

Two data collection phases were undertaken. Firstly, an online questionnaire to all UK Big 4 trainees who commenced an ICAS training contract in 2010. An online questionnaires was selected in order to reach the high number of participants located in geographically disperse offices. The questionnaire was distributed, along with a covering email explaining the research, using Survey Monkey in agreement with the Big 4 firms. A copy of the questionnaire can be found in thesis Appendix A. Due to data protection, the questionnaire was provided to each of the Big 4 firms who agreed to send this out to their trainees who met the selection criteria.

The sample was selected as it was expected Big 4 trainees would have a similar academic profile, with all Big 4 firms requiring between 280-320 UCAS points[43] and at least a second class (upper division) degree at honours level.[44] In addition, all trainees would have been exposed to a similar training environment. These Big 4 trainees made up 71% of the students who had registered with ICAS in 2010.[45] The questionnaire was completed mid-way through the trainees' 3 year training contract.

[43] The UCAS Tariff is the system in the UK for allocating points to qualifications and is used for entry to higher education (UCAS, 2013). For example, 320 UCAS points could be achieved by obtaining one 'A' grade and two 'B' grades in A-Level examinations in England. Students usually require 3 A-Levels to gain access to university education.

[44] This represents the award made at undergraduate level. Depending on performance in a student's honours years, different grades will be awarded to passing students: First Class (representing the highest grade); Second Class (Upper Division); Second Class (Lower Division) and Third Class.

[45] FRC (2011) states that 808 students registered with ICAS in 2010. Big 4 firms confirmed a total of 574 (71%) commenced a training contract with them in 2010.

The questionnaire comprised closed questions which could be coded for statistical analysis. This included two key areas of data collection:

1. Bio-data Factors: These questions comprised background factors about the trainees, such as degree undertaken.
2. Specific Non-Technical Skills: 31 non-technical skills were identified, and developed into questions, from IES 3 (shown in Table 8). Trainees were asked to rate on a likert scale (using 1=no development to 7=full development) how well they believed the 31 identified non-technical skills (detailed in Table 8) were developed through their university education.

The questionnaire was piloted through personal contacts and minor adjustments made before being sent to the research population, along with a covering email. Data was entered into SPSS for statistical analysis and tests of significance performed.

The questionnaire results identified, from the perception of graduates, the output in terms of non-technical skill development from the respondents' university education. The results of the questionnaire were then followed up, in particular to identify input pressures on accountancy programmes, though face to face interviews with those with oversight of Scottish accountancy degrees. This comprised the Head of Department for most universities but was passed on to others with oversight of the accountancy degree, such as a Programme Leader, if the Department Head was unavailable or felt they were not in a position to be able to discuss the accountancy degree. Thirteen universities in Scotland offer an accountancy degree and interviews were secured with eleven of these. Of these, five were 'new'[46] post-92 universities and six were 'traditional' universities. No differences in responses were found between these two groups and as such the analysis has not differentiated between 'new' and 'traditional' universities.

[46] In 1992 a number of educational institutions, commonly known as Polytechnics, were able to apply to award their own degrees and receive 'university' status. These are commonly referred to as 'new' universities in the UK with remaining universities known as 'traditional' universities.

Interviews were semi-structured to ensure comparable coverage but also allow interviewees to expand on areas specific to their degree and areas of personal interest. A copy of the interview schedule can be found in thesis Appendix B along the ethics approval form completed by each participant. The interview comprised a number of specific questions as well as prompts for follow up questions if these had not already been covered by the interviewees in response to earlier questions. The results (as per Table 7 and 8 with key statistical differences clearly highlighted) of the questionnaire were shared with the interviewees and their opinions sought. These results were shared at the end of the interview so as to not bias the answers to earlier questions. Interviews were transcribed and transcriptions were analysed using NVivo software in order to bring out emerging themes. Two layers of codes were established within NVivo. Firstly codes to group together responses to the standard questions asked to all interviewees, such as 'which non-technical skills do you develop on your accountancy degree.' Secondly, codes to group together emerging themes, such as the impact of accreditation. The interviews were completed in 2016 and averaged 62 minutes in length with the longest interview lasting 86 minutes and the shortest lasting 30 minutes.

3.5 Analysis of Results: Questionnaire

Due to data protection, the questionnaire was provided to each of the Big 4 firms who then sent this to all trainees (n=574) who commenced an ICAS training contract in 2010. 104 trainees completed the questionnaire giving a useable response rate of 18.11%.[47] This response rate is comparable with Gray (2010, 19.2%) and Arquero et al. (2001, 22.5%).

Due to the response rate, additional tests for non-response bias were performed. Statistical data on age profile, gender and relevance of degree is published annually by the Financial Reporting Council for the total ICAS trainee population. The sample for this study comes from one year group of the total ICAS population. Chi-Squared tests were performed on all three categories (age, gender and degree relevance) to identify if the sample represented the full year group. No indication of response bias was identified as there was no significant

[47] This relatively low response rate may reflect the way in which the questionnaire was disseminated. As contact could not be made directly with the students, covering emails from the firm and follow up emails were limited to what each firm was willing to do.

differences between the sample and the FRC population (Gender[48]: $\chi^2(1)=1.05$, $p=0.305$; Age[49]: $\chi^2(1) = 0.710$, $p= 0.399$ and Relevance of Degree[50]): $\chi^2(1) = 3.699$, $p=0.54$. In addition, there is nothing to suggest this year group is not representative of the full ICAS trainee population as the profile of ICAS trainees is similar across years groups, with the statistics for age, gender and degree relevance similar in 2009, 2010, 2011 (FRC, 2010, 2011, 2012).

The sample was further categorised into two groups: those with an accounting degree (n=30) and those with a non-accounting degree (n=74). The classification was based on those with 'Accounting' in their degree title.[51] The non-accounting graduates came from a wide range of degree backgrounds, the most popular being economics (n=12), mathematics (n=8) and law (n=7) to more unusual degrees such as genetics and modern and medieval languages. The majority of trainees came from traditional UK universities (accounting n=27 and non-accounting n=69). The remaining non-accounting graduates were from overseas universities (n=5) and the remaining accounting graduates were from UK 'new' universities[19] (n=2) and overseas universities (n=1). Whilst it is unknown if this split between 'traditional' and 'new' universities reflects the full population of Big 4 trainees, it does give an interesting insight into possible recruitment policies.

The questionnaire examined how accounting and non-accounting graduates perceived their development at university of the 31 IFAC identified non-technical skills. Due to the high number of individual skills, an initial overview comparison was made between accounting and non-accounting graduates' rating of their university non-technical skills development by summarising the 31 non-technical skills into the four skill categories identified by IFAC:

[48] Based on FRC (2010) Education statistics for full ICAS trainee population. Statistic were similar for 2009 and 2011 (FRC, 2010, 2011, 2012).
[49] Average age based on FRC (2011) Education statistics as 2011 is the mid-way point of a three year training contract. Weaker p value is expected due to a number of students taking more than 3 years to complete their training contract.
[50] Based on FRC (2010) Education statistics for full ICAS trainee population. Statistic were similar for 2009 and 2011 (FRC, 2010, 2011, 2012).
[51] Consideration was also given to accreditation but this was not deemed an appropriate split due to the high number of students with partly accredited degrees. In addition, it was noted that some students with potentially accredited degrees did not apply for exemptions due to their firms requiring them to sit the Test of Competence examinations, from which exemptions are gained, regardless of the accreditation status of their degree.

Intellectual skills, Personal skills, Interpersonal and Communications skills and Organisational and Business Management skills.[52] The results of this are provided in Table 7.

Table 7: Comparison of Skill Categories between Accounting and Non-Accounting Degree Holders

	Accounting Mean	Accounting Rank	Non Accounting Mean	Non Accounting Rank	Mann-Whitney U	P Value
Intellectual	5.05	3	5.56	1	733**	.007
Personal	5.12	1	4.80	2	885	.106
Interpersonal and Communication	5.07	2	4.67	3	909	.149
Organisational and Business Management	4.51	4	3.88	4	774*	.016

**=Significant at 1% level *=Significant at 5% level

The results indicate that both accounting and non-accounting graduates were of the opinion that their university education did develop non-technical skills in all four categories to some extent. With the exception of organisational and business management skills for non-accounting graduates, the average mean exceeds the midpoint of 4 on the 7 point rating scale (with 1=no development to 7=full development) for all categories of non-technical skills.

The intergroup comparison at category level indicates that accounting degrees are placing focus on different non-technical skills compared to other degree providers. Of particular note

[52] The questionnaires were entered into SPSS for statistical analysis. For likert scales, the ordinal data required non-parametric tests to be undertaken. To test the difference between accounting and non-accounting students for likert ratings the Mann-Whitney test was used (Field, 2009).

is the lower development of intellectual skills by accounting graduates ($\bar{x}$=5.05 vs. $\bar{x}$=5.56) despite the aforementioned literature highlighting the importance of developing these skills at university (Arquero et al., 2001; Gray et al., 2001; ACCA, 2008; Kavanagh and Drennan, 2008, Frecka and Reckers, 2010; Crawford, Helliar and Monk, 2011). However, this lower rating is perhaps not surprising given concerns raised by academics (Lister, 2010; Scott, 2010; Wilson, 2011).

However to enable a fair critique of accounting degrees, consideration should be given to which of the IFAC skills should be developed at university. The 31 listed IFAC skills are the skills that accountants require on qualification as an accountant, not on completion of a university degree. Recent research has identified different perceptions over what role universities have in developing these skills (Crawford, Helliar and Monk, 2011). Consideration was therefore given to guidance from the Quality Assurance Agency[53] (QAA) for higher education on which skills should be developed through university education in the UK, both generically by all degrees and more specifically by individual subjects, such as accounting (QAA, 2007, 2008). Higher education providers in the UK are required to comply with the provisions of the UK Quality Code resulting in a regulatory pressure. The 31 IFAC skills were mapped to the QAA skills required by all degrees (detail shown in appendix 1) to identify which IFAC skills should be, according to QAA, developed by all degrees.[54] Table 8 shows how accounting and non-accounting graduates rated their development of all 31 IFAC skills with significant differences between the two groups highlighted. The IFAC skills which should be developed at university by all degrees (as identified from QAA (2008) guidance) are identified through shading in Table 8.

[53] The QAA in an independent body in the UK that promotes quality in higher education. It protects public interest by reviewing how higher education establishments maintain their academic standards and quality. It is a key advisor to the UK Government regarding whether an institution can be called a university and award degrees (QAA, 2013).

[54] The comparison initially excluded skills required to be developed by accounting degrees but not all degrees. This allowed for a fair comparison as non-accounting degrees were not being compared on skills that only accounting degree providers are required to develop.

Table 8: Development of IFAC and QAA skills by Accounting and Non-Accounting Graduates

IFAC Skills (with shaded skills indicating skills specifically matched to QAA Guidance[55])	Acc Mean	Acc Rank	Non-Acc Mean	Non-Acc Rank	Mann-Whitney U	P value (Acc vs. Non Acc)
INTELLECTUAL SKILLS						
Locate, obtain, organise and understand information from human, print and electronic sources	5.27	8	5.62	5	850	.052
Think logically and analytically	5.13	11	**5.82**	1	639**	**.000**
Capacity for inquiry	4.83	21	**5.51**	8	723**	**.004**
Capacity for research	5.53	3	5.61	6	981	.334
Effectively reason	5.10	12	**5.64**	4	795*	**.019**
Perform critical analysis	5.07	14	**5.61**	6	796*	**.019**
Identify and solve unstructured problems which may be in an unfamiliar setting	4.43	24	5.11	13	847	.053
PERSONAL SKILLS						
Self-Manage	5.63	2	5.70	3	1045	.623
Use initiative	5.20	10	5.23	10	1081	.827
Influence others	4.50	23	4.26	22	1023	.536
Self-Learn	5.73	1	5.73	2	1070	.763
Select and assign priorities within restricted resources	5.40	6	4.91	15	884	.096
Organise work to meet tight deadlines	5.50	5	5.39	9	1075	.793
Anticipate and adapt to change	4.87	20	4.69	16	1044	.622
Consider the implications of professional values, ethics and attitudes in decision making	**4.90**	19	3.66	25	685**	**.002**
Exercise professional scepticism	4.33	25	3.66	25	843	.052

Table Continued on Next Page

[55] Based on QAA (2008) guidance on the skills required for an honours degree in England, Wales and Northern Ireland. This was compared and found to be comparable to skills required for an honours degree in Scotland (QAA, 2001). The only difference being the Scottish guidance did not specifically require 'Project Management'.

IFAC Skills (with shaded skills indicating skills specifically matched to QAA Guidance)	Acc Mean	Acc Rank	Non-Acc Mean	Non-Acc Rank	Mann-Whitney U	P value (Acc vs. Non Acc)
INTERPERSONAL AND COMMUNICATION SKILLS						
Work with others in a consultative process, to withstand and resolve conflict	**5.03**	15	4.31	21	778*	**.015**
Work in teams	**5.53**	3	4.68	17	739**	**.007**
Interact with culturally and intellectually diverse people	5.40	6	5.19	12	1081	.829
Negotiate acceptable solutions and agreements in professional situations	4.23	29	3.66	25	908	.141
Work effectively in a cross-cultural setting	5.00	17	4.62	18	999	.415
Present, discuss, report and defend views effectively through formal, informal, written and spoken communication	5.27	8	5.20	11	1044	.625
Listen and read effectively, including a sensitivity to cultural and language differences	5.03	15	5.00	14	1089	.874
ORGANISATIONAL AND BUSINESS MANAGEMENT SKILLS						
Strategic Planning	4.73	22	4.36	20	957	.260
Project Management	**5.10**	12	4.12	23	747**	**.008**
Management of people and resources	**4.33**	25	3.46	31	764*	**.011**
Decision Making	4.97	18	4.51	19	915	.147
Organise and delegate tasks	**4.23**	30	3.61	29	832*	**.042**
Motivate and develop people	4.03	31	3.55	30	882	.096
Leadership	**4.33**	25	3.65	28	830*	**.041**
Exercise professional judgement and discernment	4.33	25	3.76	24	878	.090

**=Significant at 1% level *=Significant at 5% level

Both groups rated the development of self- learning highly, with the same mean rating of 5.73 (on a 7 point scale). Indeed the ability to self-learn was rated as the most developed skill for accounting graduates and the second most developed skill for non-accounting graduates. The high rating of the ability to self-learn augers well for degree providers as it indicates conformity with the highly publicised need for all degrees (Fallows and Steven, 2000; French and Coppage, 2000; Harvey, 2000) and specifically accounting degrees (*inter alia* Bedford et al., 1986; Paisey and Paisey, 2007) to develop this ability.

Accounting graduates rated their development of consideration of ethics/professional values and a number of the organisational and business management skills significantly better than non-accounting graduates. This is unsurprising as it is logical to expect these to be better developed on a business orientated degree. Accounting graduates also rated the two skills regarding working with others significantly higher indicating more emphasis is placed on this by degree providers. Team working was the only one of the 31 IFAC skills which was identified from QAA (2007, 2008) guidance as being specifically required to be developed by accounting degrees but not a generic skill required by all degrees (see Appendix 2 for comparison).[56] This appears to be reflected in the results with the significantly higher rating of team working skills by accounting graduates.

Perhaps most interesting, is the higher rating (both in terms of mean and rank) of all the intellectual skills by non-accounting graduates, with significantly higher ratings for thinking logically and analytically (U=639, p=0.000), capacity for inquiry (U=723, p=0.004), effective reasoning (U=795, p=0.019) and performance of critical analysis (U=796, p=0.019). All of the IFAC intellectual skills were synonymous with the QAA (2008) guidance and therefore each of these intellectual based skills should have been developed at university.

Overall, the non-accounting graduates had a wider range of mean values over the range of skills (range = 2.36) compared to accounting graduates (range = 1.7). This indicates, from the perception of graduates, accounting degrees are trying to develop a wider range of skills to a similar level whilst other degrees appear to be prioritising certain skills, namely self-

[56] Team working may be required by other degrees but as it is not required by all degrees team working is not included in the QAA generic guidance for all degrees.

learn/manage and intellectual skills. This is potentially a concerning position for accountancy degree providers with intellectual skills being identified as the fundamental skill of higher education (Newman, 1852; Gray at al 2001; Wilson, 2011).

The questionnaire results gave an interesting insight into the overall perception of those who had gone on to complete an ICAS training contract with a Big 4 firm. However, these trainees completing the questionnaire had undertaken their university education in a wide range of locations in both the British Isles and overseas. The sample also indicated a high proportion of traditional universities. When applying institutional theory, the institutional environment should be constant and it was therefore decided to focus on Scottish universities, who face a similar institution environment, as a case study. Universities in the Scotland have a unique environment compared to other UK countries, for example in its 4 year degree structure and the way in which fees are charged.

It must also be recognised the questionnaire results report a perception and is limited in terms of number of respondents. Whilst most measures of non-technical skills are perception based (Ballantine and Mccourt Larres, 2009), subsequent interviews with those who have oversight of accountancy degrees were undertaken to triangulate and expand on the findings and further substantiate the conclusions.

3.6 Analysis of Interviews and Discussion

Interviewees were asked an open question on which non-technical skills they developed on undergraduate accounting courses. Responses were categorised into the IFAC skill categories as per the questionnaire. Skills from the interpersonal and communication category were the first skills identified by all but one respondent (who identified intellectual skills) and were discussed and elaborated in substantially more detail, examples included:

> *Because I come from an audit background and a lot of us have got technical background as well, I think it's fair to say we think things like group working are very, very important. Accountants have to be able to communicate. Communication is really at the heart of*

everything that we do. So all the way through the course we'll try and develop team working (N9)

In accounting generally I suppose we're very conscious of communication skills at the moment (N11)

Certainly communication. I think the interpersonal team working type skills. We like to think that we do critical thinking, but I'm not sure that we do nearly enough of that (N3)

All interviewees identified at least one skill from the interpersonal and communication category, with working in teams (n=9) and presenting, discussing, reporting and defending views effectively through formal, informal, written and spoken communication (n=8) being the most frequently identified by the interviewees. Just over half (n=7) mentioned skills from the intellectual category and only one highlighted a skill from the personal skill category. Whilst later questions and probing revealed further skill development, if this first question is used as a proxy for importance, these initial responses are in line with the findings of the questionnaire in that intellectual skills are not prioritised for development by Scottish accountancy degree providers.

When asked, all but two respondents identified at least one skill they would like to develop better. A wide range of skills were identified in relation to this, including Excel, networking and digital literacy, but interpersonal and communication skills were the most commonly identified (n=6), in particular presentation skills. Only one respondent identified an intellectual skill, in the form of critical thinking. This was interesting as despite interviewees identifying interpersonal and communication skills as being the most commonly developed skills, they also wanted to develop these further. This again indicates a high prioritisation for the development on interpersonal and communication skills. An illustration of an interviewee who first identified communication skills as the key skills currently developed but also as the skills they would like to better develop is as follows:

Interviewer*: which ones [non-technical skills] do you try and develop on your course?*

Interviewee: *Well, I think we do start from a foundational point of view that accounting is all about communication. And so communication runs through everything that we do,*

verbal and written. So given the importance of that we do try and look for opportunities to assess both, not just written communication.

***…Interviewer**: are there any skills you would like to develop better?*

***Interviewee:** That's a difficult question. I suppose going back to the fundamental skill of communication is probably the one that we would want to continue to work on as much as possible. (N4)*

Communication skills have prominently featured in accounting education research (*inter alia* Morgan, 1997; Arquero et al., 2001; Hassall et al., 2003; Gray, 2010; Crawford, Helliar and Monk, 2011) and have been identified as key skills that accountancy firms are looking for when recruiting trainees (Arquero et al., 2001; Gammie, Cargill and Gammie, 2004). Both the questionnaire and interview data indicated that accounting degree providers have responded to this research on communication skills. The questionnaire results indicated a higher focus by accountancy degree providers on interpersonal and communication skills, with all skills in this category receiving a higher rating by accountancy graduates. The interview responses, as discussed above, indicated accounting degree holders appear to be institutionalised in their belief of the importance of interpersonal and communication skills. However, if this is at the detriment of intellectual skills, then this is a concerning position for accountancy degree providers, particularly if non-accounting graduates are better developing intellectual skills which results in them being preferred for coveted accountancy positions.

