

## **A Content Analysis of Accounting Job Advertisements: Skill Requirements for Graduates**

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## **ABSTRACT**

*The purpose of this study is to investigate the emphasis placed on technical and soft skills by prospective employers for accounting positions and graduate accounting positions in particular. The data was gathered from job advertisements placed in the careers section of a major newspaper in Queensland Australia over a four year period from 2006 to 2009. The results are benchmarked against the criteria for accounting degree curricula used by academic and professional bodies to guide and evaluate accounting education in Australia. The findings highlight that employers place greatest emphasis upon soft skills, and to a lesser extent technical skills; although current curricula meet these requirements, the emphasis on these soft skills by employers may need to receive further recognition in future curriculum design.*

**Keywords:** Accounting graduates; job advertisements; soft skills; technical skills; hierarchical cluster analysis.

**JEL Classification:** I20

**PsycINFO Classification:** 3550

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## Introduction

Accounting graduates face the challenge of addressing the selection criteria of prospective employers typically highlighted in job advertisements. The recruitment process can be a lengthy and arduous one and it is vital for graduates to get through the first stage if they are to have any chance of gaining employment. Thus success at this early stage requires that a candidate addresses the selection criteria. This has received limited attention in the literature, with concerns having been focused on the differences between employer expectations and actual accounting graduate skills (France, 2010; Jackling & De Lange, 2009; Wells, Gerbic, Kraneburg & Bygrave, 2009; Kavanagh & Drennan, 2008).

The attributes that accounting graduates possess are influenced by three key stakeholder groups: academics, accounting professional bodies and employers. Academics have an influence in the way in which attributes are presented and covered in the curricula, whilst the professional accounting bodies have a greater influence in determining precisely what is covered (Laing & Perrin, 2011). The contribution of employers is likely to be relatively small, particularly from organisations that are too small to participate in activities such as student sponsorship and collaborative curriculum development. This is reflected in the emphasis that has been placed on graduate attributes (Wilcoxson, Wynder & Laing, 2010); the requirement for soft skills (Low, Samkin & Liu, 2013; Andrews & Higson, 2008) and the employability of accounting graduates (Prokou, 2008; Lindberg, 2008).

This study therefore aims to address this gap by analysing a large sample of accounting job advertisements to determine the required applicant attributes and then compare these with the existing curricula produced by academia, and professional accounting bodies. A number of key accounting curricula are also analysed using text mining, to determine how their key themes differ from those required by prospective employers.

## Background

Whilst universities have traditionally sought to provide a higher education enshrined in knowledge advancement, the vocational nature of professional education has led to the inclusion of the notion of competencies. The International Federation of Accountants (IFAC) education committee sought to instigate the production of competent accounting graduates that would have “the ability to perform tasks and roles expected of a professional accountant, both newly qualified and experienced, to the standard expected by employers and the general public” (1998, 1). The framework identified three areas of competency, specifically, functional, personal and a broad business perspective. This has been further developed by the IFAC (2003) to encapsulate two competency based approaches to accounting education; a functional approach with emphasis on performance outcomes, and a process approach with emphasis on knowledge skills and professional values.

In Australia, the professional bodies have been actively involved in shaping accounting education through the accreditation process. The Certified Professional Accountants of Australia (CPA Australia) and the Chartered Accountants of Australia and New Zealand (CAANZ) have established standards for curricula and delivery. Accreditation is regularly reviewed and critically important to any university offering an accounting course. The primary focus is on requisite accounting knowledge, communication skills and technological competence (CPA Australia, 2016; Birkett, 1993). The ability to communicate and work with people are elements of what have become known as soft

skills and these are distinct from technical skills required to perform accounting tasks (Low, Samkin & Liu, 2013; Dixon, Belnap, Albrecht & Lee, 2010). The role of professional bodies in vocational training has a legitimate role in the higher education sector, such as a university, has a long standing tradition in many professions such as medicine, and law to name but a few. This view has been extended over the years to include teachers, dentists, veterinarians, accountants, managers, and more recently financial planners. The joint purpose of the professional bodies and the education sector is to provide graduates that are ready to enter the workforce.

