ID 240

Graduate Attributes and Skills: Are we as accounting academics delivering the goods?

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Acknowledgement
The author acknowledges CPA Australia's financial support for this research.

Abstract

In the last decade the development of appropriate skills and attributes in students set to enter the accounting profession has been the subject of many debates. Accounting academics have a leading role to play in this process. This study investigates what attributes and skills accounting academics perceive should be developed during an undergraduate course, and compares this to skills and attributes that they believe are being developed. Results reveal that there is a large discrepancy between the two. Reasons why this might be are discussed and insight into issues accounting educators must address if they are to deliver graduates with the skills and attributes required for a career in the accountancy profession now and in the future are highlighted.

Introduction

In the last decade, the development of skills and attributes in students set to enter the accounting profession has been the subject of many debates. This change is driven by several factors including the diversity of the student body (Biggs, 1999), technological and economic change and external pressures from sources such as employers, governments and professional bodies (Higher Education Council, 1992; Joseph and Joseph, 1997; AC Nielsen Research Services, 2000; CPA and ICA, 2005). Given this long history it is interesting that we are still talking about the importance of these skills, graduates' lack of them and how best to teach and promote them.

The call for accounting graduates to be equipped with a broader range of non-technical skills in addition to the necessary technical skills is not recent. A survey of employers' expectations of accounting graduates derived from classified job advertisements in the USA in 1993 (Johnson and Johnson, 1995) identified that after professional accounting qualifications (57%), accounting positions called for communication skills (15%), organisation skills (7%) and interpersonal skills (5%). Watty, Cahill and Cooper, 1998 in a study involving accounting academics found evidence of recognition by academics of the growing importance of developing skills in addition to those of a strictly technical. The Albrecht & Sack (2000) report was widely supported in the business education literature and recommended that accounting educators alter their curriculum to produce accounting graduates with a broader set of skills and attributes, encompassing more than purely technical accounting expertise (Braun, 2004; Leveson, 2000). Further Albrecht and Sack suggested that accounting curricula was driven by the interests of faculty and not by the demands of the marketplace, with the focus of teaching upon content and not the development of generic skills. The call for accounting academics to re-examine

seriously the mission of university accounting education and its interface with the needs of society and the accounting profession (not necessarily one and the same) was again enunciated by Reckers (2006). He also suggested that due to globalization, technological innovation, and other fast-paced changes, there is a need for a broader set of transferable skills and content knowledge than in the past (p.37).

It is argued in the education literature that the general confusion over the generic skill construct and over the identification of what are the important generic skills extends to academic teaching staff (Barrie, 2004; de la Harpe, Radloff & Wyber, 2000). In many cases academics will attempt to teach generic skills through assessment tasks but the skill is neither specifically taught no is the expectation of skill transference explicitly identified in the assessment task (Bath et al, 2004).

The challenge for accounting educators is to bring the coherent development of these generic skills into the curriculum design with a sequential focus comparable to that applied to the teaching of discipline technical skills. Barrie 2004 reports that there is often a division between the overall generic skills and attributes expected of graduates by the university and the generic skills expected by the discipline. Prior studies of the integration of professional skills into business courses have identified the importance of the meaningful integration of generic skills into the curriculum by matching particular skills to assessment tasks in appropriate subjects (Guthrie, McGowan & de la Harpe 2001; Hoddinott & Young, 2001). However, despite this Howieson 2003 suggests that practitioners have traditionally encourage an entrenched technical approach which provides them with graduates that can instantly e turned to profitable activities. He further suggests that both universities and practitioners must change their perspective away from the short-term and technical and more towards the

long-term and adaptability. This argument is supported by Elliott and Jacobson, 2002, p 79 who argue that academics have a role to play in the evolution of the accounting profession by defining 'a body of knowledge more suited to the realities of the marketplace, to the needs of the decision makers, and to the future prospects of both. Williams, 1994 p 208 suggests that it is time to acknowledge 'that the objective should be to prepare students to *become* professional accountants, not *be* professional accountants at the time of entry to the profession'. He summarises the change that must take place in accounting instruction when he states p. 208 'the curriculum should focus on the process of learning, not just teaching answers' and 'they should be taught to identify and solve unstructured problems, learn by doing, work in groups, and learn to use technology effectively, such as databases for researching issues'.

Reckers (2006) suggests that academics must listen to the needs expressed by the profession and evaluate those, keeping in mind the needs of society as a whole. With the advent of huge corporate failure such as HIH, Enron, etc. politicians, legislators, and regulators have all come to recognise the crucial role played by accountants and auditors in protecting our society. Consequently the formative education of accountants is now recognized as important.

This study is part of a larger research project designed to highlight those professional skills and attributes developed in accounting programs offered by tertiary institutions. In particular, this study examines the perceptions of accounting academics about the skills and attributes they consider important to the careers of their students and the emphasis being placed on developing these skills in the programs and courses they teach. The study also examines the relationship between academics and practitioners and highlights factors that are impacting on change in accounting education from the perspective of accounting academics.

Literature Review and development of Research Questions

Some argue that if accounting graduates require professional skills they need to develop them while studying at university and that educators of future professional accountants should be committed to developing the relevant attributes identified as desirable for the professional practice of accounting (Bedford, 1986; AECC, 1990). Donovan (2005, p. 446) suggested that 'the strongest message that I can bring before you is to plead for stronger and more effective co-operation between academics and educators on the one hand and accountancy practitioners on the other. I use the term 'accounting practitioners' in the widest possible way to indicate all of those outside academia who are working in the field whether this be public practice, industry, commerce or the public sector."