To further understand the development of intellectual skills in accountancy degrees, follow up questions were posed to interviewees. First, consideration was given to whether intellectual skills can be taught, a concept questioned by Kent St. Pierre and Rebele (2014) who suggest intellectual skills may be a function of inherent or background factors which cannot be changed by teaching. Interviewees on the whole disagreed with this, identifying that they believed intellectual skills could be taught, developed or encouraged. This corroborated the results of the questionnaire, where all mean values for intellectual skills exceeded the mid-point scale, indicating graduates believed their university education had developed intellectual skills. However, some interviewees did identify limitations in teaching these intellectual skills:

Yes. I think you can probably teach performing critical analysis. I think you can improve your reasoning. I think being a logical and analytical thinker, there's different aspects of the brain that might be stronger in that area, but I think again you could probably develop those. The critical analysis one I think can be taught. These ones can be developed. Capacity for enquiry? Well, capacity is a little bit different. Can't teach capacity, but can you expand capacity? I suppose that's an individual thing. But, yeah, I think you can demonstrate the importance and the significance of enquiry. So developing these things I think yes. (N4)

I don't think you can teach them but I think you can point them in the right direction. And by having different assessment types and processes I think you can encourage students to use them and develop them, yes. (N2)

Previous research has identified the importance of integrating intellectual skills into accounting modules, with frameworks provided by Kimmel (1995) and Duron, Limback and Waugh (2006). Interviewees appeared in agreement that intellectual skills should be integrated within other modules rather than taught in standalone modules, one interview summed this up as:

I think it has to be absolutely embedded in everything that we do. I think it's one of these things that is difficult to teach. It's one of these things that is not something you could easily sit down on a single course or module and say "alright, in this space we're going to teach you critical thinking." It's more of an existence, a way of life, of doing things. If you build that expectation into everything that happens then it's much more likely to embed. (N10)

Once established that intellectual skills could be taught, developed or enhanced, consideration was given to if and how this was undertaken on Scottish accountancy degrees. Despite a number of interviewees not identifying intellectual skills when first asked which skills they developed, further probing resulted in all interviewees identifying these were developed on their course. Examples provided as to how this was done, included the dissertation and in particular 4th year modules which were distinctly non-technical in nature:

And perform critical analysis, certainly we challenge ideologies as well in the fourth year, it's got a big course that looks at the whole range of different ideological positions in accounting, and really challenges the role of accountants in society and rethinks what accountant could be as well. (N5)

A colleague of mine does a course on accounting in everyday life. There are some more traditional things like audit practice and tax, but these are the places where there's no technical content whatsoever. They're much more research orientated, looking at accounting in a much wider context, social context, cultural context. That's where you can do that stuff (N11)

With a general agreement that intellectual skills could be enhanced at university and with all respondents providing examples of how their course developed these, the results of the questionnaire were shared with academics and opinions sought on why accounting graduates rated their development of intellectual skills significantly lower. The initial reactions were mixed, some surprised, some clearly unsurprised; albeit reluctantly at times:

It's surprising because I would have thought accountants would be prouder of it [Intellectual Skill development] (N6)

'I can understand why. But in some ways I am disappointed' (N2)

'I'm not surprised by that, I suppose (N4)

Elaborating on their initial reaction, all but one respondent discussed the detrimental effect of teaching technical material. This is consistent with previous research (Zaid and Abraham, 1994; Morgan, 1997; Gray, et al., 2001; Kavanagh and Drennan, 2008; Wilson, 2011) and interviewees indicated this is a continuing problem:

Yeah I mean I've seen a lot of criticism of students going out that are not analytical, they're not critical, absolutely. And I think probably because of our syllabus we are teaching them (N7)

Probably because we end up doing perhaps too much of the actual technical side of things. So instead of getting into problem solving, critical analysis that we will teach bank recs or consolidations. So we will do "this is what the standard says, this is what you need to do to meet the standard." (N3)

if you are going to fill your syllabus up with a lot of the technical accounting material there is a lot that goes through "go and prepare a set of consolidated accounts" or whatever. There's a lot of that, and not very much of are you thinking logically and analytically? Okay, you might be. Capacity for enquiry? No. Effectively reasoning? No. Critical analysis? No. (N2)

Because these are a bit more traditional academic skills and given that the other degrees might not be as constrained around the technical requirements for the subject area then I think that is perhaps the difference between your liberal and vocational education generally. I think you would expect the liberal education to build those sorts of skills for anyone that's going an arts course or science or whatever, whereas the more vocationally orientated perhaps will compromise on that a little bit, or at least emphasise other things that are a bit more vocationally relevant. And so to a lesser extent those. A wee bit surprised maybe about logical and analytical because I would have seen that as quite strong in accountants. But the enquiry and the critical analysis, yeah, I think it's not so surprising. (N4)

As a result of such a high technical content, a number of interviewees identified lack of space as an impediment to the development of non-technical skills. This is illustrated by the following responses to a question regarding what barriers are faced in regards to non-technical skill development:

Space, yes, I think it probably is space. (N3)

Space is always a problem. Where we have a four year degree, and four years to actually get them through the accreditation requirements, and then we've got an Honours year where we can challenge them in different directions, you can find a space in there. (N10)

Just I suppose the space to find a place for them within the curriculum and finding innovative ways to bring them into what we already do. (N11)

This lack of space in accounting degrees means accounting degree providers have to make course content decisions about which technical and non-technical skills to prioritise. The aforementioned responses indicate a high priority for technical material and consideration

was given to understanding what pressures are being exerted on accountancy degree providers to include technical course content which they identified as detracting from intellectual skills development. Gonzàlez and Hassall (2009) identified professional accreditation as a normative pressure impacting undergraduate accountancy education and this appeared to be the driving force of a high technical content, as suggested by Wilson (2011). All degree providers noted they held multiple accreditation from different professional bodies[57], with no providers currently looking to decrease exemptions/accreditations but some looking to increase these. The most common reason given for importance placed on accreditation was student recruitment, with N1 identifying '*that's what the students look for*' and N8 confirming this in that 'If *we didn't have accreditation I don't think we would have any students, frankly'.* N10 shared this view and expanded as follows:

> *From a management perspective the thing that we need is students. The students pay our bills, they pay our salaries. We need to ensure that we can get students into the* programme*. Having the maximum available accreditation is almost a baseline requirement in order to achieve that. If we don't compete with other institutions in terms of the accreditation that we can give they just go elsewhere. (N10)*

The normative pressure of accreditation therefore appeared to be a key source of legitimacy for Scottish accountancy degree providers. In addition, evidence could be seen of Friedland and Alford's (1991) observation that legitimate organisations may have inefficiencies but despite this perform well as they are better at getting resources from those who perceive them to be legitimate. Applying this to Scottish accountancy degree providers, many interviewees believed accreditation to have a negative impact (or inefficiency) on the education they provided but reluctantly admitted this would not change due to accreditation serving as a key marketing tool, which allowed resources (in terms of student fee income) to

[57] This included exemptions for ICAS, ICAEW, ACCA, CIMA, Chartered Accountants Ireland, Association of International Accounts and the Chartered Institute of Public Finance and Accountancy. All programmes have at least two of these, several with all or almost all of these.

be gained. Interviewee N9 noted they were '*not convinced about accreditation'* but when asked if they would maintain accreditation identified that *'economically there's no way we're going to [lose it]. No chance.'* This view was also shared by interviewee N5 as follows:

> *I've been here since 1999, sixteen years, forever when you realise, and I have heard people say we're restricted by accreditation. There's really never been a challenge to that in terms of we shouldn't have it. It might have been mentioned in passing, but I think the possibility of changing it is very remote, actually. That it's important for us and it's important that we have a range of accreditation bodies as well. So I think that's the key, that there's a range of accreditation (N5)*

However, the legitimacy gained from accreditation may be fuelled by an information gap. If perspective students are focused on accreditation due to the belief it will make them more employable, an information gap may exist as employers, particularly large employers, are more interested in the non-technical skills of applicants than their level of exemptions. If this information gap is closed, accreditation could actually negatively influence legitimacy if it detracts from the intellectual skills development sought by employers (Arquero et al., 2001; Gray et al., 2001; ACCA, 2008; Kavanagh and Drennan, 2008; Crawford, Helliar and Monk., 2011) . The impact of accreditation on the development of non-technical skills was therefore explored further with interviewees.

When discussing the questionnaire results and why non-accounting graduates had more highly perceived their development of intellectual skills, the majority of interviewees reflected the concern raised by Wilson (2011) that a high level of technical content, driven by accreditation, can result in competence being developed at the expense of capability. The majority of interviewees identified that due to the technical requirements of accreditation, intellectual skills were not really taught until well into year 3 or year 4 of their accountancy degrees and those on other degrees, without such accreditation requirements, may develop these from an earlier stage:

> *I think it's probably fair enough that when we spend the best part of three years focusing on technical education and then the real academic and critical challenges come toward*

the end of their degree they probably understand at the end of the degree that there are lots of other things that they could have been doing throughout their degree that they might have enjoyed more and might have got more out of if they hadn't had to do all the technical stuff. (N10)

… we do it in Honours year, we do a lot of critical stuff and reasoning and stuff like that in Honours year that I think through the degree up to that point there's not huge amounts of it, much more factual. So I think maybe non-relevant degrees will do that sooner. (N7)

They maybe learn that earlier on. They may have had more chance to criticise. We don't see it in first and second year. You're not really criticising the notion of accounting or bookkeeping or high value assets or share price models, the type of stuff that we teach. In fourth year it's sort of like an add-on, "by the way social environmental accounting thinks that the whole basis of financial accounting is flawed and that companies don't cost the environmental damage they do." But that's only in fourth year. By then students have spent three years learning how to produce sets of accounts. And then depending on the options they pick they're doing a little bit about how to deconstruct all that…. I mean, if we didn't have accreditation we'd probably do more of that in the earlier years because we'd have more time. When you're doing accreditation it is tough, you've got to map everything across. And you don't really have many contact hours left over in Financial Accounting 1, or Taxation or something. You literally have to squeeze all the material into those sessions. It's not easy. So there isn't much room for that sort of stuff. (N8)

By limiting the development of intellectual skills in earlier years not only puts accounting graduates at a potential disadvantage when competing for accountancy positions but a further concern was identified to the development of intellectual skills going forward. Currently, the majority of graduates in Scotland undertake 4 years of study at university. As identified above, many academics identified year 4 as a key space for intellectual skills development. Whilst not specifically asked, three interviewees identified that they expect Scottish degrees will be reduced to three years in the future, which would be consistent with the current position in England. With interviewees suggesting intellectual skills are not being taught until later years, a real challenge to Scottish accountancy degrees could be on the horizon if degrees reduce to 3 years. One which accountancy degrees need to be prepared for to ensure their future.

3.7 Conclusion and Implications

Big 4 accountancy firms cite no preference for accounting graduates when recruiting for trainee positions. Firms instead look at general ability and the skills possessed by applicants with scant regard for the subject matter studied. Accounting degrees have faced continuing criticism for their lack of development of non-technical skills and this research offers a possible explanation for why accounting graduates are not preferred by Big 4 accountancy firms.

Both the questionnaire and the interviews revealed that intellectual skills could and were being developed by accountancy degree providers. However, the normative pressure of accreditation creates a capacity problem restricting the input into accountancy degrees in terms of non-technical skill development, with this actually being felt by accounting degree graduates who perceive weaker development of intellectual skills compared to non-accounting graduates.

In satisfying this pressure and maintaining accreditation, accountancy degree providers have to make prioritisation decisions in terms of which non-technical skills to develop in the remaining curriculum space. The results indicate Scottish accountancy degree providers have become institutionalised in their belief and practices relating to the importance of developing interpersonal and communication skills. Whilst these skills are undeniably desirable skills for accounting graduates to have, accounting educators need to consider the balance between interpersonal and communication skills and the development of intellectual skills. A decision which could become more difficult if the Scottish degree is reduced to 3 years as suggested by some interviewees. The majority of interviewees identifying that intellectual skills are not really taught until later year 3 year 4, the reduction of the degree to three years could have far reaching consequences for the development of intellectual skills on accountancy degrees going forward.

Finally, the normative pressure of accreditation appears to be a perceived basis of securing legitimacy for vocationally relevant undergraduate accountancy degree programmes. However, much of this is based on a belief that accountancy degrees should have accreditation

as this is what perspective students believe will make them more employable. However, if maintaining accreditation continues to negatively impact on the development of intellectual skills this could actually result in graduates becoming less employable, and in turn threaten the legitimacy of accounting degrees going forward.

3.7.1 Limitations and Further Research

The questionnaire is based on the perception of graduates who were mid-way through their Big 4 ICAS training contract. Perception, as a measure of skill development, is subject to over or under estimation by participants and caution must be exercised to ensure the findings are not overreached. Three interviewees queried the impact of perception. Of these three respondents, two went on to discuss the negative impact of technical content on the development of intellectual skills. The other respondent maintained a belief that the differences in ratings were due to perception only and accounting graduates actually better developed their intellectual skills (N5 above). Interestingly, this same interviewee was the only interviewee who identified an intellectual skill first when asked which skills they developed (discussed above).

In recognition of the limitations posed by reporting perceptions, steps were taken to triangulate the findings through interviews with academics. However, further research could triangulate this further through looking at the opinion of different stakeholders, such as employers.

The interviews looked at the perceptions of Scottish Academics. The questionnaire results also included students from outside of Scotland and further insights could be gained through interviewing academics in other countries and comparing this to the results of the Scottish case study. In particular, English academics who already operate a three year degree structure may be of relevance.

The questionnaire sample was restricted to Big 4 trainees completing an ICAS training contract. The response rate of 18.15% was slightly disappointing and whilst non-bias tests

were performed, the generalisability of findings must be acknowledged. Further research to expand the sample to both trainees outside the Big 4 firms, trainees from other professional bodies and Big 4 trainees from other year groups would be beneficial in extending the insights gained from this study.

It must also be acknowledged that the sample is limited to those who have been successfully selected by a Big 4 firm who will be looking for particular skills to be present during the selection process. Whilst this makes the findings potentially more notable as the identified differences remain even after the Big 4 selection techniques have been applied, further research to extend the sample to those who have been unsuccessful would further extend the insights gained from this study.

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3.9 Appendix 1: QAA and IFAC skill Comparison

Non-Technical Skill Required by QAA Framework for all Degrees	**IFAC skill**
an ability to deploy accurately established techniques of analysis and enquiry within a discipline	capacity for inquiry perform critical analysis locate, obtain, organise and understand information from human, print and electronic sources listen and read effectively, including a sensitivity to cultural and language differences
to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline	identify and solve unstructured problems which may be in an unfamiliar setting effectively reason
to describe and comment upon particular aspects of current research, or equivalent scholarship, in the discipline	capacity for research
an appreciation of the uncertainty, ambiguity and limits of knowledge	
the ability to manage their own learning, and to make use of scholarly reviews and primary sources	self-learn self-manage
apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects	project management

critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem	identify and solve unstructured problems which may be in an unfamiliar setting
communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.	present, discuss, report and defend views effectively though formal, informal, written and spoken communication
the exercise of initiative and personal responsibility	use initiative self-manage
decision-making in complex and unpredictable contexts	identify and solve unstructured problems which may be in an unfamiliar setting decision-making
the learning ability needed to undertake appropriate further training of professional or equivalent nature.	self-learn
analytical techniques	think logically and analytically
problem-solving skills	identify and solve unstructured problems which may be in an unfamiliar setting

3.10 Appendix 2: Comparison of QAA skills required for Accounting Degrees with IFAC required skills

Non-Technical Skills required by QAA guidance specifically for Accounting Degrees	**IFAC skill**
the capacity for the critical evaluation of arguments and evidence	perform critical analysis
the ability to analyse and draw reasoned conclusions concerning structured and, to a more limited extent, unstructured problems from a given set of data and from data which must be acquired by the student	think logically and analytically identify and solve unstructured problems which may be in an unfamiliar setting effectively reason listen and read effectively, including a sensitivity to cultural and language differences
the ability to locate, extract and analyse data from multiple sources, including the acknowledgement and referencing of sources	locate, obtain, organise and understand information from human, print and electronic sources Capacity for Inquiry Capacity for research
capacities for independent and self-managed learning	self-learn self-manage
numeracy skills, including the ability to manipulate financial and other numerical data and to appreciate statistical concepts at an appropriate level	

skills in the use of communications and information technology in acquiring, analysing and communicating information	
communication skills including the ability to present quantitative and qualitative information, together with analysis, argument and commentary, in a form appropriate to the intended audience	present, discuss, report and defend views effectively though formal, informal, written and spoken communication
an ability to work in groups, and other interpersonal skills, including oral as well as written presentation skills.	work in teams present, discuss, report and defend views effectively though formal, informal, written and spoken communication

CHAPTER 4: AN INVESTIGATION OF THE IMPACT OF THE RELATIVE BALANCE (OR IMBALANCE) OF EDUCATION AND ECONOMIC LOGICS ON COURSE CONTENT DECISIONS IN SCOTTISH ACCOUNTANCY EDUCATION

4.0 Abstract

This paper uses Institutional Theory to investigate the impact of the relative balance (or imbalance) of education and economic logics on course content decisions in Scottish accountancy education. Interviews with 11 Scottish academics with oversight for accountancy degree programmes identifies accreditation, a carrier of economic logic, as the dominant source of institutional pressure shaping Scottish undergraduate accounting programmes. This dominance conflicts with intellectual skill development, a carrier of education logic, and the strategies employed in relation to these conflicts are investigated. Concern is raised over the longevity of the current strategies employed and academics are urged to carefully consider the impact of further economic pressures which could be on the horizon.

Keywords: Accounting Education; Accreditation; Institutional Logics; Institutional Theory

4.1 Introduction

Accountancy as a university subject may, by its very nature, reasonably be identified as vocational, in that it is orientated towards preparing students for specific employment (OECD, 2002). Its standing as a university subject, however, has been criticised by those who believe a university education should be liberal, in that its focus should be on developing the mind and the individual (Newman, 1852). This is not a new phenomenon, indeed almost 100 years ago, American academic Henry Rand Hatfield in his renowned article, 'A Historical Defense of Bookkeeping' articulates this criticism:

> *I am sure that all of us who teach accounting in the universities suffer from the implied contempt of our colleagues, who look upon accounting as an intruder, a Saul among the prophets, a pariah whose very presence detracts somewhat from the sanctity of the academic halls (p. 241, 1924)*

Accountancy at UK universities developed later than in the US with its roots being traced to the first chair of Accountancy in Birmingham in 1902. Initially germinating from post-World War II initiatives to improve the economic position of the UK, the last few decades have seen significant growth in accountancy courses offered by universities (Napier, 1996). Today's UK accounting academics are however likely to identify with this comment made by Henry Reid Hatfield as a result of facing continuing criticism for failing to deliver a liberal education (Lister, 2010; Sangster, 2010).

However, in university level accountancy education there appears to be a common goal in the desired output of both a liberal and vocational education in terms of the development of intellectual skills (AECC, 1990; Paisey and Paisey, 2000). Intellectual skills are believed to be at the heart of a liberal education (Zeff, 1989) and are also, from a vocational standpoint, key skills sought by accountancy employers (Arquero et al., 2001; Gray et al., 2001; ACCA, 2008;

Kavanagh and Drennan, 2008; Crawford, Helliar and Monk, 2011) and the accountancy profession (Bedford Committee Report, 1986; CPA Australia, 2017; IFAC, 2015a).