The competitive nature of the work force and in more recent times the higher education sector, has placed a greater emphasis on graduate employability. In Europe for example, the issue of employability can be found as a central theme with in the Bologna Declaration (1999). While in the Australian context every university is subject to the Australian Qualifications Framework (AQF) which specifies the standards for educational qualifications in Australia. The Tertiary Education Quality and Standards Agency (TEQSA) has oversight to ensure standards are maintained through the Higher Education Standards Framework 2015. Graduate outcomes also receive non-government scrutiny in the form of the Australian Graduate Survey (AGS) which is the national census of newly qualified higher education graduates and has been conducted annually since 1972 by Graduate Careers Australia (GCA). The AGS is a survey of new graduates from all Australian universities and focuses on specific aspects such as:

- *"Graduate Destination Survey (GDS) collects information regarding graduates' employment and salary outcomes, continuing study and labour market status, job search behaviour, previous education history and other key respondent characteristics.*
- *Course Experience Questionnaire (CEQ) probes key elements of the higher education experience relevant to coursework graduates, focusing largely on their perceptions of course quality, their self-rated skill levels, and their overall satisfaction with their course."*

Source: Graduate Careers Australia (GCA)

<http://www.graduatecareers.com.au/research/surveys/australiangraduatesurvey/>

The specific requirements for accreditation by the professional bodies and the AQF reflect a presumption that both soft and technical skills are important to employers. employability.

### **CPA Australia and Chartered Accountants Australia and New Zealand**

Under Section 3 of the joint accreditation document the main focus is placed upon the following:

- **Intellectual skills** enable a professional accountant to solve problems, make decisions and exercise good judgment in complex organisational situations.
- **Technical and functional skills** consist of general skills as well as skills specific to accountancy.
- **Personal skills** relate to the attitudes and behaviour of professional accountants. Developing these skills helps individual learning and personal improvement.
- **Organisational and business management skills** have become increasingly important to professional accountants.
- **Interpersonal and communication skills** enable a professional accountant to work with others for the common good of the organisation, receive and transmit information, form reasoned judgments and make decisions effectively.

### **Australian Learning and Teaching Council (2010):**

The Learning and Teaching Academic Standards Project: Accounting Academic Standards Statement (PDF), page 10. Where in the following are espoused as virtues of accounting graduates at the Bachelor level:

- **Judgement:** Exercise judgement under supervision to solve routine accounting problems in straightforward contexts using social, ethical, economic, regulatory and global perspectives
- **Knowledge:** Integrate theoretical and technical accounting knowledge which includes a selection of auditing and assurance, finance, economics, quantitative methods, information systems, commercial law, corporation law and taxation law
- **Application skills:** Critically apply theoretical and technical accounting knowledge and skills to solve routine accounting problems
- **Communication and teamwork:** Justify and communicate accounting advice and ideas in straightforward collaborative contexts involving both accountants and non-accountants
- **Self-management:** Reflect on performance feedback to identify and action learning opportunities and self-improvements

### **Australian Qualifications Framework:**

Under the AQF 2<sup>nd</sup> edition 2013 reference is made to Generic Learning Outcomes (also known as Graduate Attributes) and four broad categories are identified as:

- **Fundamental skills**, such as literacy and numeracy appropriate to the level and qualification type
- **People skills**, such as working with others and communication skills
- **Thinking skills**, such as learning to learn, decision making and problem solving
- **Personal skills**, such as self direction and acting with integrity.

From the skill sets identified by the main bodies concerned with higher education in general, and accounting education in particular, the most identified soft skills have been categorised and defined (Ahmed, Capretz & Campbell, 2012, 45) in terms of:

- *"Communication skills – the ability to convey information so that it is well received and understood;*
- *Interpersonal skills – the ability to deal with other people through social communication and interactions under favourable and inauspicious conditions;*
- *Analytical and problem-solving skills – the ability to understand, articulate, and solve complex problems and make sensible decisions based on available information;*
- *Team player – someone who can work effectively in a team environment and contribute toward the desired goal."*

Despite the establishment of these criteria by national bodies, there may be a gap between these criteria and the perceptions of the accounting profession. In a survey of high school teachers and counsellors Wells and Fieger (2006) surveyed high school teachers and counsellors and focused more on the concept of accounting as a profession than the actual attributes required of graduates however they concluded that the requisite skills needed of accounting graduates had to be better identified and communicated to the high school level. Empirical studies have also sought responses

from various constituents to determine the skills and capabilities required of graduate accountants. For example Carr, Chua and Perera (2006) surveyed graduates with professional experience and reported that the areas of coverage favoured by the respondents was for financial accounting followed by management accounting then taxation. In regards to attributes they found that the application of accounting techniques, communication, problem solving, critical thinking, application of computer technology, and time management were the highest skills rated. Hassall, Joyce, Montano and Anes (2003) and Gammie, Gammie and Cargil (2002) surveyed recruiters and employers and found a consistent emphasis on vocational skills and in general computer technology, communication, time management and the least concern was for problem solving. Whilst some prior research has sought the opinions of recruiters and employers, this study addresses a gap by providing a longitudinal analysis of the criteria used by employers in their recruitment process.

It is common in Australia for Universities to have in place a review process to evaluate each of their degree programs. This approach involves establishing a review committee comprising academics, both from within the home university and external, a representative from the professional bodies, and from the local community. The committee conducts interviews of current students, graduates, academic staff and employers. This research is important because, despite the accreditation and review processes designed to ensure the efficacy of accounting degree programs, research has shown (Jackling & De Lange, 2009; Wells, Gerbic, Kranenburg & Bygrave, 2009) that a gap exists between the skills of accounting graduates and the expectations of employers.

## Method

The data for this study was derived from the employment section of the Saturday Courier Mail newspaper in Queensland Australia. This data was collected for accounting positions (job advertisements) over a four year period from 2006 to 2009. This resulted in a total of 1,594 accounting employment advertisements being included in the database. This sample, with its focus on employment opportunities in Queensland, provides a good mix of capital city and regional employers. The data was input into an access database and excel spreadsheet for the purpose of conducting analysis. This is not a study of the size of the job market for accountants but rather an investigation of the skills and competencies specified in advertisements aimed at accountants and in particular accounting graduates.

The approach used in this study involves a content analysis of the skills required in job advertisements pertaining to accounting positions. Content analysis is a technique more commonly employed in social science and can be traced back to studies undertaken by Waples, Berelson and Bradshaw (1940) (see Hopkins and King (2010) for a discussion on this being possibly the earliest use of the term content analysis). Basically, the technique involves coding and establishing categories for analysis. The requirements of the job being advertised were captured by identifying the specified details which were then coded zero or one according to their presence or absence in the job advertisement.

In the process of preparing and entering the data five key categories were identified, job category, sector, experience required, duties, and skills. The job category distinguished between the different types of accounting roles and provides a more detailed insight into the requirements in terms of the experience duties and skills. The sector is a further moderating variable in determining the relevance of the requirements. The specific list for the job categories is provided in Table 1.

**Table 1.**  
*Job Categories*

<b>Code</b>	<b>Category</b>	<b>2006-07</b>	<b>2008-09</b>
C1	Financial Controller / Financial Services Manager	81	117
C2	Financial Accountant	148	142
C3	Management Accountant	70	87
C4	Tax Accountant	27	58
C5	Auditor	5	23
C6	Financial Analyst	17	22
C7	Company Accountant	16	19
C8	Graduate Accountant	28	30
C9	Recruitment Practice	1	6
C10	Bookkeeper	101	265
C11	Assistant Accountant	35	50
C12	Forensic Accountant	4	6
C13	Project Accountant	3	10
C14	Senior Accountant	24	46
C15	Systems Accountant	4	5
C16	Internal auditor	21	23
	<b>Total</b>	<b>585</b>	<b>909</b>

The grouping was undertaken manually by examining a sample of the source data from which the concepts were drawn, to determine the likely meaning of the concept. The process started by identifying some key terms that were expected. When something came up that was unexpected another category would then be created. Although variation in source data was expected, if this was sufficiently high to make identification of the most appropriate group difficult then the concept was placed in the miscellaneous group.