Research, concerning different jurisdictions and international accounting education, indicates that accounting education worldwide is in crisis (Albrecht and Sack, 2000 [US]; Mathews et al., 2001 [Australia]; Howieson, 2003 [UK, Australia and UK]), with the lack of intellectual skills development being a common key concern. Despite these concerns raised in the early 2000's, criticism remains of university accountancy courses which are considered to be too focused on a technical, professional curriculum at the expense of the development of intellectual skills (Lister, 2010; Wilson, 2011; Hopper, 2013). The cause of this technical focus has been attributed to the growing commercialism of the university sector as a whole (Hopper, 2012) which has been observed since the 1980's (Parker, 2011). Commercial drivers evident through accreditation (Ferguson et al, 2010; Wilson, 2011; Duff and Marriott, 2012), league tables (Humphrey, Lewis and Owen, 1996; Hopper, 2013), massification of the university sector (Hopper, 2013) and research prioritisation (Humphrey et al., 1996; Dewing and Russell, 1998) have all been identified as contributory factors for the emphasis on technical education in accountancy at university. Such research indicates the existence of two competing institutional logics within the field of university accounting education: economic logic and education logic.

This research will gather empirical evidence, through interviewing senior academics who have oversight of accounting programmes in the Scottish university sector, to understand the perceived drivers of undergraduate accountancy education in Scotland. Interviewee responses are interpreted through the lens of institutional theory with particular attention to understanding how economic logic compared to education logic, shapes the behaviour of those academics in making course content decisions.

The paper proceeds as follows: Section 4.2 outlines institutional theory, with a particular focus on institutional logics, as the framework for informing the research and interpreting the

results. Section 4.3 provides a review of the literature which underpins the identified education and economic logics. Section 4.4 provides details of the interview methodology with a discussion and analysis of the findings of these interviews in Section 4.5. Final conclusions are presented in Section 4.6.

4.2 Theoretical Underpinning and Context

4.2.1 Institutional Theory

Institutional theory which 'asks questions about how social choices are shaped, mediated, and channelled by the institutional environment' (Wooten and Hoffman, 2008, p.130), is used to underpin the development and interpretation of this research. Turner (1997 p.6) defines social institutions as:

> *'a complex of positions, roles, norms and values lodged in particular types of social structures and organising relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable societal structures within a given environment.'*

Social institutions operate in an institutional environment and Scott (2014) identifies three elements of this institutional environment: regulative, normative and cultural-cognitive. These elements can result in isomorphic pressures which drive behaviours and institutional conformity.

The regulatory element involves the influence on behaviour through the establishment of rules, inspection of conformity to these rules and resulting rewards for compliance or punishment for non-compliance (Scott, 2014). These rewards and punishments may be formal (such as decreased funding for a university) or informal (such as being shunned by peers or student dissatisfaction) (Scott, 2014). Palthe (2014, p.61) summarises the regulatory element as the 'have to.' The regulatory pillar results in coercive isomorphism where organisations are pressured to act in a certain way by other organisations on which they are dependent (DiMaggio and Powell, 1983). Borrego Boden and Newswander (2014) identify the policies and curricula required to be satisfied in order to get a new course approved as an example of

the regulatory environment for higher education and gives policy forbidding team teaching between different departments as an example of how this can become coercive.

The normative element includes values, being the conception of the ideal or the desirable along with the development of a standard which allow current structures and behaviours to be evaluated, and norms, the way things should be done to be established (Scott, 2014). Scott (2014) describes this normative pillar as actors behaving in a way which is believed appropriate given the situation and their role in it, rather than what is in their personal best interests and Palthe (2014, p.61) summarises this as the 'ought to.' DiMaggio and Powell (1983) identify that normative pressure stems from professionalism and in particular identify two important aspects of professionalism which contribute to isomorphic change: recruitment of those with similar education background and the development of professional networks. Borrego, Boden and Newswander, (2014) give an example of the normative pillar influence in US higher education in that whilst the strategic plans of most US colleges include development of interdisciplinary research, the perception of academic faculty is that participation in this research is not highly rewarded and should, therefore, be left until after tenure.

The cultural-cognitive element is based on actors behaving in a certain fashion not because they have to, or ought to, but because it is taken for granted that this is the way to behave (Scott, 2014). This implies the behaviour is assumed without questioning and no active decision is required as in the case for the regulatory element or normative element. This element draws its legitimacy from a shared mind set and understanding, based on cultural support (Powell, 2008). Scott (2014) identifies the cultural-cognitive element to have a mimetic mechanism. This may result in mimetic isomorphic change where standard behaviour is displayed in times of uncertainty (DiMaggio and Powell, 1983). Borrego, Boden and Newswander (2014) give the example of the alignment of academic institutes' structures to academic discipline with no alternatives seen as viable by most participants.

In addition to responding to, and contributing to, isomorphic elements within the institutional environment, two other important contributors to institutional dynamism need to be noted. Firstly, institutional elements may evolve in response to exogenous shock, for example the

global financial crisis. Secondly, institutional elements may evolve, develop or disappear through the focused and intentional behaviour of institutional agents of change (Haunschild and Chandler, 2008). Thus it is important to appreciate the dynamic nature of social institutions and how this shapes behaviours in an organisational field.

4.2.2 Organisational Field

Institutional theory can apply at macro (societal), meso (organisational field) or micro (individual/organisational) level (Contrafatto, 2014). This paper considers Institutional theory at a meso level where the unit of analysis is the organisational field. DiMaggio and Powell (1983, p.148) define an organisational field as:

> *'those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products.'*

Scott (1995, in Wooten and Hoffman, 2008, p.130) provides a similar definition but notes also the importance of interaction between organisational actors:

> *'a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outwith the field'*

The organisational field of study for this paper is UK Higher Education which is an established example of an organisational field (Czarniawska and Wolff, 1998; Scott, 2008). Within this field, the location of study is Scottish universities who deliver undergraduate accountancy degree programmes.

The boundary of Scotland has been applied due to the unique environment in which Scottish universities operate. Firstly, Scottish universities have a unique overseeing body, the Quality Assurance Agency for Higher Education in Scotland (QAA, 2017a), which has powers devolved from the UK universities' oversight body, the Quality Assurance Agency for Higher Education

(QAA). The QAA (2017b) publishes and maintains the UK Quality Code for Education, conducts reviews of universities and, critically, advises government on degree awarding powers and the right to be a university in the UK. QAA Scotland oversees monitoring and compliance with the UK Quality Code for Education for Scottish Universities (QAA, 2017c). In addition, QAA Scotland note 'much of our work relates to the distinctive Scottish approach to quality – the [Scottish] Quality Enhancement Framework' (QAA, 2017c, p.4). This framework includes guidance on the review of Scottish universities by QAA Scotland and enhancement themes for improving teaching and learning in Scottish universities (QAA, 2017c).

Secondly, funding of undergraduate tuition fees in Scotland is substantially different from the rest of the UK. The fee charged per student for undergraduate degree courses in Scotland is dependent on home location. Scottish residents and other non-UK EU residents (known as 'home' students)[58] are subject to pay university fees at a level set by the Scottish Government (£1,820 in 2016 for accountancy degrees) as this is paid for by the Student Awards Agency for Scotland (SAAS) assuming eligibility criteria are met by the applicant.[59] The number of places on each course for these home students is capped by the Scottish Government. Due to devolved governments, students from the rest of the UK can be charged fees, set by the individual Scottish university, of up to £9,000 (rising to £9,250 from autumn 2017). This contrasts to universities operating in England and Wales, where fees of up to £9,000 can be charged directly to all UK and EU students and in Northern Ireland, where fees of up to £3,750 can be charged directly to all UK and EU students. There are also no government caps on the number of students for English, Welsh and Northern Irish universities. For Scotland, England, Wales and Northern Ireland there is no restriction on the fee that can be charged to international students and overall, it is estimated undergraduate students from outside the EU are, on average, are paying £4,503 more than students from the UK and EU (Times Higher Education 2016).

[58] The UK has recently voted to leave the European Union which could result in future changes to EU student numbers and funding. The impact of this in not yet known.

[59] In addition to the fees identified, the Scottish government pay a teaching grant to Scottish universities which is dependent on the subject and student numbers. Together, this would give a contribution per business student of around £6,000 per year.

Thirdly, the structure of a Scottish undergraduate degree is unique in the UK. In England and Wales, three years is the standard completion time for an honours degree. In Scotland, undergraduates have the option of exiting after three years with an ordinary degree or after four years with an honours degree. The majority (70%) of Scottish graduates hold a four years honours degree (HESA, 2016). Therefore, in comparison to accounting programmes offered by universities operating in England and Wales, Scottish accounting programmes have one additional year in which accounting content can be incorporated.[60]

Finally, the different geographical locations of the universities offering accounting degrees in the UK appear to be focused on different accrediting bodies. In Scotland, 11 of the 13 accountancy degrees currently offered are accredited by the Institute of Chartered Accountants of Scotland (ICAS) (ICAS, 2017). ICAS, however, accredits only a small number, six, accountancy degrees in England and none in Wales or Northern Ireland. Evidently, therefore, Scottish universities are offering accounting programmes that are exposed to the particular demands of ICAS accreditation. Gaining accreditation requires certain prescribed content to be covered and setting the boundary as Scotland should provide a more comparable environment in terms of the influence of accreditation.

4.2.3 Organisational Actors

Within an organisational field, social actors are the 'creators and carriers of institutional elements,' with the institutional elements being regulative, normative and cultural-cognitive (Scott, 2014, p.229). Actors in an organisational field should be mutually aware of each other, perceive themselves similar in terms of function and role and regular interactions between the organisations are expected (Dingwerth and Pattberg, 2009). Each organisational field will have a 'constellation of actors' (Wooten and Hoffman, 2008, p. 131) and these actors impose a coercive, normative and mimetic influence on the organisation being studied (Contrafatto, 2014). Applying this, a number of actors have been identified for Scottish universities which deliver undergraduate accountancy degree programmes and are identified in Diagram 3.

[60] English students generally spend an additional year at school and hence the overall education to university level is for the same length of time,

Diagram 3: Identification of Institutional Actors

For this paper, which seeks to understand course content decisions, academic staff have been selected for study. Academics are the interface between the demands of university management, professional body, students and employers. Each of these exert different pressures on the academics when making course content decisions for accountancy degree programmes. In addition, pressure from government bodies may also be evident directly to academics or through university management. Faced with these multiple pressures, the next section considers how course content decisions made by academics may be guided through institutional logics.

4.2.4 Institutional Logics

The behaviour of actors within a social institution is shaped by institutional logics (Lander, Koene and Linssen, 2013). Thornton and Ocasio (1999, p.804) define institutional logics as:

> *the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality*

Friedland and Alford (1991 in Scott, 2014) provide the following definition of institutional logics in relation to the organisational field:

> *a set of material practices and symbolic constructions which constitute its [organisational field] organising principles and which is available to organisations and individuals to elaborate [or not]*

Actors within an organisational field may conform to these institutional logics because they experience a 'pull towards conformity' by 'symbolic carriers' and 'material practices' (Lepoutre and Valente, 2012, p.285) through institutional isomorphism. Of these, symbolic carriers, 'the rules, norms, and taken-for-granted beliefs that define socially accepted notion of appropriate behaviour,' are identified as the most important to institutional theory (Lepoutre and Valente, 2012, p.285). However, material carriers which comprise the 'material artifacts, routines and relational systems' can also influence the behaviour of actors within an organisational field (Lepoutre and Valente, 2012, p.285). As an illustration, the influence of accreditation on accountancy degrees can have symbolic carriers, if it is the established 'norm' for accountancy degree holders to have this and material carriers, relating to the routines which are undertaken to ensure accreditation requirements are met. Combined, this may result in behaviour where the standard reason for not making changes to course content, is that the changes impact accreditation, even though they may actually have no impact.

Each organisational field is normally subject to more than one dominant logic (Lander, Koene and Linssen, 2013), therefore, actors within the organisational field may experience institutional conflict as they respond (or not) to pressures emanating from different logics. Tension arises between different logics when they advocate different actions, goals or means (Greenwood et al, 2011). Dunn and Jones (2010, p.115) illustrate this problem in relation to education at US medical schools where the dual logics of science (focusing on scientific knowledge of diseases) and care (focusing on clinical skills) result in tension in terms of 'what is covered' in education and 'which values are central and what logic should be inculcated to guide the future [medical] profession'. Dunn and Jones (2010) identify that time limitations mean academics choose and limit course content, impacted by what is the dominant

underlying logic. In the Scottish university context, in relation to delivering undergraduate accounting programmes, two competing logics, which may impact course content decisions, have been developed from the literature. These two logics are summarised below and the literature leading to the development of these logics is reviewed in section 4.3.

An education logic is where the organising principles, rules, norms and taken-for-granted beliefs give substance to the meaning and value of higher education as a public good, beyond a singular focus on preparing individuals for employment, but to develop the intellectual skills necessary to prepare individuals for citizenship and employability. Programmes are designed to develop intellectual skills and facilitate a culture of learning to learn, and produce graduates who have the intellectual skills desired by advocates of both a liberal and vocational education.

An economic logic, in line with Scott (2014), is where the organising principles, rules, norms and taken-for-granted beliefs are focused on the financial success of the organisation providing higher education and a focus on the individual demands of the student as 'customers' rather than the wider needs of society. Programmes are designed to attract maximum home and international students, thereby maximising income, and to use resources as efficiently as possible to produce employment-ready graduates.

4.2.5 Strategies for Competing Logics

When competing or multiple logics exist, institutional actors may adopt strategies to deal with multiple demands. Consideration is given to strategies employed by accountancy degree providers when facing these dual logics in making course content decisions. Kraatz and Block (2008) identify four strategies which organisations may implement when facing competing demands and these strategies have been utilised by researchers in understanding how organisational actors approach competing logics (Garrow and Hasenfeld, 2012; Pache and Santos, 2013; Bullinger, Kieser and Schiller-Merkens, 2015). The four strategies are as follows:
Strategy 1: Try to eliminate pluralism by trying to marginalise some of demands viewed as less important.

Strategy 2: Compartmentalise demands by sequentially attending to different demands and/or by creating separate units and initiatives which respond to different demands. Kraatz and Block (2008) give a relevant example of athletic departments in American universities. Whilst the university is likely to have goals related to knowledge and education with no mention of sports excellence, sporting excellence can play a large role in the university's identity. These two competing institutional demands are often separated through the athletic department being run independently of the university.

Strategy 3: Try to control and reduce competing tensions by finding some kind of balance between tensions, albeit in a reluctant manner. Bullinger, Kieser and Schiller-Merkens, (2015) use the relevant example of a university department where some staff are teaching orientated and some are research orientated with the demands of both being met at an organisational level. Dunn and Jones (2010 p.139) found both a science and care logic to coexist in medical education, residing in an 'uneasy tension.' They note, however, this balance, or imbalance, has changed over time with the traditional scientific logic being increasingly challenged by a care logic resulting in tension about the best way to educate future medical professionals. Dewing and Russell (1998) allude to this strategy in accounting education, identifying accounting degrees' need to 'strike a balance' between the liberal education expected of a university and the vocational training expected by professional accountancy bodies.

Strategy 4: Become an 'institution in their own right' (Kraatz and Block, 2008, p. 251) and developing its own logic. It is contended that by accepting the demands of its constituents, an institution also becomes the vehicle for these aspirations and ideals. By becoming the receptacle for these eclectic commitments it acquires a greater value as its members place increasing value on the organisation (Kraatz and Block, 2008).

In addition to these strategies, Lepoutre and Valente (2012, p.287) identify a further reaction to competing logics in 'institutional immunity.' This is when the actor deviates from the guiding institutional logics, effectively not complying with all the symbolic carriers or material practices of the competing logics. Crawford et al. (2014) identify an example of this where professional bodies do not always comply with International Education Standards despite publically disclosing compliance.

4.2.6 Table 9: Summary of Theoretical Framework and Context for Analysis

Typology	General	In Context	
Institutional Theory	Used to understand social decisions	Understand the course content decision made by Scottish accountancy academics	
Organisational Field	A 'recognised area of institutional life' (DiMaggio and Powell, 1983, p.148)	UK Higher Education with particular focus on Scottish universities who deliver undergraduate accountancy degree programmes.	
Organisational Actors	The 'creators and carriers of institutional elements' (Scott, 2014, pp229)	Academic Faculty, Professional Accountancy Bodies, Student Population, University Management, Government Bodies, Employers	
Institutional Logic	The material practices and symbolic carriers which shape the behaviour of the actors (Lepoutre and Valente, 2012)	Education logic: behaviour shaped towards developing intellectual skills	Economic logic: behaviour shaped towards financial success
Strategies	How actors respond to conflicts which arise from competing institutional logics	1. Marginalise demands viewed as less important 2. Compartmentalise competing demands 3. Strike a balance between competing demands 4. Become an Institution in its own right 5. Do not comply with all competing demands (Kraatz and Block, 2008 and Lepoutre and Valente, 2012)	

4.3 Literature Review

4.3.1 The purpose of a university education: liberal versus vocational

Since their conception, education has been at the heart of universities (Denman, 2009). In Scotland, all universities are registered charities. To become a registered charity in Scotland, the organisation must have charitable purposes, such as the advancement of education, and provide public benefit[61] (OSCR, 2015). However, the composition of what education should be can vary (Drenman, 2009) and in this regard there are two key outlooks on the educational purposes of universities: liberal and vocational.

The liberal outlook dates back to the intellectual cultures of Ancient Greece and Rome, and was reflected in the first universities, including Oxford (1167) and Cambridge (1209) with early studies focusing on arts and humanities (Paisey and Paisey, 2000). As well as moral and personal development, a key component of a liberal education is the development of intellectual skills (Barnett, 1988; Zeff, 1989; Axelrod, 2002) with its focus is on the learning process rather than specific knowledge (Paisey and Paisey, 2007). Worthy of particular note is the development of critical thinking which academics generally (Barnett, 1990) and accounting academics specifically (Gray et al 2001; Cunningham, 2014) have identified as the key skill of a liberal education. Axelrod (2002) provides a detailed definition of the activities of a liberal education at university:

> *activities that are designed to cultivate intellectual creativity, autonomy, and resilience; critical thinking; a combination of intellectual breadth and specialized knowledge; the comprehension and tolerance of diverse ideas and experiences; informed participation in community life; and effective communication skills (p.35)*

Identified as a key contribution in developing the liberal/vocational debate on the purpose of a university was Cardinal Newman's (1852) seminal essay on 'The Idea of a University', based on a series of lectures he gave as the founding rector of a Catholic University in Ireland. Newman (1852) firmly believed that a university should provide a purely liberal education in which students love knowledge for its own sake. He opposed the view that a university should provide a 'commercial' or 'professional' education (p.65). Newman (1852, p.65) differentiates

[61] OSCR assess this public benefit by looking at how the organisation achieves its charitable purposes

liberal knowledge from ‘commercial’ or ’professional’ knowledge in that liberal knowledge should

> *stand on its own pretentions, which is independent of sequel, expects no complement, refuses to be informed by any end, or absorbed into any art.*

The idea of a liberal education remains important today with accounting academics around the world believing that a liberal education should be strived for (Bedford et al., 1986; Dewing and Russell, 1998; Kelly, Davey and Haigh, 1999; Lister, 2010; Willits, 2010; Hopper, 2013).

An alternative outlook on the purpose of education is vocationalism. A vocational education is designed to prepare participants for entry into specific occupations (OECD, 2002). To achieve this in accounting education at universities, the education is required to be informed, in part, by accountancy employers and professional accountancy bodies and, hence, appears incompatible with Newman’s (1852) definition.