The job advertisements were for accounting positions in a variety of sectors as identified in the Appendix. These advertisements also came from government departments, large multi nationals as well as individual accounting firms and general business organisations.

### **Analysis Stage 1 – All Accounting Positions**

The overall ranking of the most frequently occurring skills required within the employment data for the 2006 to 2007 period are presented in the Table 2. The most highly ranked skill was 'communication', which ranked as number 1 having occurred in 18.97% of all the advertisements. Ranked at number 2 was the skill to use the Microsoft spreadsheet 'Excel', and this was the most highly requested computer skill, occurring in 16.92% of all the advertisements. Ranked equal third are the skills 'proactive' and 'interpersonal'. Other skills which make up the top ten are 'analytical', 'MYOB', 'technical', 'leadership', 'teamwork', 'people management'.

**Table 2.**  
*Skills Required in Advertisements 2006 - 2007*

	<b>#</b>	<b>% of Skills</b>	<b>% of Adds</b>	<b>Rank</b>
Communication	111	12.89%	18.97%	1
Excel	99	11.50%	16.92%	2
Proactive	74	8.59%	12.65%	3
Interpersonal	74	8.59%	12.65%	3
Analytical	68	7.90%	11.62%	5
MYOB	64	7.43%	10.94%	6
Technical	61	7.08%	10.43%	7
Leadership	58	6.74%	9.91%	8
Team work	50	5.81%	8.55%	9
People management	45	5.23%	7.69%	10
Strategic thinker	27	3.14%	4.62%	11
Time management	22	2.56%	3.76%	12
BAS/GST	22	2.56%	3.76%	12
Problem solving	21	2.44%	3.59%	14
Quickbooks	20	2.32%	3.42%	15
Bookkeeping	17	1.97%	2.91%	16
Bank reconciliation	12	1.39%	2.05%	17
SAP	8	0.93%	1.37%	18
Software Other	7	0.81%	1.20%	19
Solution 6 software	1	0.12%	0.17%	20

The overall ranking of the most frequently occurring skills required within the employment data for the 2008 to 2009 period are presented in the Table 3. The most highly ranked skill was again 'communication', which ranked as number 1 having occurred in 31.08% of all the advertisements. Ranked at number 2 was the skill to do with the use of the computerised accounting package 'MYOB', occurring in 16.68% of all the advertisements, then in third place this time was the Microsoft spreadsheet 'Excel', occurring in 13.60% of all the advertisements. Other skills which make up the top ten are 'software other', 'Bank reconciliation', 'team work', 'proactive', 'BAS/GST', 'interpersonal', and 'leadership'.

**Table 3.**  
*Skills Required in Advertisements 2008 - 2009*

	<b>#</b>	<b>% of Skills</b>	<b>% of Adds</b>	<b>Rank</b>
Communication	313	20.23%	31.08%	1
MYOB	168	10.86%	16.68%	2
Excel	137	8.86%	13.60%	3
Software Other	126	8.14%	12.51%	4
Bank reconciliation	88	5.69%	8.74%	5
Team work	85	5.49%	8.44%	6
Proactive	83	5.37%	8.24%	7
BAS/GST	74	4.78%	7.35%	8
Interpersonal	72	4.65%	7.15%	9
Leadership	66	4.27%	6.55%	10
People management	62	4.01%	6.16%	11
Analytical	55	3.56%	5.45%	12
Quickbooks	43	2.78%	4.27%	13
Problem solving	34	2.20%	3.38%	14
Time management	33	2.13%	3.28%	15
Bookkeeping	31	2.00%	3.08%	16
Strategic thinker	30	1.94%	2.98%	17
Technical	25	1.62%	2.48%	18
SAP	18	1.16%	1.79%	19
Solution 6 software	4	0.26%	0.40%	20

In the next stage of analysis the skill requirements are contrasted against skill sets emanating from the AQF, ALTC and the CPA/CAANZ lists.