This vocational outlook in UK universities can be traced to Owens College in Manchester (later to evolve into the University of Manchester), one of the first British institutions founded, in 1851, with vocational aims in mind (The University of Manchester, 2017). The so-called "redbrick" universities followed as the 20th century began, with the founding of the likes of Leeds and Liverpool. Based around an industrial identity, they were viewed as having inferior status to the liberal educations of Cambridge and the Oxford Universities (Silver, 1999). The 1960’s saw two key developments in expanding vocational prominence in universities. Firstly, Colleges of Advanced Technologies were permitted to become universities as a result of the 1963 Robbins Report (Aston University, 2017). Secondly, the Labour Government of 1964 created the Council for National Academic Awards, which validated degrees awarded by Polytechnics. These Polytechnics were transformed into Universities by acts of Parliament in 1992 (Pratt, 1997). Today, a number of accounting academics have indicated support for a vocational education, identifying that a key role of university education is to prepare graduates for employment (Jackling and De Lange, 2009; Gammie, Hamilton and Cargill, 2010).

Despite what initially appears to be contested and, arguably, incompatible perceptions of liberal and vocational education, Paisey and Paisey (2000) identify common ground in terms of skills development. They argue that the key skills required to satisfy vocational purposes, such as communication and problem solving, are also underpinning skills required for the development of discussion and critique as desired from a liberal education. These skills are identified as key to accounting education, required for areas such as exercising judgement on the valuations of accounting balances where accountants need to be able to assess, not just what they are doing, but the why they are doing it and its implications (Paisey and Paisey, 2000).

Intellectual skills, in particular, appear to be common skills desired by both outlooks. In defining intellectual skills, Johnson (1997, p.163) describes these as 'the mental operations that help us to acquire new knowledge, apply that knowledge in both familiar and unique situations, and control the mental processing that is used to acquire and use knowledge.' The International Federation of Accountants (IFAC) (2015a) offer a similar definition in identifying intellectual skills as skills which allow problems to be solved, decisions to be made and professional judgement to be exercised and give specific skill examples such as critical analysis, problem solving and analytical thinking. Willits (2010, p.15) specifically gives examples of intellectual skills sought by a liberal education in 'the ability to think critically, solve problems, communicate and be culturally aware.'

Intellectual skills are, therefore, not subject or vocation specific but their development appears to be consistent with a vocational outlook in accountancy education. Wilson (2011) identifies that effective practitioners need a strong foundation of intellectual skills and the accounting profession around the world identifying intellectual skills as a key skill they desire in their members. The seminal Bedford Committee Report (1986), a joint project between the American Institute of CPAs and the American Accounting Association, identifies the importance of a liberal education as it deems this type of education necessary to develop the intellectual and personal skills required by accountants to allow them to update their knowledge throughout their working lives. CPA Australia (2017) identifies the development of intellectual skills as a requirement for accreditation of higher education accounting

programmes. IFAC's International Education Standard 3, Initial Professional Development of Professional Skills (2015a) requires its member bodies (comprising over 175 member bodies in 130 countries, including The Institute of Chartered Accountants of Scotland, The Institute of Chartered Accountants in England and Wales, America Institute of Certified Public Accountants and CPA Australia) to ensure aspiring professional accountants develop intellectual competence. In addition, intellectual skills, such as decision making and exercising judgement, have been identified as key underpinning skills for exercising professional scepticism (IFAC, 2015b) with improving professional scepticism being a current project of the International Accounting and Audit Standards Boards, the International Ethics Standards Board for Accountants and the International Accounting Education Standards Boards (IFAC, 2017).

Accountancy employers, a key stakeholder group of vocational education, have also advocated support for intellectual skills to be developed (Arquero et al., 2001; Gray et al., 2001; ACCA, 2008; Kavanagh and Drennan, 2008; Crawford, Helliar and Monk, 2011). This is demonstrated by Big 4 Accountancy firm, Ernst and Young (2017, p.1) who state 'It's your intellectual ability and natural strengths that matter to us'.

There, therefore, appears to be consensus on the importance and desirability of the development of intellectual skills across both liberal and vocational outlooks of higher education. The development of intellectual skills would appear to be a key goal for accountancy education and this informs the behaviours which would be expected under an education logic.

4.3.2 Contemporary institutional pressures on undergraduate accounting programmes: Evidence of an economic purpose

However, a recurring criticism of accountancy education around the world is that it is too technical and fails to adequately develop intellectual skills sought by both a liberal and vocational education (Zaid and Abraham, 1994; Morgan, 1997; Gray, et al., 2001; Kavanagh and Drennan, 2008; Wilson, 2011). The literature identifies a number of possible explanatory factors for this technical focus including accreditation (Ferguson et al, 2010; Wilson, 2011;

Duff and Marriott, 2012), league tables (Humphrey, Lewis and Owen, 1996; Hopper, 2013), massification of the university sector (Hopper, 2013) and research prioritisation (Humphrey et al., 1996; Dewing and Russell, 1998). The driver of each of these factors appears to be primarily economic, indicating an alternative economic purpose of universities.

Indeed, at a global level, it has been argued that universities are becoming increasingly commercially orientated in their actions (Weisbrod, 1998). Gumport (2000) specifically identifies with this, noting a shift in the US from higher education as a social institution, which cultivates citizenship, preserves cultural heritage and forms individual character, to higher education as an industry. In addition, Scott (2014) specifically identifies the growth over the last few decades of an economic logic, characterised by an emphasis on financial success, in universities where cost benefit analysis, financial outcome measure and competition (between universities) are prevalent. Such an economic logic may be particularly prominent in business schools (Startkey, Hatchuel and Tempest, 2004 and Ivory, 2006), and more specifically accounting departments (Hopper, 2013, Duff, 2017) which are regarded as a 'cash cows,' for their university as they generate consistent teaching income which may finance other aspects of the university. The commercialism of universities has resulted in students, who are now viewed as customers, driving curriculum content in the US (Scott, 2014) and the UK (King, 1995).

The pressure of accreditation on accountancy degrees as well as three contemporary pressures (massification, league tables and research) on higher education generally have been argued to restrict the development of intellectual skills. These will be explored in the next four sections.

4.3.3 Accreditation

UK undergraduate accounting degrees can be accredited by professional accountancy bodies which allows a graduate from these accredited degrees to be exempt from the initial level of professional examinations set by the accrediting body (Apostplou and Gammie, 2014). There are seven accrediting bodies in the UK: Association of Chartered Certified Accountants (ACCA), The Association of International Accountants (AIA), Chartered Accountants Ireland

(CAI), Chartered Institute of Management Accountants (CIMA), The Chartered Institute of Public Finance and Accountancy (CIPFA), ICAEW, and ICAS (FRC, 2016) and accounting degree providers can choose from which of these they wish to apply for accreditation.

An economic driver appears to be a key reason behind accounting degree providers accrediting their programmes, despite an awareness that this drives the curriculum in a technical direction. To maximise income, accountancy degree providers need to attract maximum student numbers. Gammie and Kirkham (2008) identify that the primary reasons for students choosing to undertake an accountancy degree are vocationally orientated. Furthermore, accounting academics have identified that their prospective students in particular want accreditation (Humphrey, Lewis and Owen, 1996). Accreditation, therefore, serves as a key marketing tool (Duff and Marriott, 2012; Duff and Marriott, 2017; Stevenson, Crawford and Ferguson, 2016). This is evident as all Scottish undergraduate accounting courses prominently display accreditation or exemptions on their online recruitment literature (Abertay University, 2017; Edinburgh Napier University, 2017; Edinburgh University, 2017; Glasgow Caledonian University, 2017; Heriot Watt University, 2017; Robert Gordon University, 2017; University of Aberdeen, 2017; University of Dundee, 2017; University of Glasgow, 2017; University of Highlands and Islands, 2017; University of Stirling, 2017; University of West Scotland, 2017) and professional bodies reciprocate by providing information on their websites about which universities they accredit (ACCA, 2015; CIMA, 2017; ICAEW, 2017; ICAS, 2017).

Accreditation features in the literature as the most consistent reason why accountancy undergraduate courses have a technical focus. Specifically, securing accreditation results in a pressure on syllabus and, as a result, undergraduate programmes are feared to replicate the knowledge contents of professional body syllabus at the expense of a more liberally based education, detracting from the development of intellectual skills (Scott, 2010; Sangster, 2010; Wilson 2011; Duff and Marriott, 2012; Hopper, 2013; Duff and Marriott, 2017). Humphrey, Lewis and Owen, (1996) identify that this pressure may be direct, as in the inclusion of technical material, but also indirect by influencing the perception of what should be included in the curriculum in the space remaining after meeting accreditation requirements.

An associated pressure of accreditation on the development of intellectual skills is in relation to assessment as at least 70% of any modules contributing to accreditation in the UK are required to be assessed by unseen examination (Apostolou and Gammie, 2014). In the wider educational literature, assessment is identified as a key driver of student learning, known as the 'backwash effect' (Biggs and Tang, 2011). In applying this to accounting education, traditional teaching methods have long been criticised as failing to develop intellectual skills, such as critical thinking and learning to learn (Albrecht and Sack, 2000). A key element of traditional teaching, which has been criticised for failing to develop key intellectual skills, is the traditional examination (Gammie, Cargill and Hamilton 2010).

However, this criticism, which identifies the detrimental impact of accreditation, is not universal. Undertaking an accredited degree in the UK gives exemptions to a limited number of professional exams, usually undertaken in the first year of the training contract and doubt has been raised over how 'real' the accreditation restrictions are. Thomson and Bebbington (2004, p. 618) refer to this as a 'considerable myth' and cite Strathclyde University as a university which has successfully built in non-accredited space in their accredited degree. This is a view shared by the profession, with the ICAS Director of Education, Mark Allison (2007), identifying the blame placed on accreditation as the main contributory reason for under developing intellectual skills as 'unwarranted.' The Scottish degree system, whereby most students undertake a four year honours degree compared with the English three year degree, has been identified as particularly able to provide space for unaccredited material (Thomson and Bebbington, 2004; Duff and Marriott, 2012).

4.3.4 League Tables

League tables rank universities based on a number of key measures, such as student satisfaction and employability ratings (The Guardian, 2017; The Complete University Guide, 2017). The first UK league table was published in The Times in 1992 and there has been rapid growth in the publication and use of league tables since this date (Bowden, 2000). There are two key university league tables in the UK: The Guardian University Guide and The Times Good University Guide (Dill and Soo, 2005; Hazelkorn, 2008) but UK universities may also appear in international rankings such as the Times Higher Education World Wide Ranking and

the QS World University Rankings. The importance of league tables to universities can be traced to the commercial driver of student recruitment (Dill and Soo, 2005). This is evident by Broecke (2015) finding a small but significant relationship between league position and number of applications and Gibbons, Neumayer and Perkins (2015) finding a direct small but significant relationship between National Student Survey Score (a measure of student satisfaction) and number of applications. In addition, league tables are identified as particularly important to international students in deciding which university to attend (Hazelkorn, 2008, Harvey, 2008).

Harvey (2008) identifies that league tables have resulted in universities making strategic decisions with a view to moving up the tables, noting in particular that teaching excellence is not rewarded by league position:[62]

> *…rankings place a potential brake on the development of critical transformed learners. Developing a critical education is not a way to move up league tables.* (Harvey, 2008, p.205)

Discussing league tables from an accounting education perspective, Hopper (2013) argues that league tables place more pressure on accounting departments to teach technical material at the expense of more liberal content as such an approach can improve league positioning both directly and indirectly. Directly, in that technical subjects tend to result in higher grades which has a direct bearing on measures such as completion and level of degree awarded (Hopper, 2013). Indirectly, in that meeting students' preference for technical subjects subsequently improves satisfaction measures (Hopper, 2013). Humphrey, Lewis and Owen, (1996) illustrate this indirect effect by highlighting student resistance to liberal education areas, such as social and environmental accounting.

[62] The UK Government is in the process of introducing a new Teaching Excellence Framework which aims to reward teaching excellence and could be used as a league table measure going forward.

4.3.5 Massification

Universities have, as a whole, been successful in increasing the number of students with massification of the university sector, both in the UK and worldwide, being evident over the last few decades with an expectation that the trend will continue (Usher, 2009). Two key periods of expansion are identified, both driven by government initiatives to increase higher education participation (Ashcroft, 2004). Rapid growth followed The National Committee of Enquiry into Higher Education in 1962 which identified that only 4% of school leavers went to university. This rose to 20% by the early 1980's following this report (Ashcroft, 2004). The Dearing Report in 1997 identified a further doubling of the number of students in higher education between 1977 and 1997 (Ashcroft, 2004). However, Greenaway and Haynes (2003) found that UK public sector funding in real terms per student halved during this same period when student numbers doubled.

The numbers of International students have also seen rapid growth in this period, increasing from 54,000 in 1973 to 430,000 in 2013 (British Council, 2015). However, 2013 saw a small 3% decline in international student numbers (HESA, 2014), and this decline, thought to be driven by government initiatives to increase work restrictions post study (Guardian, 2016), has since continued. In addition, a further future challenge to international student numbers is the UK's decision to leave the European Union in 2016, with 2017 applications to UK universities from EU students down by 9% (Guardian, 2016)

Increased student numbers coupled with reduced government funding per student has resulted in changes to education provision. Whilst less pronounced than some other countries, the UK has seen an increase in class sizes which can lead to less effective teaching and learning (Booth et al., 2000; Mulryan-Kyne, 2010). Furthermore, Biggs (1999) highlighted a wider range of abilities and motivations in the student population. Increasing class sizes, decreasing contact hours and the use of cheaper tuition methods are all trends observed in accountancy education (Puxty, Sikka and Willmott, 1994; Hopper, 2013). Thus concern has been raised that such trends are at odds with the provision of more liberal content which helps to develop intellectual skills, such as social and environmental accounting (Humphrey, Lewis and Owen, 1996).

Additional teaching challenges can also arise from increasing international student numbers within the UK education system (McNamara and Harris, 2002) including recognising and accommodating culture shock (Furnham, 2002) and different learning needs (McNamara and Harris, 2002). These challenges may be particularly prominent in business schools where business related degrees are identified as the most popular choice for international students (OECD, 2014) Specifically in relation to accounting education, Hopper (2013) identifies that international students on accountancy courses often come with language difficulties and a background of didactic learning, where higher success rates, required to attract future students, are achieved from a more technical education. Again, potentially detracting from developing intellectual skills.

4.3.6 Research and Teaching Conflict

In addition to income from student fees, a second key source of university revenue generation is research funding. The Scottish Funding Council (a government body) provided £232 million in research funding to Scottish universities in 2016/17 (SFC, 2016a). A key driver in allocating this research funding is the performance of individual universities in the Research Excellence Framework 2014 (SFC, 2016b). This is a UK wide peer review exercise where the quality of individual universities is research evaluated. Parker (2008, p.237) identified that such an exercises results in an 'intense pressure' for universities to increase research output. Furthermore, as a result of this pressure, Duff and Monk (2006) identify that research output, rather than teaching quality, can be the key factor in recruitment decisions of accountancy departments.

Whilst this paper focuses on course content and teaching, rather than research, it is important to consider the impact of research as it is an institutional pressure that has the potential to detract from teaching. Indeed, Brinn, Jones and Pendlebury (2001), on interviewing accounting faculty, found the Research Assessment Exercise, which impacts both league positions and government funding, has a negative impact on teaching. This is corroborated by Professor Alan Gilbert, president of the University of Manchester who noted:

> *Research-intensive universities have presided over a decline in the quality of undergraduate teaching as they neglect students in the pursuit of research excellence (Times Higher Education 2008, p.1)*

Accounting academics perceive government funding to be more favourable for research which subsequently results in reduced incentives for faculty to develop the innovative and challenging teaching required for a liberal education (Humphrey, Lewis and Owen, 1996; Dewing and Russell, 1998). Furthermore, faculty are not rewarded for teaching excellence in the promotion hierarchy as, despite a number of government initiatives to improve the status and rewards for teaching, higher level positions of reader and professor require research excellence, rather than teaching excellence, at the majority of UK universities (Parker, 2008).

4.3.7 Concluding Paragraph

Advocates of both a liberal and vocational purpose of higher education agree on the importance of developing intellectual skills. A number of pressures have been identified which may detract from the development of these skills in undergraduate accounting education including accreditation, league tables, massification and research prioritisation. Economic roots for all of these pressures are identified which highlight a conflict between the education and economic goals faced by accountancy degree providers. In considering these factors, three research questions were developed as follows:

1. To investigate what institutional pressures have shaped Scottish undergraduate accounting programmes.
2. To evaluate if and how education and economic logics shape the behaviour of Scottish academics in making course content decisions for accountancy programmes.
3. To investigate how Scottish accountancy degree providers respond to institutional conflicts.

4.4 Methodology

4.4.1 Data Collection

Data was collected through face to face semi-structured interviews with those who have oversight of undergraduate accountancy degrees in Scotland. A copy of the interview schedule can be found in thesis Appendix B along the ethics approval form completed by each participant. The interview comprised a number of specific questions as well as prompts for follow up questions if these had not already been covered by the interviewees in response to earlier questions. Interview questions were developed from themes emerging from the literature.

Thirteen universities in Scotland offer an accountancy degree and interviews were secured with eleven of these. Of these, six were 'traditional' universities and five were 'new'[63] post-92 universities (Table 10). No differences in responses were found between these two groups and as such the analysis has not differentiated between 'new' and 'traditional' universities.

Initial contact was made with the Head of Department of Accounting. Where universities were not structured with Head of Departments, their university website was reviewed to identify the most senior level academic with direct responsibility for the accountancy undergraduate degree, such as a programme leader. Where the person contacted felt they did not have a detailed overview of the accountancy degree, they delegated to an appropriate person, such as the programme leader. A summary of participants is shown in Table 10.

[63] In 1992 a number of educational institutions, commonly known as Polytechnics, were able to apply to award their own degrees and receive 'university' status. These are commonly referred to as 'new' universities in the UK with remaining universities known as 'traditional' universities.

Table 10: Summary of Interview Participants

Interviewee Code	Job Title	New or Traditional University
N1	Associate Director	New
N2	Programme Leader	New
N3	Head of Department	New
N4	Subject Leader	New
N5	Director	Traditional
N6	Senior Teaching Scholar	Traditional
N7	Programme Leader	New
N8	Head of Department	Traditional
N9	Head of Department	Traditional
N10	Head of Department	Traditional
N11	Programme Leader	Traditional

Interviews were semi-structured to ensure consistency whilst allowing interviewees to expand on areas specific to their degree and areas of personal interest.

4.4.2 Analysis of Data

The interviews averaged 62 minutes in length with the longest interview lasting 86 minutes and the shortest lasting 30 minutes. Interviews were transcribed and transcriptions were analysed using NVivo software. Two layers of codes were established within NVivo for identifying emerging themes. Firstly, codes to group together responses to the standard questions asked to all interviewees, such as 'who are the main drivers of your syllabus?' and 'what do you think is the purpose of a university accounting education?' Secondly, codes for the key themes were also utilised, such as a code for evidence of an economic logic and a code for evidence of an education logic.

4.5 Analysis and Discussion

4.5.1 Higher Education, Accounting Educators, Accreditation and Emerging Conflicts

The traditional liberal view of a university, where the development of intellectual skills and teaching students to think are key elements, was reflected in the view of nearly all interviewees at an individual level when asked the purpose of university accounting education, including the following two examples:

> *I think that the world would certainly be poorer without universities. I hope that what we do is teach people to think. I don't think it's about impressing technical knowledge upon people. There are other education systems that can do that. I think what universities do, and should do well, is teach people how to think for themselves. And through the development of critical thinking skills and research skills I hope we can do that. People shouldn't be out there in the world thinking "I need somebody to tell me what to think or tell me what to do." They should be having their own ideas, they should be able to try and challenge ideas and do things differently. If they don't, we're stuck. (N10)*

> *Basically a sense of learning to learn, that people come out of university with a thirst for learning and with an ability to perform critical analysis. And to think logically and analytically. (N6)*

However, this was not always viewed as the sole purpose of university with around half of interviewees combining this traditional liberal view with a vocational view as illustrated by the following quotes:

> *I think to develop somebody's intellectual capacity with a view to providing them with the career capital, if you like, so that they then go on to have a successful career. So it's providing somebody with career capital. (N3)*

> *I'm a Scot so I believe that education is about much, much broader than delivering people into a profession and just for a job. I think getting a job and a career is vitally important and we need to be preparing people for a job and a career, but we also need to be preparing citizens who are going to go out into society and are going to be able to have an impact on the world that they are entering. And we should be developing people who*

can think critically and who can communicate their ideas well with that broader community. (N9)

Despite these perceptions, the educational experience of accountancy graduates did not appear to be guided by the achievement of these liberal educational goals. When asked the key driver of their accountancy degree syllabus, professional accreditation was the first driver identified by all interviewees and the only driver identified by five interviewees. Interviewee N3 explained this in the context of the initial design of the degree where the '*focus was very much on aligning our syllabus with the professional body syllabus'.* Interviewee N6 immediately brought in an economic reasoning behind this, explaining *'the main undergraduate accounting degree the principal driver is, or I suppose the main selling point is, professional accreditation because that's what sells it'.* The continuous process of maintaining this driver was also articulated by N5:

I would say it's definitely accreditation. In certainly the first three years we're driven towards the requirements of the accreditation bodies, and we're always looking to see what updates and changes and developments they have (N5)

Of the remaining six interviewees, two balanced accreditation with employability and four balanced accreditation with academic study, although one noted this is 'a *difficult balance that we struggle with' (N7)*. Of those who balanced accreditation with academic study, three specifically identified that accreditation drove the first three years of the degree programmes and once accreditation requirements were met students were offered a broader range of subjects in 4th year (a strategy later referred to by a further five other interviewees), but this was limited at times as illustrated by N8:

Oh, it's the professional bodies. The first three years the professional bodies, professional accreditation. We put our own spin on things but most of the first three years is pretty much dictated by the professional bodies (N8)

To understand why accreditation had become the driving force in determining syllabus, the importance of accreditation was explored with interviewees. Duff and Marriott (2012) have

identified that accreditation was sought due to student demand and accounting degree providers have little choice other than meet this demand due to the competitive market place in which they operate. The majority (n=9) of interviewees agreed with Duff and Marriott's (2012) findings and identified accreditation is driven by what students, and sometimes also parents, want. This is illustrated by N1 who identified accreditation is '*what students look for'* and N8 who noted '*If we didn't have accreditation I don't think we would have any students, frankly'.* Specifically commercial drivers linked to student demand were identified with N5 suggesting accreditation is required to *sell* the course and N10 explaining this economic pressure as:

> *The students pay our bills, they pay our salaries. We need to ensure that we can get students into the* programme*. Having the maximum available accreditation is almost a baseline requirement in order to achieve that. If we don't compete with other institutions in terms of the accreditation that we can give they just go elsewhere. (N10)*

In order to maximise the marketability of their courses, interviewees identified they are now seeking a range of different accreditations, with accreditations or exemptions currently in place with the following professional accountancy bodies: ACCA (n=11), AIA (n=4), CA1 (n=1), CIMA (n=11), CIPFA (n=5), ICAEW (n=4) and ICAS (n=9). No interviewee identified they were currently looking to decrease their accreditations and four interviewees specifically identified that they were in the process of actively trying to increase exemptions or accreditation. In addition, a number of interviewees identified they try to maximise exemptions with examples from N4 who noted '*we try to maximise our professional exemptions'* and N5 was in agreement with the following comment that '*it's important that we have a range of accreditation bodies as well. So I think that's the key, that there's a range of accreditations'* and N7 expanded on the rationale for this with '*we think is that if they have as many accreditations as they can, as many exemptions from the exams, then they will be more employable at the end of it'.*

Only one interviewee, N9, identified they would consider decreasing exemptions '*if we felt that the professional route was compromising the academic integrity of what we're supposed to be doing'* and furthermore noted:

> *we've always been very strong within the department saying that accreditation is not everything. So for instance ACCA, we only have the basic accreditation, we haven't gone for the full accreditation because they want us to change fundamentally the way that we examine and some of the way we teach and we're not willing to do that because we believe academically that's not the best approach. So we're not willing to compromise. So it's a bit of a debate but we're saying no.*

Although this interviewee then indicated that economic pressure prevented accreditation being dropped completely, recognising they were *'also commercially aware so I don't think we'd ever move away entirely from accreditation. No chance' (N9)*

As well as maximising the range of accreditation for marketing purposes to home students, a second, and previously unexplored, reason for the growth in the range of professional accreditations sought was driven specifically by the desire to attract international students. Recent trends have identified a growth in international students in Scottish universities and a primary reason identified in the literature for the attraction of international students to the university sector is economic benefit (McNamara and Harris, 2002; De Vita and Case, 2003). The growth of international students was evident in a number of accounting programmes offered. Five universities had specific programmes with one or more overseas universities, most commonly a 2+2 route where students complete two years at their home country university followed by two years at the Scottish university, resulting in a Scottish degree award. Two other universities had direct entry into 2nd year for international students who had completed a first year at an attached feeder college although numbers on these were currently identified as quite low.

For a number of interviewees who identified the importance of expanding international student numbers, a further pressure to increase the range of accreditations was mentioned.

In particular, accreditations sought by Scottish students, such as ICAS, did not hold the same currency overseas and hence degree providers were seeking additional accreditations, such as ACCA, to try and satisfy both markets. Interviewee N4 illustrated this as follows:

> *I think it pretty much comes from the student voice. At the recruitment stage of our* programmes*, open days, applications generally. I mean, it used to be a little bit tighter for us but now with the SFC capping on student numbers we don't really have problems of filling our quota. But even so it's still a big issue for folks wanting, and parents as much as the students themselves, looking for ICAS accreditation in particular. And for our overseas students it's really ACCA that they're interested in. (N4)*

Interviewee N10 acknowledged the same trend:

> *And so our accreditation thinking is having to shift from a position where we used to focus on the needs of Scotland, so ICAS first and then everything else follows on. And now we're having to think about the construction of our* programmes *and syllabus in more than one direction because in [names countries] ICAS has no traction, they don't accredit outside the UK anyway,[64] so that doesn't work for any students in those locations. And we need to think alternatively about ACCA and ICAEW and CIMA. (N10)*

In addition, the market for international students appears to be getting more competitive and as such maximising accreditation, a key selling point, may become even more important in the future. This was illustrated by four of the interviewees with international students who identified a risk to the recruitment of international students due to recent government initiatives to tighten visa requirements and the UK's decision to leave the European Union. This was summarised by interviewee N3 who noted '*our international student recruitment is under huge challenge because of the UKVI stuff. I think Britain is seen as being anti-Europe, anti-world, international students are not welcome'.*

[64] Confirmed to ICAS website that all current accredited ICAS degrees are based in Scotland or England (ICAS, 2017)

Whilst the influence of student demand on accreditation was clearly identified by interviewees, a more subtle influence was also revealed in a peer pressure between Scottish university accountancy departments whereby academics identified the educational constraints that result from accreditation but felt they couldn't be the first to move away from accreditation. Interviewees N9 and N8 both highlighted this with the following comments:

> *I think we'd all have to move together and say "actually, none of us are going to go for accreditation." I think you'd be a very brave university. It would have to be Glasgow or Edinburgh. (N9)*

> *The reality of it is we need to compete, particularly in Scotland these days, for students. So there's no way we could be first mover on that [decreasing accreditation]. In some ways it would be good if we had more freedom but I'm not sure we'd have many students (N8)*

The key impacts, identified by interviewees, of accreditation on the educational experience of Scottish accounting undergraduates studying at Scottish universities were the high level of technical material and the requirement for traditional examinations. Both of these issues are likely to cause conflict with the ability to develop intellectual skills, as suggested by Scott (2010); Sangster (2010); Gammie, Cargill and Hamilton (2010); Wilson (2011); Duff and Marriott (2012) and Hopper, (2013) and are, therefore, explored further.

In agreement with Duff and Marriott (2012) and Apostolou and Gammie (2014), interviewees on the whole strongly agreed that accreditation requirements were primarily focused on technical coverage. Using identical words both N2 and N10 felt they had seen nothing *'that really convinces me that they're looking for these non-technical skills'.* One interviewee identified this was particularly the case for ICAS:

> *It does tend to all be technical. It's really what they look for. I would say that probably from the conversations with CIMA, it's probably they are much more "yes we like the fact you do all these extra things" and therefore they're more flexible with their exemption accreditations because of that, is what they say. Whereas ICAS is very much more technical and really don't care what you do in their other moments of it. (N1)*

A further interviewee, N3, was also in agreement but also provided an illustration of the regulatory pressure of accreditation when this was not achieved:

> *Very much technical. All fine with our contents but we have found that we've had to go back and forward, you know, our first application has not been accepted because our exam was not numerate enough or whatever. And that's fine, we've sorted things out. But they haven't requested any sort skills, which is probably one of the things that the professional bodies don't do at all (N3)*

In addition to the requirements being technical, these technical requirements vary between the different accreditations. N10 illustrated this in context of the '*diverse'* requirements of the different professional bodies they are now trying to satisfy:

> *I think everyone's looking more and more at the international market, whereas before it was about satisfying ICAS you're now satisfying six different….[professional bodies]*

However, whilst the primary reason for accreditation appeared from interviews to be to attract students and, therefore, secure university income, accreditation was also identified as having vocational benefit by some interviewees (n=4) in that it covered fundamental technical skills which would be expected in an accounting degree and which are aligned with current technical practice. The following three quotes recognise this, albeit in varying explanation:

> *We view what we do as being a bit like law, medicine, and dentistry. If a medical degree didn't train you to be a doctor why do you want the medical degree if you then had to go off and train to be a doctor? You do that because that's what you want to do as your profession. (N8)*

> *So if you think that the professional body syllabus is supposedly fit for purpose, so it's designed to generate people who are going to have careers as accountants, by us aligning our syllabus to that then that fits into employability of the graduates at the end of the day. So I would say probably professional body syllabus augmented by what are the current thinking in terms of what employers are looking for in terms of soft skills (N3)*

> *The main starting point would definitely be accredited and accredited material. But not so much for accreditation, more because that's the common basics for accounting. So there's*

basic knowledge that all students need to have, so we build on that. (N9)

However, a potential detrimental impact of meeting technical accreditation requirements is that '*space is always a problem'* (N10) which restricts the time available to develop intellectual skills in Scottish accountancy degrees. This problem was identified by a number (n=8) of interviewees when discussing what had prevented non-technical skills being better developed. For example, N2 stated *'I don't think I have the space to develop any non-technical skills better'* and N3 identified that space in the syllabus was a problem, elaborating:

we end up doing perhaps too much of the actual technical side of things. So instead of getting into problem solving, critical analysis that we will teach bank recs or consolidations. So we will do "this is what the standard says, this is what you need to do to meet the standard…."

One interviewee identified a point of conflict between trying to meet accreditation demands, and satisfy university pressure to develop skills, stating:

*We're getting very heavily pressured [from their own university] to be much more skills orientated in our teaching. And the more that's crowded in in terms of subject knowledge means we have less scope for doing that, really. (*N11*).*

As well as technical content, a further conflict between meeting accreditation requirements and developing intellectual skills was identified in terms of assessment. The education literature highlights the importance of assessment in learning in the formal education environment (Brown, Bull and Pendlebury, 2013). Of particular relevance is the 'backwash effect' where student learning is driven by what they will be assessed on (Biggs and Tang, 2011). Though not specifically asked, one interviewee clearly shared this opinion on assessment: *'I'm a firm believer that assessment drives student behaviour. If it's not assessed they don't do it.' (N3).*

Gammie, Cargill and Hamilton (2010) identify a potential 'backwash effect' in professional accountancy education whereby if only technical skills are assessed this is what trainees will focus on resulting in the ineffective development of non-technical skills. If undergraduate accountancy education replicates the professional syllabus and examination structure the same 'backwash' effect may apply resulting in students focusing on technical skills at the expense of developing non-technical skills.

The most common issue identified by interviewees, and in line with Apostolou and Gammie (2014), was the requirement for a high proportion of accredited material to be assessed by examinations. This was believed to limit the development of non-technical skills by the majority (n=8) of interviewees. Interviewee N4 identified an '*uneasy relationship between the universities and the professional bodies'* and that whilst *'nice to think of yourselves as being in partnership but there are significant constraints over the educational experience of the students, particularly around assessment'.* Interviewee N6 also identified '*so much accreditation is dependent on the mode of assessment which is principally unseen exam'* and this reduced '*scope to introduce more, shall we say, modern, not really that modern, but not a lot of scope to introduce other forms of assessment'.* Expanding further, N6 identified further conflict in terms of satisfying different professional bodies, illustrating this as follows:

> *We have class tests and exams because the ACCA want to have three hours' worth of examination. They're a bit more strict than ICAS in this regard. Accordingly we find that for many modules we have to have the class test and a two hour exam, so students are doing three hours' worth of basically an Honours senior exam. There's no student complaints about it, they know they've got to do it. But at the back of my mind I'm thinking that maybe the experience could be improved. (N6)*

N1 also concurred with being *'driven by the professional bodies* and *therefore a large proportion of it has to be exams'.* However, N1 also identified a differing approach between academics in terms of what assessment to use in any remaining unaccredited space*:*

> *I know that certainly for myself I believe that students just doing exams is not enough. They need to have experience of other opportunities, other types of assessment. And I*

know some other colleagues may have gone down the route of make life easier and just doing straight exams and nothing else (N1)

To summarise so far, accreditation is a carrier for economic logic in determining conflict with educational goals. This is due to interview responses indicating accreditation is the dominant force in determining course content with accreditation being sought primarily for commercial reasons. However, the literature review also identifies a number of higher education practices that are also arguably carriers of economic logic and which may impact on course content: league tables, massification and reduced government funding and research. Whilst none of these were raised by interviewees as a key driver of course content, interviewees were specifically asked about these and their impact on the educational experience to gain a fuller understanding of the impact of economic logic.

4.5.2 League tables

All but one interviewee identified the high importance placed on league tables and the main reason given for this was economic in that league tables were important for the recruitment of students, supporting findings by Broecke (2015). Three interviewees also specifically identified international recruitment in line with Hazelkarn (2008) and Harvey (2008). Interviewee N3 identified the general importance of league tables for *'attracting students and international students'.* Focusing just on international students, N7 commented *'international students come if you're further up the league'* and within this context N6 focused particularly on the Chinese market:

if you get a good NSS score it feeds into some of the more important league tables. And if you do a good NSS score it feeds into these books of league tables which are available in foreign countries, especially China. So obviously the better your reputation the easier it is to recruit students, particularly from China. But it is certainly regarded as very important. (N6)

Only one interviewee identified they did not feel their university placed a high importance on league tables but noted that:

> *I think we're a bit naïve in the older universities in thinking our reputation will keep us going. You know, you're an ancient university and people will come to you for that reason. And I think we are a bit naïve not to say "actually, those rankings do really matter." (N9)*

Despite consensus on the importance of league tables, there was evidence of agreement by most interviewees that league tables had not directly impacted the syllabus or specifically the non-technical skills developed on their courses. Therefore no conflict between the economic pressures of league tables and the educational provisions was identified. Previous literature had identified that league tables could result in more technical teaching (Hopper, 2013) but this was not identified by any interviewees. The main impact instead appeared to be a 'management' of the activities underpinning the league table measures as illustrated by the following two quotes:

> *I think we've become more managerialist, not as a unit in accounting. I suppose as accountants we've always been quite professional, and had that orientation ourselves, but the university has become quite focused around KPIs, and the key ones that we can have some influence on, rather than things like spend on the department, things like that, are NSS. So that is important.* (N4)

> *I think we were reasonably successful in the last few years with NSS but all institutions are getting much better at how they deal with students. And I think most of that is actually to do with communication, managing student expectations, and the understanding of what it is that the students are feeling strongly about (N10)*

A common identified impact of league tables was in regards to student feedback which a number of academics identified as trying to improve. However, the impact of this varied. Some interviewees identified they had tried to improve feedback, which could actually have a positive impact on learning, but others identified that rather than changing the feedback itself, they were trying to manage student perception of the feedback they currently offered

such as by '*always giving feedback to students about what's been done. The "you said, we did" kind of thing' (N2).* Interviewee N5 also referred specifically to trying to manage perception as:

> *We need to try and improve their perception of what they're getting, really, to think in terms of "okay, you're going to be asked do you get this, therefore this is where we offer it. (N5)*

Further evidence of managing league tables was identified by two interviewees who revealed taking the timing of the NSS survey into account when scheduling 4th year modules. This is demonstrated by interviewee N3 who referred to being '*careful of scheduling in the final year which modules are going where just so that you don't end up with a bad NSS'*. Again, not changing the educational experience, just managing what is being done to satisfy league table measures.

4.5.3 Massification and Decreasing Government Funding

Confirming the university wide trend (Usher, 2009) for growing numbers in accountancy education, most (n=8) interviewees identified student numbers were increasing, albeit by only a small amount by three interviewees. The numbers of Scottish students are capped by the Scottish Government which has minimised the growth of home students. The key area identified for growth in numbers was 2+2 routes where students complete two years elsewhere followed by two years, and graduation, at the interviewed university. For three interviewees this 2+2 route was with local Scottish colleges whereas another five interviewees identified a 2+2 route with the first two years being completed overseas by international students. For both of these routes, some educational challenges were identified indicating potential conflict between economic drivers to increase student numbers and the educational experience. In relation to a 2+2 route with a local Scottish college, N2 identified a weakness in intellectual skills:

> *they come in and things like time management are fantastic, so they're good at managing their time. But their academic skills are quite poor so they haven't particularly written academic essays before, they haven't had to search for general articles, that kind of thing, so they know very little about that. (N2)*

For international students, a challenge was identified in relation to learning style by N9 noting:

> *I think students who are coming from a different educational background have had different expectations and we kind of expect them to learn by osmosis when they get here, and we expect them to know lots of things that they've never been taught before. (N9)*

However, the most common challenge in relation to international students was identified in relation to communication skills, with three different examples given as follows:

> *Although I think some of the international students do struggle with working in… for example if you're doing team work and you have people coming in whose English skills are not… English is not their first language and you're doing a bit of group work and they're maybe having to do a presentation then that can be quite challenging. And you can get some of the UK students being really unhappy that they have an international student who is not a great speaker if it's a piece of group work and they're getting a group mark for that. But that's something that you then just have to manage. (N3)*

> *…but with our degrees a decent chunk of students coming in to third year then there is the danger that the assessment of communication skills is diluted a little bit because you're having to continuously allow for second language, and therefore that will affect potentially the way you assess domestic students, because everything's anonymous marking, you've no clue whether it's a Polish student or a Spanish student, Chinese student or a Scottish student. So we have to be relatively forgiving around some of the grammar and such unless that's a particular part of the assessment brief. And so I think it's quite a challenging area how we bring that back again, whether we have to start specifically assessing some of that from an accounting perspective. (N4)*

> *I think in terms of skill development there are certainly some international students who find oral communication work quite difficult, giving presentations and that kind of thing, and also working in groups can be a bit of a challenge. For example I know we've had cases where students have complained that they've ended up in a group with a lot of*

*international students and they weren't international and they felt they were being held back. (*N11*)*

However, for those who identified educational challenges, there also appeared to be a consensus that the education experience overall hadn't changed or suffered as suggested by Mcnamara and Harris (2002), rather strategies were employed to overcome challenges identified, such as N9 identified this as *putting a little bit of effort in at the beginning* and N5 expanded on this providing an illustration in terms of assessment:

So it's not changing the assessment at all, it's more making sure they understand it, working with them on the terms "this is what you're required to do." And maybe explaining more to them "this is what I'm looking for here" so I'm translating. They're saying "is this what I want to do?" There's a kind of exchange of ideas around the clarification of what the assessment actually is. (N5)

In addition, five interviewees identified high quality international students on their undergraduate accounting courses. Enthusiastic responses to this were gained such as N10 who explained '*we're getting very high quality students, and we're extremely responsive to new ideas. And they quickly adapt because they are so good*' and N6 who concurred noting they were getting '*very, very high quality students, some quite interesting experiences as well.'*

A more mixed response was evident in relation to the impact on skill development of growing student numbers along with decreasing government funding, as identified as UK-wide by Greenaway and Haynes (2003). Six interviewees felt this had not negatively impacted on the educational experience whilst five indicated it had provided conflict with the educational experience which varied from the impact on feedback, class sizes and not having the resources to develop 'extras.'