**Table 4.**  
*Comparison of Skills Required against Espoused Skills 2006 - 2007*

	<b>Rank</b>	<b>AQF</b>	<b>ALTC</b>	<b>CPA/CAANZ</b>
Communication	1	People	Communication	Communication
Excel	2	Fundamental	Knowledge	Technical
Proactive	3	Personal	Self-management	Personal
Interpersonal	3	People	Communication	Interpersonal
Analytical	5	Thinking	Judgement	Intellectual
MYOB	6	Fundamental	Knowledge	Technical
Technical	7	Fundamental	Knowledge	Technical
Leadership	8	People	Teamwork	Organisational
Team work	9	People	Teamwork	Organisational
People management	10	People	Teamwork	Organisational
Strategic thinker	11	Thinking	Knowledge	Organisational
Time management	12	Fundamental	Self-management	Personal
BAS/GST	12	Fundamental	Application	Technical
Problem solving	14	Thinking	Judgement	Technical
Quickbooks	15	Fundamental	Knowledge	Technical
Bookkeeping	16	Fundamental	Application	Technical
Bank reconciliation	17	Fundamental	Application	Technical
SAP	18	Fundamental	Application	Technical
Software Other	19	Fundamental	Application	Technical
Solution 6 software	20	Fundamental	Application	Technical

**Table 5.**  
*Comparison of Skills Required against Espoused Skills 2008 – 2009*

	<b>Rank</b>	<b>AQF</b>	<b>ALTC</b>	<b>CPA/CAANZ</b>
Communication	1	People	Communication	Communication
MYOB	2	Fundamental	Knowledge	Technical
Excel	3	Fundamental	Knowledge	Technical
Software Other	4	Fundamental	Application	Technical
Bank reconciliation	5	Fundamental	Application	Technical
Team work	6	People	Teamwork	Organisational
Proactive	7	Personal	Self-management	Personal
BAS/GST	8	Fundamental	Application	Technical
Interpersonal	9	People	Communication	Interpersonal
Leadership	10	People	Teamwork	Organisational
People management	11	People	Teamwork	Organisational
Analytical	12	Thinking	Judgement	Intellectual
Quickbooks	13	Fundamental	Knowledge	Technical
Problem solving	14	Thinking	Judgement	Technical
Time management	15	Fundamental	Self-management	Personal
Bookkeeping	16	Fundamental	Application	Technical
Strategic thinker	17	Thinking	Knowledge	Organisational
Technical	18	Fundamental	Knowledge	Technical
SAP	19	Fundamental	Application	Technical
Solution 6 software	20	Fundamental	Application	Technical

For the most part, the required computer software skills were the commonly used software: 'Excel', 'MYOB', 'Quickbooks', and 'SAP'. It should be noted that at this point in time the 'cloud' had not been developed and subsequently online software such as 'Xero' had not been introduced.

**Table 6.**  
*Required Experience 2006 - 2009*

	<b>2006-07</b>	<b>2008-09</b>
No Experience Required	4 (0.68%)	15 (1.82%)
Graduate	32 (5.47%)	56 (6.81%)
Experience required	205	358
Graduate + experience	60	29
CPA Qualified	6	12
CA Qualified	8	11
CIMA	3	0
MBA	1	2
Qualified Accountant	191	101
Current Level Equivalent	41	2
Grad + 8 Years	5	0
5-10 Years	30	122
2-3 Years	29	114
<b>Total</b>	<b>615</b>	<b>822</b>

## Analysis Stage 2 – Graduate Positions Only

The focus of this part of the study is on the skills and competencies required for accounting graduates. In Table 1 the category graduate accountant (code C8) was identified in the job advertisements, and the skills specifically identified are reported in Table 7. A most notable exclusion is the skill S8 relating to MYOB. No apparent reason could be found for this especially since Excel and Quickbooks were both mentioned in the advertisements. One possible explanation may be the inclusion of general software skills identified as S20.