In terms of big class sizes, N3 noted '*to do the assessment and give good feedback and do it within the really short timeframe and have consistency of assessment is a real challenge'*. This challenge was shared by N6 who explained *'we have thought about changing how we assess*

to make it easier to mark because we've got such a quantity of marking to do'. Rather than focusing on assessment specifically, N11 discussed the impact on non-technical skill development. Interestingly, this was placed in the context of being a 'rich' school as follows:

> *Financially it's a pretty successful school. We're not terribly short of resource, we can do most of the things that we want. The big issue in relation to what you say is really class sizes in first and second year are really big. So to really hone in on some of these skills is more difficult given the number of kids in the classes. So dealing with things like oral communication skill development, that's very difficult in a class of three hundred students in a lecture. (*N11*)*

N8 raised an alternative viewpoint in the increasing pressure for academic staff. This was in relation to the requirement to take on more work traditionally outside their remit, thus putting additional pressure on time for academic activity:

> *A lot of work that used to be done by central service, central service has been cut back so a lot of the admissions work that used to be done before we'd even see student applications and UCAS forms, we have to do all that ourselves. So much more of the work seems to come down to academics but it's because there are fewer people working in central services as much as anything else.*

N11 also identified the financial pressure resulting from reduced funding for universities and felt this resulted in the 'extras' which could help develop non-technical skills being depleted:

> *Obviously the higher education sector in Scotland is in deep trouble, and I think our model is bust the way we're sitting. I can't see how financially the higher education sector model can carry on for very much longer as it is. And I think the lack of money within the system really starts to show up. These are the sorts of things, the added extras, which are not happening. Now, if you talk to colleagues down south they are developing a lot more of this and there's a lot more voluntary and they've got a lot more courses, but that's because they've got a lot more resource that they can dedicate into it. And that's quite frustrating because you're looking at initiatives that are happening and you're thinking "we would*

*love to do something like that but we can't because we haven't got that bucket of money in the same way. (*N11*)*

However, only one interviewee provided any narrative around the potential link between non-technical skill development and financial pressures as indicated by Hopper (2013). N8 identified this as follows:

it is easier just to teach technical stuff, you can come in a just sort of teach from book. And you're thinking of ways of delivering non-technical stuff, it takes a bit of thought, you need time to stand back. And there's so little time to stand back from things as academics. So if you've got a new module the publisher will have pre-prepared slides, everything, and they're all technical. So it's often what we're doing at night and the weekends, thinking of ways to bring out some of the softer skills. But everything is under pressure. (N8).

Overall, the very mixed responses indicated a potential conflict between reduced government funding and the educational experience but the majority of interviewees did not feel this had yet had an impact. However, if government funding is to reduce further, this could result in academics having to make changes to the educational experience in order to satisfy economic drivers. This was summarised by N7, when asked if they had made any changes to the educational provisions such as assessment, with the response '*I don't think it's happened yet but I think it might. We're kind of on the cusp of manageability. So the answer is not yet but we're not far away from that point, I would think.'*

4.5.4 Research

Humphrey, Lewis and Owen, (1996) and Dewing and Russell (1998) both identify government funding to be more favourable to research which can result in research being prioritised which subsequently detracts from the provision of a liberal education in accounting education. Interviewees were asked if they felt their university prioritised teaching or research. Interestingly, overall responses indicated research was not being prioritised at the expense of the educational experience with only two interviewees identifying research was prioritised.

Four interviewees identified teaching was prioritised and three maintained these were equal. The other two interviewees didn't answer directly but discussed how a balance between the two was maintained. The evidence provided therefore indicates no widespread conflict between research activity and the educational experience. However, in later wider discussion two respondents who identified themselves as teaching focused, indicated that research could potentially have a negative impact on teaching with N3 discussing a *'big drive to improve our research credibility, so to try and free up staff to do more research, I think there's been a lot of "well, we're over-assessing so you need to cut back the assessment'* and N7 summarising the teaching research conflict as '*teaching, research, I think it's just a case of do as much as you possibly can without collapsing in a heap.'*

In addition, one of the interviewees who did identify a priority for research noted:

> *there's a complete disregard for the fact that particularly in business schools, 90% plus of our income comes from teaching, it doesn't come from research. There's equal disregard elsewhere in the university that although perhaps they might generate about 30% of their income for research it's almost immediately spent on machines or whatever and it does very little to actually contribute to the life of the university. So research has had this horrible effect on teaching, and I would like to believe that the TEF will perhaps impact and at least restrain REF. It creates different focus within the institutions. (N10)*

Whilst the majority of interviewees indicated research was not prioritised over teaching, these later comments indicate research could be impacting on the educational experience and this is identified as an area for future research.

4.5.5 Institutional Pressures Shaping Scottish Undergraduate Accounting Programmes

Overall, the interviews revealed accreditation is the main driver of undergraduate accounting course content with accreditation being driven primarily by student demands. Universities seeking to maximise their income look to meet these student demands with competition from other Scottish universities, who offer the accreditation sought by students, deterring accountancy degree providers from reducing accreditations. These are all economic, not educational, reasons for the dominance of accreditation in Scottish accountancy degrees thus accreditation can be regarded as a carrier for economic logic. The impact of this dominance

of accreditation creates conflict with the educational beliefs of the purpose of higher education and these conflicts, along with the coping strategies utilised, will be discussed in the next three sections.

4.5.6 Conflict and Coping Strategy 1: Increasing trend for the range of accreditations sought

The interviews, discussed above, revealed a growing economic pressure to increase the range of accreditations. Students appear to be viewed as consumers by Scottish universities who deliver undergraduate accountancy degree programmes. To attract maximum numbers of students and, therefore, maximise income, particularly from the high fee paying international market, Scottish accountancy degree providers are trying to maximise their range of accreditations. With each professional body having different requirements, this places more and more pressure on accountancy degree providers to teach technical material and assess by tradition examinations. This results in tension with the development of intellectual skills, desired by both academics and employers, and, therefore, creates tension with education logic.

In terms of coping strategies, a partial resolution was identified to the conflict whereby most interviewees (n=8) identified they were able to cover the requirements of accreditation in the first 2-3 years, utilising the 4th year of their course to move away from accreditation and develop intellectual skills. Interviewee N6 illustrated this when discussing how accreditation drove assessment to be primarily an '*unseen exam*' but they were able to introduce alternative assessment *'for things like story boards and presentations* but these methods *tend to be towards the end of the degree, so in the Honours and the junior and senior Honours years.'* This indicated a compartmentalisation of demands, as suggested by Kraatz and Block (2008), with different demands being met in separate spaces of the accountancy degree. However, this compartmentalisation as a coping strategy may be under threat, as, whilst not specifically asked, three interviewees identified a strong expectation that Scottish degrees would be decreased to three years in the future. As an example, N10 explained:

> *I think there's clearly a lot of pressure at Scottish Government level to look at the first year of the Scottish degree and the sixth year of school and say "why are we paying for this*

twice?" And how long can the four year degree survive? I'm not sure. And that will create problems for us. (N10)

If accounting degrees are to maintain, or increase, the accreditation levels of today, this could present a real threat to the educational experience going forward.

This compartmentalisation strategy results in the dominance of accreditation, a carrier of economic logic, in the first 2-3 years of a Scottish accountancy degree. Within this first 2-3 year period further tension arise between accreditation and university management and accreditation and academic beliefs. These tensions are explored further in the next two sections.

4.5.7 Conflict and Coping Strategy 2: University Management and Accreditation

A second point of conflict was identified in relation to the regulatory pressures of accreditation and educational goals of higher university management. Specifically, examples were identified of universities moving away from traditional exams and looking to increase interdisciplinary study. In dealing with this conflict, academics appear to actively fight for accreditation. An example of this was given in relation to assessment by N4 who noted the '*university philosophy'* was moving away from examinations and they have *'to fight to keep exams for first years because no first year student in first semester gets any exams in the whole university apart from accounting'.* In relation to increasing interdisciplinary study, N11 noted they were *'under quite a lot of pressure at the moment to open up various pathways through different disciplines, giving students options of taking a bit of this and a bit of that, just to broaden their interdisciplinary of their educational experience* which resulted in *conflict with accreditation'.* However, when probed further on how this conflict was resolved, N11 concluded that accreditation '*wins*'. More generally, interviewee N6 also referred to being able to '*play the accreditation card'* if accounting lecturers didn't want to develop certain non-technical skills.

All of these responses indicate the demands of university management are deemed as less important than maintaining accreditation and academics try to eliminate purism, as suggested by Kraatz and Block (2008), by marginalising the demands of university management. Again, the economic logic appears to dominate, with the commercial benefits of accreditation presiding over attempts by university management to improve the educational experience.

4.5.8 Conflict and Coping Strategy 3: Academics and Accreditation

The third conflict identified was in relation to academics. The interviewees, as previously discussed, identified a personal belief that higher education should be educationally driven and, in particular, a liberal outlook was identified as the purpose of higher education with some others also combining this with a vocational purpose. This is in conflict with accreditation, identified as a carrier of economic logic. As academics are the suppliers of education, ultimately making course content decisions, this was an important conflict to consider.

Interviewees, as previously discussed, identified the importance of accreditation and its dominating impact on course content. Transcripts were also interrogated for evidence of the coping strategies implemented by academics when faced with the conflict between accreditation and their personal belief of the purpose of higher education. Interviewee N4 discussed that accounting faculty have an annual review of their programme where accreditation is regularly discussed with questions such as '*should we be so focused on that? Should we be releasing ourselves from the ties?*' being raised. When probed as to how this is resolved and if accreditation would be decreased, the interviewee concluded '*I think probably unlikely'*. A further example was provided by N5 who identified the restrictions of accreditation but noted: '*There's really never been a challenge to that in terms of we shouldn't have it. It might have been mentioned in passing, but I think the possibility of changing it is very remote, actually.'* This opinion was shared by N9 who identified they were '*not convinced about accreditation* but when asked if they maintain it identified*: Look, economically there's no way we're going to [get rid of accreditation]. No chance.'*

The responses of interviewees indicate the presence of non-compliance with the educational logic which reflects Lepoutre and Valente's (2012) strategy of not complying with all competing demands. Accreditation, as previously discussed, detracts from the educational experience. Academics acknowledge this but the interviews suggest they do nothing to fight against accreditation but will fight against pressure that will result in the reduction of accreditation. This may be explained by the standing of the perceived negative economic consequence in terms of non-compliance with accreditation compared to the consequence for not complying with their own belief of what a higher education should be.

4.6 Conclusion and Implications for the Future

This paper uses Institutional Theory to seek a better understanding of the underlying drivers that shape undergraduate accounting programmes in the Scottish University Sector. Through interviewing eleven senior academics with oversight of Scottish accountancy degrees, this research shows that the practice of accreditation is a dominant driver of course content. The underlying reason for this emanates and resonates with notions of an economic logic, where actor behaviour is shaped primarily towards securing the financial success of the university which is evident through meeting student demands, maximising income and competing with other universities. Such behaviour creates institutional conflicts with an education logic, more focused at shaping behaviour towards the development of intellectual skills necessary to prepare individuals for citizenship and employment.

This paper also shows institutional contradictions arising in the organisational field, where conflicts between co-existing education and economic logics are apparent. Specifically, evidence of institutional contradictions can be interpreted from interviewee transcripts and a range[65] of strategies appear to be implemented to deal with these contradictions.

[65] Evidence identified of three of the five strategies outlined in the literature review (table 9 at 4.2.6).

The first contradiction arose in relation to meeting multiple different professional accounting body accreditation requirements, driven by economic reasons, and the development of intellectual skills. A compartmentalisation strategy appeared to be in place whereby accreditation requirements are covered in the first 2-3 years of a degree and intellectual skills being developed in the remaining 1-2 years. However, the first 2-3 years are still dominated by accreditation and within this further conflicts arose. Firstly, conflict between university management initiatives to improve the education experience and accreditation was identified. The coping strategy appeared to be the marginalisation of the educational experience allowing the economic benefits of accreditation to preside. Secondly, conflict arose between academics' personal beliefs on the purpose of higher education the underlying economic logic that drives the development and delivery of the accounting programmes they lead. Academics appeared to employ a non-compliance strategy whereby they did not actively fight against accreditation which was identified as driving their accounting programme and being in conflict with their personal beliefs. This was perhaps as a result of the potential impact of non-compliance with accreditation compared with non-compliance with their personal beliefs.

Other potential carriers of economic logic, in terms of league tables, massification and prioritisation of research, were also investigated. However, the evidence presented in this paper suggests that such carriers do not currently result in the reduction of the development of intellectual skills. If, however, economic pressure increases going forward, perhaps as a result of decreased government funding in the field, this could negatively affect the education provision due to pressure on academics to make teaching more cost effective and coping strategies would need to be re-evaluated.

The impact of the identified conflicts and the associated coping strategies need to be considered in relation to accounting education going forward. The first strategy of compartmentalisation, where intellectual skills are taught in the last year(s), was a key strategy identified by many academics when discussing how they developed intellectual skills on their accountancy courses. Going forward, if the range of accreditations sought continues

to grow to meet market demands, this is going to further squeeze the available space for intellectual skills development. The international market for student recruitment is facing an uncertain time for UK universities following on from the UK vote to leave the European Union as well as recent government initiatives to tighten visa requirements for overseas students. This could result in further falls to international student numbers and therefore increase the competition between universities over relatively fewer students. With accreditation being identified as a key marketing tool to these students, this could further drive up the range of accreditations sought and reduce the available space for intellectual skill development.

A further risk to the operation of this compartmentalisation strategy was highlighted through the identification that the Scottish degree is currently under [economic] pressure to reduce from a four to three year delivery. If accreditation is to be maintained, this would further restrict the syllabus space to develop intellectual skills. Accounting academics are urged to consider this threat to the current strategy so if such changes do materialise they are in a position to react quickly to protect the future of the accountancy degree.

The second strategy of marginalising the demands of university management, so as to meet the economic demands of accreditation, also needs careful consideration. If universities are generally moving to improve the intellectual skills of their graduates and accountancy degree providers fail to keep pace with these changes, this may pose a real threat to the standing of accounting as a university subject, from both a liberal and vocational perspective. Indeed the historical quote from Henry Rand Hatfield that accounting in universities is a '*pariah whose very presence detracts somewhat from the sanctity of the academic halls' (p. 241, 1924)* may, once again, ring true. If accounting graduates fall behind other graduates in terms of skill development this could also have serious consequences for the employability of accounting graduates.

The final strategy identified as being employed by the interviewees was the non-compliance with academics' personal belief in the purpose of higher education. This may be explained

by the perceived negative implications of non-compliance with academics' personal beliefs compared with the perceived negative implications of not seeking accreditation. In addition, academics may currently take some comfort from the compartmentalisation strategy discussed above. However, if the educational experience is squeezed further, through the various aforementioned risks, this conflict could become the driver for change as tensions between co-existing logics in the organisational field can create opportunities for change. This could potentially drive an institutional change away from prioritising accreditation towards a more holistic educational experience.

4.6.1 Limitations and Further Research

This research is based on the views of academics interviewed. Whilst best attempts were made to identify those with oversight of accountancy degrees a number of other academics within Scottish accountancy degrees are also likely to be involved in course content decisions. In addition, the analysis and conclusions are based on the perception of those interviewed and may not reflect the views of others involved in course content decisions. Expanding the sample could provide further insights into the areas investigated.

The location of Scotland was chosen due to its unique institutional environment. However, many of the criticisms of accountancy education failing to develop intellectual skills are not limited to Scotland. Equally, the growing commercialisation of universities is a worldwide, rather than solely Scottish, trend. A comparative analysis with a different location could further add to the insights of this paper. In particular, and in light of the Scottish degree potentially decreasing to three years, comparison to English accountancy degree providers could provide interesting insight into the strategies they employ in this reduced timeframe.

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Chapter 5: CONCLUSION

5.1 Conclusions and the Individual Objectives

Big 4 accountancy firms currently cite no preference for an accounting graduate in their recruitment publications. This is demonstrated by Ernst and Young (2017, p.1), a Big 4 accountancy firm identifying 'It's your intellectual ability and natural strengths that matter to us. Some of our highest achievers have studied subjects totally unrelated to the work they do' and by PWC (2017, p.1) who note 'we welcome students from all degree disciplines. It doesn't matter what degree you're studying for.' Indeed, previous research has identified some large accountancy employers actually prefer to recruit non-accounting graduates as demonstrated by an Audit Partner of a large accountancy firm noting '….we are not great fans of accounting degrees, because people who come here with accounting degrees are not usually as good as people with non-accounting degrees for various reasons' (Gray et al., 2001, p.143). This thesis, therefore, sets out to understand why accounting graduates are not preferred for such positions within large accountancy firms. The aim of this thesis is as follows:

A critical evaluation of the value proposition of an accountancy degree as a foundation for training as a professional accountant.

Initial literature (Gammie, Cargill and Gammie, 2004), which resonated with anecdotal evidence gathered by the researcher when employed by a Big 4 firm, identified two key factors sought by large Scottish accountancy employers in their recruitment process: (1) the ability of a trainee to pass professional Institute of Chartered Accountants of Scotland (ICAS) accountancy examinations at the first attempt and (2) demonstration of non-technical skills.

The first avenue explored in this thesis was the ability of trainees to pass their professional examinations. Trainees who fail their professional examinations are unlikely to develop as a professional accountant (Gammie, Cargill and Gammie, 2004). Indeed, personal evidence suggested Big 4 trainees are likely to have their contracts terminated if they are unable to pass their professional examinations, sometimes even on the first attempt. Using this as a basis, the first objective was developed *to investigate the factors influencing the performance of Big*

4 trainees in the Institute of Chartered Accountants of Scotland's (ICAS) Test of Professional Skills Examinations[66] *(Chapter 2: Paper 1*).

A theoretical model of performance, based on Porter and Lawler's (1968) Model of Performance, formed the basis for achieving this objective. This incorporated both biodata factors, common explanatory factors for undergraduate accountancy examinations (*inter alia* Wooten, 1998; Koh and Koh, 1999; Gammie, Jones and Robertson-Millar, 2003; Duff, 2004; Byrne and Flood, 2008; Gurney, 2009; Al-Twaijry, 2010, Maksy, 2012) and the key factors utilised by previous studies of performance at professional level (Harvey-Cook, 1995 and Gammie, 1999). In addition, this model incorporated other factors identified through the literature review, including variables based on expectancy theory which has been commonly used to understand examination performance in accounting education (Gul and Fong, 1993; Carpenter and Friar, 1993; Wooten, 1998).

Data, on the identified input variables and on the exam performance outcomes, was gathered using an online questionnaire to all Big 4 trainees (excluding one group on a specialised tax route) who commenced an ICAS training contract in 2010. Despite the inclusion of a high number of variables, very few significant factors were identified in relation to performance in the examinations and as a result no explanatory model could be developed which differentiated between performance in individual examinations or between those trainees who passed first time and those who failed. A possible explanation identified was homogeneous nature of the population. This is possibly explained by the extensive selection processes of the Big 4 firms. This paper, however, did not find any significant differences between accounting and non-accounting graduates in terms of performance in professional examinations which contradicted earlier evidence by Gammie (1999) but agreed with the findings of Harvey-Cook (1995). The attention of the thesis therefore turned to investigating the non-technical skill development of accounting and non-accounting graduates.