**Table 7.**

*Skills Required in Graduate Positions 2006 - 2009*

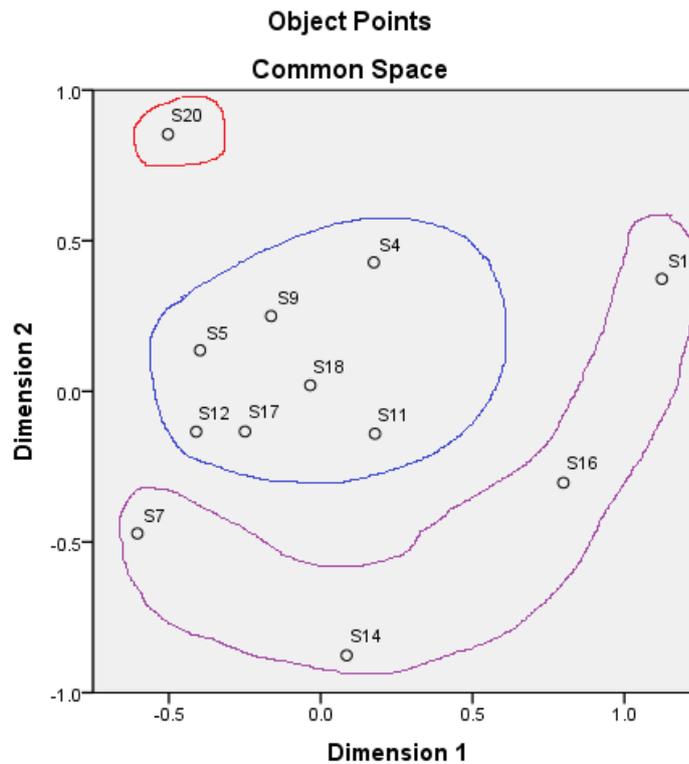
Code	Skill	2006 - 2007			2008 - 2009		
		Number	Percentage	Rank	Number	Percentage	Rank
S1	Communication	9	32.14%	1	11	37.93%	1
S4	Proactive	1	3.57%	4	3	10.34%	5
S5	Time management	1	3.57%	4	0	0.00%	
S7	Excel	4	14.29%	3	2	6.90%	6
S9	Quickbooks	1	3.57%	4	0	0.00%	
S11	GST / BAS	0	0.00%		3	10.34%	5
S12	Analytical	1	3.57%	4	1	3.45%	7
S14	Interpersonal	5	17.86%	2	5	17.24%	4
S16	Team work	5	17.86%	2	6	20.69%	3
S17	SAP	0	0.00%		1	3.45%	7
S18	Problem solving	0	0.00%		1	3.45%	7
S20	Software other	0	0.00%		9	31.03%	2

For the purposes of analysing this data two multivariate statistical techniques were used, specifically: ordinal multidimensional scaling (MDS) and Hierarchical cluster analysis (HCA). There were 57 graduate job advertisements (cases) and a possible 12 zero/one skills (variables) that were identified.

The implementation of the MDS technique requires establishing the measure of proximity between any two variables. Since this study deals with variables of zero/one the approach is to count the number of times they both occur as one simultaneously in a job advertisement. This method was advocated by Yin and Yasuda (2005) and is based on the principle that the number of times that two variables have the value one in an advertisement, the more similar (a measure of proximity) they are considered to be. Since 12 variables were identified for this particular part of the study the result is a table of 12 by 12 measures of proximity, and is then used for the SPSS PROXSCAL routine which is one of the MDS options.

The measure of proximity between any two points (variables) is derived from the co-ordinates of the points in accordance with Ward's measure of distance (Ward, 1963). This approach maximises the homogeneity within clusters, to the extent that cluster items are as similar as possible, and the heterogeneity between clusters such that the clusters are as different as possible. The projection of the variables on a two dimensional basis derived from the PROXSCAL routine is presented in Figure 1. In the next phase hierarchical cluster analysis (SPSS) was used to evaluate the distances between points. This method further assesses the results from the MDS and where two points are found to be closest to each other they are merged into a single point thus forming a cluster. The dendrogram produced by the hierarchical cluster analysis (Figure 2) shows the stage at which points merge. Branches that are shorter indicate the clusters are similar to each other conversely longer branches are deemed to be dissimilar.