[66] There are 3 levels of ICAS examinations. Exemptions are available from all or part of the first level of examinations, Test of Competence, for those who have undertaken accredited subjects at university. Test of Professional Skills is the 2nd level of examinations but the first level sat by all trainees.

The importance of non-technical skills of accounting graduates is undisputed in the literature and of particular relevance to this thesis is the importance of non-technical skills to employers (*inter alia* Arquero et al., 2001; Gray et al., 2001; Gammie, Cargill and Gammie, 2004; ACCA, 2008, Riley and Simons, 2016) and the profession (Gray et al., 2001; IFAC, 2015). However, a continuing criticism of accountancy programmes at university is the failure to develop non-technical skills to the desired level (Zaid and Abraham, 1994; Morgan, 1997; Gray, et al., 2001; Kavanagh and Drennan, 2008; Wilson, 2011). If non-accounting programmes at university are developing superior non-technical skills, this is as a possible explanatory factor for why accounting graduates were not preferred over non-accounting graduates and this proposition drove the development of the second objective *to undertake a critical comparison of the perception of non-technical skills developed at university by accounting and non-accounting graduates who go on to complete a Big 4 ICAS training contract (Chapter 3: Paper 2).*

Data was gathered using an online questionnaire to all Big 4 trainees who commenced an ICAS training contract in 2010. A key finding from the data collected was that non-accounting graduates rated their development of intellectual skills significantly higher than accounting graduates. With intellectual skills being identified as a key skills desired by employers (Gray et al., 2001; Gammie, Cargill and Gammie, 2004; Crawford et al., 2011) this provided a possible explanation for why accounting graduates were not being preferred during recruitment.

A further finding from the questionnaire was accounting graduates rated their development of team working skills more highly than non-accounting graduates. Whilst, team working skills are undoubtedly important skills for an accounting graduate to develop (inter alia Arquero et al., 2001; Hassall et al., 2003; Gammie, Cargill and Gammie, 2004; ACCA, 2008; Kavanagh and Drennan, 2008; Crawford et al., 2011), this raised questions about skill prioritisation on accounting degrees compared to other degrees. To investigate this further, the next objective was developed to *investigate the institutional practices and beliefs that influence the development of non-technical skills in Scottish accountancy degrees* (Chapter 3: Paper 2).

For this objective and the final objective (see below), interviews were conducted, and analysed through the lens of institutional theory, with 11 Scottish academics who had

oversight of accountancy degrees. In line with previous research (Humphrey, Lewis and Owen, 1996; Duff and Marriott, 2012; Duff and Marriott, 2017), the interviews revealed a high priority to satisfy the normative pressure of accreditation and this appeared to serve as a source of legitimacy. Seeking and maintaining accreditation results in Scottish accountancy degree providers having to make prioritisation decisions about which non-technical skills to develop in the remaining space. In line with the results of the questionnaire, data collected from the interviews revealed that accounting academics were institutionalised in their belief of the importance of developing interpersonal and communication skills. Whilst undoubtedly important skills to develop, if interpersonal and communication skills are prioritised over intellectual skills, a key skill sought by large accountancy recruiters, this could result in accountancy graduates failing to secure coveted positions, particularly if graduates from other degree disciplines, who also apply for these positions, have enhanced skills in this area.

The interviews also revealed an anticipation by some interviewees that Scottish degrees could decrease from the current four year structure to a three year structure. This was highlighted as a real risk to accountancy degrees with interviewees revealing the final 4th year as a key space for intellectual skill development. If current accreditation is maintained, this could place a real pressure on non-technical skill development within accountancy degrees and put accounting graduates at an even bigger relative disadvantage when competing with non-accounting graduates for trainee accountancy positions.

Further investigating as to why accreditation is prioritised when it appears to detract from non-technical skill development, the literature identified economic reasons in the form of the importance of accreditation in marketing their degrees to both home and international students (Humphrey, Lewis and Owen, 1996; Duff and Marriott, 2012; Duff and Marriott, 2017). Indeed further economic factors, from massification of the university sector, league tables and research and teaching conflict, were also identified which had the potential to detract from the development of non-technical skills, and particularly intellectual skills, of accounting graduates. The final objective *to investigate the balance (or imbalance) of an economic and education logic in Scottish accountancy degrees and the impact of this on course content decisions made by Scottish accountancy degree providers (Chapter 4: Paper 3)* was therefore developed.

The interviews identified accreditation, as a carrier of economic logic, was the dominant driver of course content decisions. Whilst the identification of accreditation as a key driver is not in itself a new contribution to literature, this paper identified a continuing growth in the range of accreditations sought, particularly in relation to international student recruitment. This demand for an increasing range of accreditations was identified as detracting from the development of intellectual skills and thus potentially further widening the intellectual skill development gap between accounting and non-accounting graduates. In addition, this paper identified that this could be further compounded going forward by the reduction in the length of the Scottish degree (in line with paper 2) and an increase in competition for international students.

Furthermore, this paper also identified conflicts between accreditation and university management initiatives to improve intellectual skill development. Whilst short term this may satisfy the economic goals of accreditation, accountancy degree providers are urged to consider the implications of this going forward. Paper 2 identified that, from the perception of graduates, non-accounting graduates who go on to complete a Big 4 training contract already have better developed intellectual skills. If accounting degrees go against these initiatives, this could further widen the gap placing even more uncertainty on accountancy degrees as a platform for a career as a professional accountant.

5.2 Concluding Thoughts

So, does an accounting degree add up?

In considering the value of an accountancy degree, as a foundation for training as a professional accountant, this thesis has considered the exam performance in ICAS TPS examinations and the non-technical skill development of accounting graduates. In relation to passing professional accountancy examinations, accounting graduates who go on to complete ICAS TPS examinations with a Big 4 accountancy firms perform no better than non-accounting graduates thus indicating no advantage or disadvantage for accounting graduates

compared to non-accounting graduates. However, it was identified that accounting graduates perceive that they have not have developed their intellectual skills, key skills sought by employers and the profession, to the same extent as their non-accounting counterparts and thus creates doubt over whether or not an accountancy degree is providing the best foundation for training as a professional accountant.

Accreditation appears to be the driving force behind why non-technical skills are not maximised within accounting degrees. This appears to be driven by economic goals, in particular in relation to maximising both home and international student numbers. Interestingly, large employers are uninterested in the accreditations a student has gained and Big 4 firms are known to disregard these completely and require accounting graduates to undertake the examinations they have gained exemption from. There therefore appears to be an information gap between what the literature identifies students think will help them gain employment (accreditation), which in turn impacts on the demand and design of the degree, and what actually will help them gain Big 4 employment (the development of non-technical skills).

The thesis also finds a number of potential future risk factors which could further increase the relative gap in intellectual skill development between accounting and non-accounting graduates. These include the reduction of the Scottish university degree from four to three years and increased market competition for international students These risk factors will affect all Scottish degree providers, not just accountancy degrees. However, if the level of accreditation is maintained, or increased, this places accountancy degrees in a relatively weaker position compared to other degrees as a larger proportion of the degree will be dedicated to the technical coverage required by the accrediting bodies which is believed to detract from intellectual skill development. Indeed, the current role of accreditation in legitimising accountancy degrees could instead become a real threat to the legitimacy of accountancy degrees going forward.

It is recognised that much of this conclusion is based on the recruitment of the Big 4 accountancy firms and it may be argued that other recruiters, particularly smaller accountancy

firms, prefer accredited graduates due to the lower cost of training them (Gammie, Cargill and Gammie, 2004). However, this would be a worrying position for accountancy degree holders if accounting degrees were designed around these smaller firms who account for only 29%[67] of ICAS trainees.

5.3 Summary of Key Contributions to Literature

1. A theoretical model of performance (adapter from Porter and Lawler 1968) was developed with the objective of understanding performance in professional accountancy examinations. Whilst validity of the model was not established, possibly due to the population being too homogeneous, the model developed may be of use to future studies of performance where a less homogeneous population is present, such as undergraduate education or professional education using the full population. However, this thesis did establish there was no significant difference in ICAS TPS performance for those who had completed an accountancy degree compared to non-accounting graduates. It is noted, however, that these findings are specific to those who had passed the initial hurdles set by the firms during selection, such as academic requirements.

2. For graduates who had gone on to complete a Big 4 training contract, this thesis identified that non-accounting graduates perceived the development of their intellectual skills were more highly enhanced than accounting graduates by their university education. Although by contrast, accounting graduates perceived their development of team working skills more highly than non-accounting graduates. The importance of team working and other communication skills was reflected in the views of academics with oversight of accountancy degree programmes who prioritised interpersonal and communication skills once accreditation requirements were met. Given both populations perform equally as well in ICAS TPS exams, discussed above,

[67].FRC (2011) states that 808 trainees registered with ICAS in 2010. Big 4 firms confirmed a total of 574 (71%) trainees and therefore 29% are non-Big 4 trainees.

this implies these non-technical skills are not important in technical professional exams performance for this population.

3. This thesis confirmed a focus by Scottish accountancy degree programmes on accreditation at the expense of developing intellectual skills; a focus borne from economic logic and identified as an institutional threat to the legitimacy of accountancy degree programmes going forward. In addition, a growth in the range of accreditations sought was also identified, particularly in relation to attracting high fee paying international students who seek alternatives to the ICAS accreditation traditionally sought by Scottish students.

4. Scottish academics express a conflict between what they believe the purpose of higher education should be and the practice of seeking accreditation for the accountancy programmes they lead and develop. A further conflict between accreditation and university initiatives to improve intellectual skill development was also identified. Both of these conflicts were identified as arising from an institutional contradiction between two coexisting logics, education and economic logic, in the organisational field.

5. This thesis identified three strategies employed by Scottish academics, with oversight of accountancy degree programmes, to managing the conflicts arising from co-existing educational and economic logics: compartmentalisation of competing demands, marginalisation of demands viewed as less important and non-compliance of competing demands. In addition, contemporary risks to these coping strategies employed were identified and explored in the context of the threat they pose to the standing of accountancy degrees in future.

5.4 Implication for Policy and Practice

A number of stakeholders are identified for whom this thesis might be of interest: Scottish and global accounting academics; university management; the professional accountancy bodies; employers and prospective accountancy students. Key implications for policy and practice are identified as follows:

1. This thesis has implications for Scottish academics through identifying conflicts in accounting undergraduate education which detract from the development of intellectual skills. Scottish academics need to address and respond to these conflicts if accountancy degrees are to retain their currency as a platform for launching a career as a professional accountant. Failure to address these conflicts could result in changes to the recruitment policies of accountancy firms with accountancy firms challenging if accounting degree graduates are fit for purpose and if not, potentially having bias towards non-accountancy graduates during recruitment.

2. This thesis may also be of interest to accounting academics and professional bodies from other jurisdictions, particularly for those countries which have extended their professional accountancy entry route to include non-accounting graduates, such as Australia. Through the comparison of non-technical skill development between accounting and non-accounting graduates, this thesis identifies potential deficiencies in non-technical skill development by accountancy degrees. If these findings are also the case for other jurisdictions, with routes open to non-accounting graduates or accounting graduates only, this thesis raises a question as to whether the graduates from accounting degrees are fit for purpose. If not, this could provide a wakeup call for accountancy degrees globally.

3. The findings of thesis may have implications for prospective university students in selecting their course of study. In particular, for those prospective students who want to undertake their degree as a platform for launching a career as a professional accountant. In addition, if the information gap between what prospective students

think accountancy employers want (accreditation) and what accountancy employers actually want (non-technical skills) is closed, and accounting degrees fail to develop these non-technical skills to a similar or superior level to non-accountancy degrees, this could have implications for both accounting academics and university management as accountancy degrees may no longer be attractive to prospective students in jurisdictions where entry routes to the accountancy profession are open to non-accounting graduates.

4. This thesis contributes to work of global professional bodies in relation to entry-level qualification and non-technical skill development in the training of professional accountants. For example, elements of this thesis have already been used to influence the work of the International Federation of Accountants. Paper 1 was reviewed and acknowledged in the development of International Education Standard 1: Entry Requirements to Professional Accounting Education Programmes. The results of papers 2 and 3, particularly in relation to the development of intellectual skills, have been shared with the International Accounting Education Standards Board in relation to their current project on professional scepticism where intellectual skills are identified as a key underlying skill for the development of professional scepticism.

5.5 Overall Reflection and Further Research

The overall aim of this thesis was to critically evaluate the value proposition of an accountancy degree as a foundation for training as a professional accounting. Two key data collection methods were undertaken in the achievement of this objective: a questionnaire to Big 4 ICAS trainees and interviews with Scottish academics with oversight of accountancy degrees.

At the onset, this thesis set out to develop a statistical model, which added to the explanatory factors of previous biodata studies, to explain performance in ICAS TPS examinations and to gather graduate perception on their non-technical skill development. Whilst unable to develop a model, potentially due to the sample being too homogeneous, the questionnaire to evaluate the perception of non-technical skills by accounting and non-accounting graduates

identified some really interesting differences and attention was turned to developing this further.

From the perception of the graduates sampled, non-accounting graduates rated their development of intellectual skills significantly higher than accounting graduates. This was investigated further though interviews with Scottish academics with oversight of accountancy degree programmes. The normative pressure of accreditation was identified as detracting from intellectual skill development. Whilst the pressure of accreditation is not a new finding in itself, this thesis identified that in the Scottish context this is a continuing problem, a growing problem and is driven by an economic logic which conflicts with intellectual skills desired by an education logic.

Two key areas for further work are identified. Firstly, this thesis was unable to develop a statistical model for the chosen sample, perhaps as a result of the sample being too homogeneous. A less homogenous group, such as undergraduate accounting students or students from anther professional body with a wider range of background factors could provide more variation to prove or disprove the model.

Secondly, the interviews were conducted with Scottish academics with oversight of accountancy degrees with the boundary of Scotland being applied due to its unique institutional environment. Further studies of different locations, such as England or America, with different institutional environments, could provide an interesting comparative studies and are identified as a second area of future research.

5.6 Overall Limitations

The questionnaire, used to gather potential explanatory factors for TPS examination performance and to evaluate the perception of Big 4 trainees on their non-technical skill development at university, was sent to Big 4 trainees who commenced an ICAS training contract in 2010. Whilst the response rate was in line with previous studies and tests of non-bias did not indicate any bias, the results may not be generalisable.

Both the evaluation of non-technical skills in the questionnaire and the interviews with academics were based on perception. Whilst perception is identified as important and

attempts were made to triangulate the findings through the mixed method approach, it is acknowledged that this perception reported may not represent the full population.

Finally, the interviews were conducted with Scottish academics with oversight of accountancy degrees. It is acknowledged that the views of Scottish academics may be unique to their institutional environment and whilst the theoretical framework may be transferrable to different locations with different institutional pressures, the findings are specific to the Scottish context.

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Appendix A: Questionnaire

Questionnaire Part 1

1. Background Information

* 1. Please select if you are

- ◯ Male
- ◯ Female

* 2. What is your date of birth

Date of Birth DD / MM / YYYY

3. Please select the most appropriate option to indicate your cultural background.
(Please note categories are as per recommended by the Commission for Racial Equality.)

- ◯ White
- ◯ Mixed
- ◯ Asian, Asian British, Asian English, Asian Scottish, or Asian Welsh
- ◯ Black, Black British, Black English, Black Scottish, or Black Welsh
- ◯ Chinese, Chinese British, Chinese English, Chinese Scottish, Chinese Welsh

Other (please specify)

4. Which, if any, of the following TC examinations are you required to sit

	Financial Accounting	Principles of Auditing and Reporting	Finance	Business Management	Business Law
ICAS requirement	☐	☐	☐	☐	☐
Employer Requirement (Exemption given by ICAS but required by employer)	☐	☐	☐	☐	☐

5. Please select which, if any, of the following TC level subjects you have already received ICAS training in

- ☐ Financial Accounting
- ☐ Principles of Auditing and Reporting
- ☐ Finance
- ☐ Business Management
- ☐ Business Law

6. Please select which, if any, of the following TC level subjects you have already sat ICAS examinations in

- [ ] Financial Accounting
- [ ] Principles of Auditing and Reporting
- [ ] Finance
- [ ] Business Management
- [ ] Business Law

* 7. To date, have you received any ICAS training at TPS level

- ◯ Yes
- ◯ No

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Questionnaire Part 1

2. University Education

* 1. Which University did you attend for your first degree

* 2. What was the title of your degree (for example BA Accounting and Finance)

* 3. What classification did you receive for your degree

- [ ] Honours Degree: 1st Class
- [ ] Honours Degree: 2:1
- [ ] Honours Degree: 2:2
- [ ] Honours Degree: 3rd
- [ ] Ordinary Degree
- [ ] No degree as on AAT route

4. How many resits, if any, were you required to take for your first degree. If none, please leave blank.

1st Year	
2nd Year	
3rd Year	
4th Year	

* 5. Did you complete any postgraduate qualifications

- ◯ Yes
- ◯ No

If Yes, please give details

* 6. Did you complete a placement during your time at university

- ◯ Yes
- ◯ No

If Yes, how long was the placement and was the experience gained relevant to your current position?

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* 7. Did you work during term time (excluding placements above)

- ◯ Yes
- ◯ No

If Yes, was the experience you gained relevant to your current position?

8. If you worked during term time, how many hours on average did you work each week

* 9. Did you work during university holidays (excluding placement above)

- ◯ Yes
- ◯ No

If Yes, was the experience you gained relevant to your current position?

10. Please identify any sports/outside interests pursued during your university years, indicating the average hours per week spent on each during term time

* 11. Did you progress directly from university to your CA training

- ◯ Yes
- ◯ No

If No, what were your reasons for not progressing directly and how long was the gap between leaving university and commencing your CA training?

Questionnaire Part 1

3. School Information

* 1. What type of school did you attend

- ◯ Fee Paying
- ◯ Non Fee Paying

Other (please specify)

2. What final grades did you achieve at the following subjects

	GCSE	AS Level	A Level	Standard Grade	Intermediate 1	Intermediate 2	Higher	Advanced Higher	Other - Please specify in comments box below
Art and Design									
Accounting or Accounting and Finance									
Biology									
Business, Business Studies or Business Management									
Chemistry									
Computing									
Drama									
Economics									
English									
French									
General Studies									
Geography									
German									
History									
Latin									
Mathematics									
Media Studies									
Modern Studies									
Music									
Physical Education									
Physics									

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	GCSE	AS Level	A Level	Standard Grade	Intermediate 1	Intermediate 2	Higher	Advanced Higher	Other - Please specify in comments box below
Science									
Spanish									
Statistics									

Please give details of any other qualifications not included in the above. Please also give details of qualifications included in the 'other' column.