**Figure 1.**  
*Multidimensional Scaling Configuration*



Cluster 1 – is a combination of (S1) communication, (S16) team work, (S14) interpersonal skills, and (S7) Excel skills.

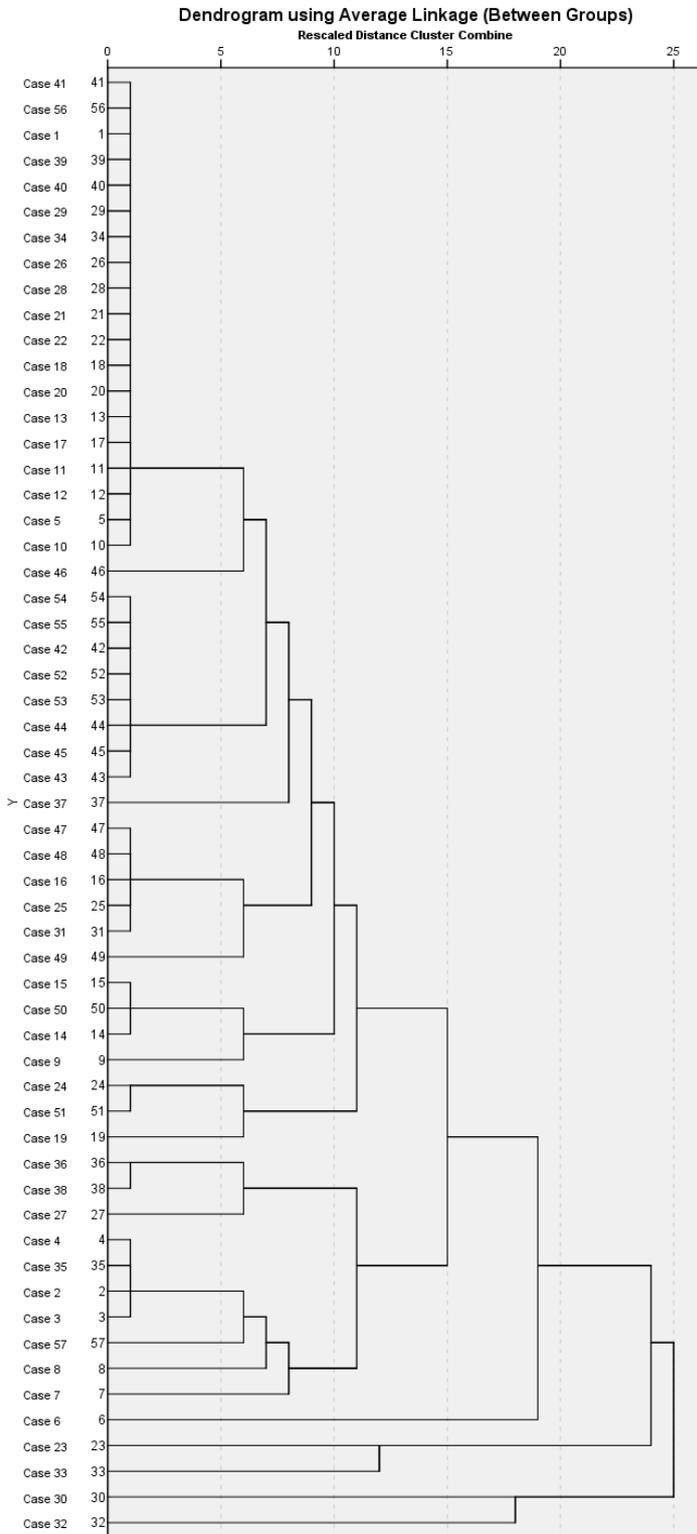
This cluster suggests that the four skills were considered to be an important skill set by various employers. In deed this cluster is strongly emphasising the soft skills espoused by the AQF; ALTC; and CPA/CAANZ, summarised in Tables 4 and 5. With the exception the requirement for Excel skills which are more closely aligned to technical skills.

Cluster 2 – is a combination of (S4) proactive, (S5) time management, and (S9) Quickbooks skills; (S11) GST/BAS; (S12) analytical; (S17) SAP; (S18) problem solving.

This cluster also includes soft skills, which further supports the importance being emphasised by employers through the job advertisements. However, this needs to be tempered with the inclusion of the technical skills associated with the accounting software Quickbooks and the practical knowledge required to complete the Business Activity Statements in regards to Goods and Services Tax.

Cluster 3 – stands alone with just one skill being required (S20) software other skills. Whilst it seems in congruent to refer to this as a cluster it must be acknowledged that it stands apart from the other clusters. To that extent it is pertinent to computer usage in general.

**Figure 2.**  
*Dendrogram using Ward's method*



## Discussion

Communication skill was the most frequently requested soft skill in the job advertisements, as indicated in Table 7. Closely followed by interpersonal and team skills, which is not surprising since effective communication is considered to be strongly correlated with the ability to establish good working relationships within a firm as well as with the clients.

The results indicate that employer's place a high emphasis on soft skills and that communication skills are favoured over the technical skills. Although computer knowledge and skills are sought after, these are present to a lesser extent. Analytical and problem solving skills appear to be marginally less prevalent. Theoretical skills were absent from the job advertisements over this period to the extent that it is either assumed graduates and applicants for other levels of accounting positions will have such knowledge or perhaps theoretical knowledge is not valued by employers.

The demand for experience related skills shows great variation across data sources, this is to be expected since experiential opportunities during education are limited, whilst theoretical foundations are crucial to ensure fundamental it may be assumed that understanding is achieved through the education process in which case transferable skills could be expected to be learned. One possible explanation for this anomaly might be that the accounting firms may well be adopting the view that experience is a better proxy for skill level.

## Conclusion

The study highlights that soft skills dominate technical skills as requirements by employers and although current curricula goes some way to meeting these requirements, this does suggest that future curriculum design may need to place greater emphasis on incorporating soft skills.

The assumption implicit in this study is that the content of the job advertisements is a valid representation of the skills and competencies required by employers. It is recognised that some advertisements are likely to be less accurate in their application than others with some variation in the length and detail provided. However, job advertisements are a widely used basis for analysis due to the information being publicly available and the large number providing a representative detail of the extent of knowledge, skills and competencies demanded by employers.

The study has a number of limitations. Firstly only job advertisements from one major capital city were used for analysis; however, the job advertisements in one major capital city can be considered as representative of the population especially where a large data set is available. Further, this approach includes large sized employers, who typically use their own corporate job advertisements. Secondly, the time period covered by this data set overlaps the global financial crisis, which occurred 2007 to 2008, and it may be beneficial for a future study to investigate any changes in skill requirements after 2009. Finally, employment advertisements are limited representations of the attributes or skills for the positions to which they relate, and may even only represent a small part of what is required to perform the actual jobs. However, they are the initial indicators of potential job applicants and to that extent they provide clear guidance of the required content of most positions and more importantly represent the first hurdle that must be cleared by graduates when seeking employment.

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## **APPENDIX**

### **Sector**

- SE1 Finance sector
- SE2 Mining
- SE3 Accounting practice
- SE4 Misc
- SE5 ASX listed coy
- SE6 Manufacturing
- SE7 Building
- SE8 Local Govt
- SE9 Recruitment Practice
- SE10 Govt - various
- SE11 Agribusiness

### **Skills**

- S1 Communication
- S2 People management
- S3 Strategic thinker
- S4 Proactive
- S5 Time management
- S6 Bank reconciliation
- S7 Excel
- S8 MYOB
- S9 Quickbooks
- S10 Bookkeeping
- S11 BAS
- S12 Analytical
- S13 Technical
- S14 Interpersonal
- S15 Leadership
- S16 Team work
- S17 SAP
- S18 Problem solving
- S19 Solution 6 software
- S20 Software Other