3. Please specify subjects, if any, which were retaken in order to improve the original grade

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Questionnaire Part 1

4. ICAS Examinations

* 1. On a scale of 1-7, with 1 being no influence and 7 being high influence, how did the following factors influence your decision to undertake a CA training contract

	1 - No Influence	2	3	4	5	6	7 - High Influence
Financial incentives	○	○	○	○	○	○	○
Good for career development	○	○	○	○	○	○	○
Not sure what else to do	○	○	○	○	○	○	○
The accountancy profession is highly regarded	○	○	○	○	○	○	○
Enjoyment of accountancy in previous study	○	○	○	○	○	○	○
Opportunity to gain CA qualification	○	○	○	○	○	○	○
Having friends or family who were chartered accountants	○	○	○	○	○	○	○

Please give details of any other reasons you chose to undertake a CA training contract

* 2. On a scale of 1 - 7, with 1 being unimportant and 7 being very important, how important are the following to you

	1 - Unimportant	2	3	4	5	6	7 - Very Important
Passing ICAS examinations on the first attempt	○	○	○	○	○	○	○
Achieving high grades in ICAS examinations	○	○	○	○	○	○	○

* 3. On a scale of 1 - 7, with 1 being not confident and 7 being very confident, how confident are you of the following

	1 - Not Confident	2	3	4	5	6	7 - Very Confident
Passsing ICAS examinations on the first attempt	○	○	○	○	○	○	○
Achieving high grades in ICAS examinations	○	○	○	○	○	○	○

* 4. On a scale of 1-7, with 1 being no influence and 7 being high influence, how much influence do you believe the level of effort exerted in studying for the ICAS examinations will have on the following

	1 - No Influence	2	3	4	5	6	7 - High Influence
Passing ICAS examinations on the first attempt	○	○	○	○	○	○	○
Achieving high grades in the ICAS examinations	○	○	○	○	○	○	○

* 5. On a scale of 1 to 7, with 1 being low effort and 7 being great effort, how much effort will you exert into studying for your ICAS examinations

- ○ 1 - Low Effort
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7 - Great Effort

* 6. On a scale of 0 - 100 (0 = no motivation, 100 = extremely motivated) how motivated are you to pass your ICAS examinations on the first attempt

* 7. On a scale of 0 - 100 (0 = no motivation, 100 = extremely motivated) how motivated are you to achieve high grades in your ICAS examinations

* 8. On a scale of 1-7, with 1 being unimportant and 7 being very important, how important are the following to you

	1 - Unimportant	2	3	4	5	6	7- Very Important
Financial Incentives (such as a bonus)	○	○	○	○	○	○	○
Job Security	○	○	○	○	○	○	○
Career Development	○	○	○	○	○	○	○
Personal Satisfaction	○	○	○	○	○	○	○
Your Employers Opinion of You	○	○	○	○	○	○	○
Your Fellow Trainees Opinion of You	○	○	○	○	○	○	○
Your Family or Friends Opinion of You	○	○	○	○	○	○	○

* 9. On a scale of 1 - 7, with 1 being no influence and 7 being high influence, what influence do you think passing the CA examinations on the first attempt will have on the following

	1 - No Influence	2	3	4	5	6	7- High Influence
Financial Incentives (such as a bonus)	◯	◯	◯	◯	◯	◯	◯
Job Security	◯	◯	◯	◯	◯	◯	◯
Career Development	◯	◯	◯	◯	◯	◯	◯
Personal Satisfaction	◯	◯	◯	◯	◯	◯	◯
Your Employers Opinion of You	◯	◯	◯	◯	◯	◯	◯
Your Fellow Trainees Opinion of You	◯	◯	◯	◯	◯	◯	◯
Your Family or Friends Opinion of You	◯	◯	◯	◯	◯	◯	◯

Please give details of any other impacts of passing (or not passing) the ICAS examinations on the first attempt which are important to you

* 10. On a scale of 1 - 7, with 1 being no influence and 7 being high influence, what influence do you think receiving high grades in the CA examinations will have on the following

	1 - No Influence	2	3	4	5	6	7- High Influence
Financial Incentives (such as a bonus)	◯	◯	◯	◯	◯	◯	◯
Job Security	◯	◯	◯	◯	◯	◯	◯
Career Development	◯	◯	◯	◯	◯	◯	◯
Personal Satisfaction	◯	◯	◯	◯	◯	◯	◯
Your Employers Opinion of You	◯	◯	◯	◯	◯	◯	◯
Your Fellow Trainees Opinion of You	◯	◯	◯	◯	◯	◯	◯
Your Family or Friends Opinion of You	◯	◯	◯	◯	◯	◯	◯

Please give details of any other impacts of receiving (or not receiving) high grades in the CA examinations which are important to you

* 11. Do you intend to stay with your training firm on completion of your CA qualification?

- ◯ Yes
- ◯ No
- ◯ Unsure

* 12. Please provide a personal contact email address. This will be used to contact you with follow up surveys after completing your TPS and TPE examinations. Your email will not be passed on to anyone or used for any other purposes apart from this study. You will not receive any further emails other than the follow up surveys.

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Questionnaire Part 2

1. Background Information

* 1. What is your date of birth?

Date of Birth DD / MM / YYYY

* 2. What was the title of your first degree (for example BA Accounting and Finance)

* 3. Did you complete an accredited accounting degree?

- ◯ Yes - Completed a partially accredited degree (Degree gave exemption to some of the ICAS TC examinations)
- ◯ Yes - Completed a fully accredited degree (Degree gave exeption to all of the ICAS TC examinations)
- ◯ No - Degree provided no exemptions to TC examinations

If your degree was partly accredited, which subject(s) did it gain exemption from?

* 4. Are you still employed by your original CA training provider?

- ◯ Yes
- ◯ No

Questionnaire Part 2

2. Continued

* 1. What were your reasons for leaving your training provider? (Please select all those which apply)

- [ ] Employer enforced due to failing ICAS examinations
- [ ] Did not enjoy the work
- [ ] Wanted a change of career
- [ ] Could not achieve the required work-life balance
- [ ] Poor working relationship with colleagues
- [ ] Other (please provide details below)

Please provide other reasons for leaving your training provider

2. If you did not pass your ICAS examination(s), is there anything that you believe could have helped you pass your ICAS examinations?

* 3. Before leaving your original training provider, which of the following examinations did you sit?

	Did not sit	Passed on 1st Attempt	Passed on 2nd Attempt	Passed on 3rd Attempt	Passed on 4th Attempt	Have sat examination on at least one attempt but have not passed examination or are still waiting on results
TC: Financial Accounting	○	○	○	○	○	○
TC: Principles of Auditing and Reporting	○	○	○	○	○	○
TC: Finance	○	○	○	○	○	○
TC: Business Management	○	○	○	○	○	○
TC: Business Law	○	○	○	○	○	○
TPS: Advanced Finance	○	○	○	○	○	○
TPS: Assurance and Business Systems	○	○	○	○	○	○
TPS: Financial Reporting	○	○	○	○	○	○
TPS: Tax	○	○	○	○	○	○

If you have sat but not passed an examination(s) or are still waiting on your results, please give details of the number of attempts you have had for each.

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* 4. To date, have you sat any TPS examinations? (I appreciate that this is covered in the previous question but this question acts as a filter for the rest of the survey) ◯ Yes ◯ No	

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Questionnaire Part 2

3. Examination Information

* 1. To date, which of the following examinations have you sat?

	Have not Sat	Passed on 1st Attempt	Passed on 2nd Attempt	Passed on 3rd Attempt	Passed on 4th Attempt	Have sat examination on at least one attempt but have not passed examination or are still waiting on results
TC: Financial Accounting	◯	◯	◯	◯	◯	◯
TC: Principles of Auditing and Reporting	◯	◯	◯	◯	◯	◯
TC: Finance	◯	◯	◯	◯	◯	◯
TC: Business Management	◯	◯	◯	◯	◯	◯
TC: Business Law	◯	◯	◯	◯	◯	◯
TPS: Advanced Finance	◯	◯	◯	◯	◯	◯
TPS: Assurance and Business Systems	◯	◯	◯	◯	◯	◯
TPS: Financial Reporting	◯	◯	◯	◯	◯	◯
TPS: Tax	◯	◯	◯	◯	◯	◯

If you have sat but not passed an examination(s) or are still waiting on your results, please give details of the number of attempts you have had for each.

* 2. To date, have you sat any TPS examinations? (I appreciate that this is covered in the previous question but this question acts as a filter for the rest of the survey)

◯ Yes

◯ No

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Questionnaire Part 2

4. Examination Details

* 1. What percentage mark did you achieve on your first attempt of the following TPS examinations? (If you have not yet sat an examination or are still waiting on results, please enter a x)

Advanced Finance	
Assurance and Business Systems	
Financial Reporting	
Tax	

* 2. On a scale of 1 to 7, with 1 being low effort and 7 being great effort, how much effort did you exert in studying for your TPS examinations?

- ◯ 1 - Low Effort
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7 - Great Effort

* 3. On a scale of 1 to 7, with 1 being no negative impact and 7 being high negative impact, how much did the following impact the amount of effort you exerted in studying for your TPS examinations?

	1 - No Negative Impact	2	3	4	5	6	7 - High Negative Impact
Work Commitments	◯	◯	◯	◯	◯	◯	◯
Family Commitments	◯	◯	◯	◯	◯	◯	◯
Social and/or Sporting Commitments	◯	◯	◯	◯	◯	◯	◯

Please specify any other factors which negatively impacted on the effort you exerted into studying for your TPS examinations and the impact they had on a scale of 1-7 (as per rating above)

4. On average, how may hours a week did you work for your employer while undertaking and studying for your TPS courses?

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* 5. On a scale of 1 - 7, with 1 being no focus and 7 being high focus, how much focus did you place on the following when revising for your TPS examinations?

	1 - No Focus	2	3	4	5	6	7 - High Focus
Reading ICAS Notes	○	○	○	○	○	○	○
Making and Reading Own Notes	○	○	○	○	○	○	○
Question Practice	○	○	○	○	○	○	○
Further Reading (outside of ICAS provided materials)	○	○	○	○	○	○	○
Re-doing Mock Exams	○	○	○	○	○	○	○

Please specify any other techniques you used to study for your TPS examinations and the focus you placed on them on a scale of 1-7 (as per ratings above)

* 6. Which type of classes did you undertake for your TPS examinations?

- ○ Modular
- ○ Block
- ○ Intensive

7. With hindsight, is there anything you could have done to improve you TPS examination grade(s)?

Questionnaire Part 2

5. Skills Survey

* 1. The following non-technical skills and capabilities are identified by the International Federation of Accountants as skills which are required to be developed prior to qualifying as a professional accountant. On a scale of 1 - 7, with 1 being no development and 7 being full development, to what extent do you believe the following non-technical skills and capabilities were developed through your university education?

I appreciate there are quite a few of these to work through. However, these have all been identified as being important for accountants to develop and as such your time in responding to all of these is much appreciated and your answers are a very important part of this research.

	1 - No development	2	3	4	5	6	7 - Full Development
Locate, obtain, organise and understand information from human, print and electronic sources	○	○	○	○	○	○	○
Think logically and analytically	○	○	○	○	○	○	○
Capacity for inquiry	○	○	○	○	○	○	○
Capacity for research	○	○	○	○	○	○	○
Effectively reason	○	○	○	○	○	○	○
Perform critical analysis	○	○	○	○	○	○	○
Identify and solve unstructured problems which may be in an unfamiliar setting	○	○	○	○	○	○	○
Self-Manage	○	○	○	○	○	○	○
Use initiative	○	○	○	○	○	○	○
Influence others	○	○	○	○	○	○	○
Self-Learn	○	○	○	○	○	○	○
Select and assign priorities within restricted resources	○	○	○	○	○	○	○
Organise work to meet tight deadlines	○	○	○	○	○	○	○
Anticipate and adapt to change	○	○	○	○	○	○	○
Consider the implications of professional values, ethics and attitudes in decision making	○	○	○	○	○	○	○
Exercise professional scepticism	○	○	○	○	○	○	○
Work with others in a consultative process, to withstand and resolve conflict	○	○	○	○	○	○	○
Work in teams	○	○	○	○	○	○	○

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	1 - No development	2	3	4	5	6	7 - Full Development
Interact with culturally and intellectually diverse people	○	○	○	○	○	○	○
Negotiate acceptable solutions and agreements in professional situations	○	○	○	○	○	○	○
Work effectively in a cross-cultural setting	○	○	○	○	○	○	○
Present, discuss, report and defend views effectively though formal, informal, written and spoken communication	○	○	○	○	○	○	○
Listen and read effectively, including a sensitivity to cultural and language differences	○	○	○	○	○	○	○
Strategic Planning	○	○	○	○	○	○	○
Project Management	○	○	○	○	○	○	○
Management of people and resources	○	○	○	○	○	○	○
Decision Making	○	○	○	○	○	○	○
Organise and delegate tasks	○	○	○	○	○	○	○
Motivate and develop people	○	○	○	○	○	○	○
Leadership	○	○	○	○	○	○	○
Exercise professional judgement and discernment	○	○	○	○	○	○	○

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Appendix B: Interview Documentation

Interview Schedule

(Key questions shown in bold with follow up questions/prompts noted below if not covered within key question)

Who are the main drivers of you syllabus?

- Why do you want to satisfy identified drivers? (Why are employers, prof bodies (accreditation) etc important)

- Accreditation
    - What pressures do you feel to maximise exemptions?
        - Review accreditation's (details from university website taken to interview), Any prioritised?
    - Do you feel pressure for your students to perform well in professional exams post university? If so why?
        - Do you do anything beyond the accreditation requirements to try to improve your students' performance in professional examinations?

Which non-technical skills do you develop on your accountancy degree?

- Why do you develop these?
- How do you develop these?

- Do you receive any feedback from employers?
    - Do you develop any skills (technical or non-technical) specifically with a view to satisfying employers? Why?
- What specific skills (technical or non-technical) do you feel potential students are looking for an accountancy degree to develop?
    - Do you specifically try and develop these skills with a view to satisfying potential students? Why?
    - What do you do to try and attract students?
- How does the QAA requirements influence your syllabus in terms of skill development?

Which non-technical skills you would like to develop better?

- Why/Who are you failing to satisfy?
- Why is this the case?

Can you identify any drivers of change in non-technical skill development on your accountancy degree in the last decade?

What challenges do you face in terms of non-technical skill development?

- Do your accreditation requirements have any impact on your development of non-technical skills? (positive and negative)
    - Would you consider reducing number of exemptions/accreditation?
- How has massification of the university sector impacted on the development of non-technical skills in accounting degrees?
    - Impact on assessment?
- How do you think changes in government funding is impacting undergraduate accounting education?
- Have you faced any teaching challenges as a result of international students?
    - Have international student numbers increased over the last decade?
    - Has this impacted on non-technical skill development?

How do university league tables influence your department?

- Do these have any influence on non-technical skills developed?
- Have you made any changes with a view to improving league position?
- Why are league tables important/not important to you?
- Do you think TEF will impact on your accounting undergraduate course going forward?

What influence has government initiative to increase the number of students from lower social/economic backgrounds had on your department?

- Are you aware of an increase in these students?
- Do you do anything to specifically support these students?
- Do you expect any changes going forward?
- Do you offer a 2+2 degree route?
    - If yes, what impact has this had on the accounting course?
    - How do these students perform relative to continuing students?

What are the key attributes you are looking for when recruiting for your department?

- What is your mix of staff from a professional background vs. staff from a research background?
- How has this mix changed in the last decade?
    - Has this change been for the better or worse?
- How do you think it will change going forward?
    - Do you think the new teaching excellence framework will have any impact on this?
- How does this research/teaching focus impact on the skills developed?

Do you feel research or teaching is prioritised at your university?

- What is the reason for this?

Discussion of Questionnaire Results

Background to data collection explained to interviewee. A copy of Table 7 and Table 8 was shared with interviewees with significant differences clearly highlighted.

Why do you think Big 4 firms do not favour accounting graduates?

Thoughts on overall differences?

Why do you think accounting graduates rated their development of intellectual skills significantly lower than other graduates?

- Problem for a number of decades - do you think there has been progress?
- Can these be taught?
    - If yes, what is the best way – integrates/own course?
- How do you try and teach intellectual skills?

Learn to learn – criticised by literature, results ranked no 1 for accountings graduates with same mean as non-accounting graduates.

- Have you specifically done anything to improve this?
- How do you teach this?
- Would you like to do more?

Team working was highly rated by accounting students. Do you specifically try and develop this skill? What has motivated you to develop this skill? (If yes)

Organisation and Business Management Skills were more highly rated by accounting students compared to non-accounting students. Do you specifically try and develop this skill? What has motivated you to develop this skill? (If yes)

What do you think is the purpose of a university accounting education?

Part 2: Information for Participants and Consent Form Completed by all Participants

NON-TECHNICAL SKILLS IN UNDERGRADUATE ACCOUNTING EDUCATION

INFORMATION SHEET FOR INTERVIEWEES

I am a lecturer at the Robert Gordon University and am undertaking a research project looking at skill development on undergraduate accounting courses. I have collected some initial data which compares the perceptions of accounting and non-accounting graduates on their skills developed at university. This has yielded some interesting results which I am keen to follow up with interviews to gain the opinions of those with overview of accounting undergraduate courses. The interviews will investigate some of the issues that arose in the prior data collection, as well as issues that have been mentioned in the literature in this area. Thank you for agreeing to participate in this interview.

The face-to-face interview should take about 60 minutes and will be loosely structured and informal. For the first few minutes of the interview we will discuss the project and you will have the opportunity to ask questions regarding the procedures and purposes of the interview. The interview involves an open-questioning technique where the precise nature of the questions to be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the Ethics Committee of the Robert Gordon University is aware and has approved the project, the Committees have not been able to review the precise questions to be used. Therefore, if the line of questioning develops in such a way that you feel hesitant or uncomfortable, you may decline to answer any particular question(s) and you may withdraw from the interview without any disadvantage to yourself of any kind.

I would like to record and transcribe our conversation. This will enable me to have a much more accurate record of what you say in the interview than I would have if I relied on written notes and memory alone. These recordings will be confidential to the researcher and will be kept in a locked drawer in my office. The tape will be transcribed verbatim by a professional transcriber, who will also sign an agreement specifying that all information in the transcript will be kept confidential, and the recordings and transcripts will be kept secure. Your transcript will only be identified by a code such as TU1 (1st Traditional University to be Interviewed). A record of names will only be kept until the data collection process is complete and will then be destroyed. After that time, your transcript will be anonymous as well as confidential.

Supplying information and participation in the project is at your discretion, and you may withdraw from the process at any time without any disadvantage to yourself of any kind. If you terminate the research process before its conclusion, or are unable to continue, I will destroy the recording and transcript, if you so request.

Results of the questionnaire and the interviews may be published but any data included will in no way be linked to any specific participant. Some quotations from the interviews may be used, but again only a general attribution would be used such as “One head of department said that…”.

Data, audio and transcripts will be securely kept until 5 years after publication of the results, when it will be destroyed. You are most welcome to request a copy of the results of the research should you wish.

No remuneration can be offered for your participation in this project. I greatly appreciate your generosity in sharing your experiences with me.

If you have any questions about this project, either now or in the future, please feel free to phone me at 01224 263808 (direct) or email me at s.douglas1@rgu.ac.uk

Shonagh Douglas
Robert Gordon University
Aberdeen
Scotland

NON-TECHNICAL SKILLS IN UNDERGRADUATE ACCOUNTING EDUCATION

CONSENT FORM FOR PARTICIPANTS

I have read and understood the Information Sheet concerning this project. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. My participation in the project is entirely voluntary;

2. The interview will be audio-recorded and will be identified by a code;

3. Records of names of interviewees will be deleted when data collection is complete;

4. The data, audio and transcripts will be retained in secure storage for five years after publication from this work, after which time they will be destroyed;

5. The precise nature of the questions to be asked in the interview has not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the Ethics Committee of the Robert Gordon University are aware of the project, the Committee has not been able to review the precise questions to be used;

6. If the line of questioning develops in such a way that I feel hesitant or uncomfortable, I may decline to answer any particular question(s) and I may withdraw from the interview, without any disadvantage to myself of any kind;

7. I may withdraw from the entire research process at any time without any disadvantage to myself of any kind. If I terminate the research process before its conclusion, or am unable to continue, then the recording and transcript, will be destroyed if I so request;

8. No remuneration is offered for my participation in this project;

9. The results of the project may be published but my anonymity will be preserved.

10. I will be supplied with a summary of the research findings upon request

I agree to take part in this project.

…….. ……

(Signature of participant) (Date)