To this end the role of the profession is to specify and communicate the skills and knowledge needed to be an accomplished practitioner and the responsibility for curriculum development and appropriate teaching methods rest primarily with the academic community. Quite simply the professionals need the intellectual and research abilities which the academics can bring to the table. Equally, the educators need the guidance of the profession in identifying the skills need the guidance of the profession in identifying the skills and knowledge needed to be an accomplished practitioner. Bricker (1993) traces the role of research in business education suggests that by the 1980s practical research was frowned upon in many accounting faculties. Most of the research was highly mathematical, used sophisticated statistics, employed theories that were at times exotic and addressed issue of little concern to practitioners. In addition, most academic research is published in journals to which practitioners have little exposure.

Many writers have reinforced the view that oral and written communication skills are considered to be the two most important skills (Clark, 1990; Nelson et al, 1996; Deppe et al., 1991; Novin & Tucker, 1993). However, Mangum (1996) indicated that poor communication skills were among the top two greatest shortcomings of job candidates reported by employers. This was supported by Borzi and Mills 2001 who discovered a significant level of communication apprehension in upper level accounting students suggesting that changes to the manner in which this skill in particular is developed within the curriculum need to be addressed.

In a study involving accounting academics Watty et al (1998) found evidence of recognition by academics of the growing importance of developing skills in addition to those of a strictly technical nature. Other studies have argued that accounting and business students must develop more than technical skills to succeed (Aiken, Martin, & Paolillo, 1994; Deppe, Sonderegger, Stice, Clark & Streuling, 1991). Albrecht and Sack (2000), Herring and Williams (2000), Needles and Powers (1990) and Zeff (1989), all recommended abandoning a wholly procedural (technical) approach to financial accounting. Hunton (2002) argues that, since many traditional accounting tasks dealing with recording and processing of accounting transactions can be reliably automated, an accountant's worth is now reflected in higher-order critical-thinking skills. Elliott and Jacobson (2002) suggest that accountants need education in complementary bodies of knowledge such as organisational behaviour, issues in strategic management and measurement and analytical skills. Johnson & Johnson (1995) suggest that successful accountants in today's business environment must possess a different skill set including interpersonal and communication skills, intellectual and creative problem- solving skills.

This study addresses the following research questions:

RQ1: What professional skills and attributes do academics perceive as being important in terms of the future careers of their students?

RQ2: To what extent are these skills and attributes being delivered and developed in students during degree programs at your university?

RQ3: What factors are impacting on the ability of accounting academics to effectively prepare graduates for practice?

3. Methodology

*3.1 **Sample***

We conducted a study involving data collection from accounting academics in universities across Australia. Of the 300 hundred surveys which were mailed to randomly selected academics, 12 were returned as not deliverable. 92 usable surveys resulted – a response rate of 31.94%. As indicated in Table 1, the sample included academics of different ages ranging from 20-30 to 61-70, academic rank from associate lecturer to professor, years of experience from 1-3 years to over 15 years (with 42% of the sample having over 15 years experience as a full time academic) and a spread of primary teaching interests with the majority of respondents working in either audit, financial accounting or management accounting.

Insert Table 1 here

*3.2 **Data Collection***

Data collection involved administration of a survey which was adapted from Albrecht and Sack (2000) and amended to include those areas highlighted in pilot

focus groups conducted in Australian universities for the purpose of refining the survey. The survey consisted of 4 sections:

Section 1 asked academics to rate on a scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree) statements about aspects of business/accounting education and student populations at their university.

Section 2 requested information about the relationship between accounting/business education and practice and factors impacting on change in accounting/business education.

Section 3 was designed to collect demographic information from the academics relating to length of time as a full time academic, current academic rank, primary teaching interest, gender and age.

Section 4 required academics to rate 47 specific skills/attributes as listed in Table 2 on a scale ranging from 1 (no priority) to 5 (top priority) in relation to importance to the future careers of their students. They were also asked to rate the same 47 skills/attributes in terms of the extent to which they perceived each had been developed during degree programs being offered to students.

Insert Table 2 here

4. Results

4.1 Descriptive statistics

To provide background information for the discussion later in the paper, academics were asked to provide their perceptions about various aspects of business/accounting education in Australia and about the size and quality of student populations within schools. Mean scores for statements about business/accounting education are included in Table 3.

Insert Table 3 here

The results depicted in Table 3 provide insight into how academics feel about various aspects of the environment in which they teach ranked on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree). There was mild support for the impression that the various majors (finance, accounting, information systems, etc) are too isolated from each other (mean score 3.52). Academics did not agree that an accounting major is perceived by students as less challenging and rewarding than other fields of study (mean score 2.1) but there was some support (mean score 3.5) for the impression that an accounting career is not perceived by the community as having the growth opportunities that other disciplines have. In addition there was only mild support for the impression that accounting and business education in Australia is keeping up with what is actually occurring in the business environment (3.5).

When asked about perceptions about the size and quality of the student population undertaking studies in accounting or business education in Australian schools there was general agreement amongst academics as indicated in Table 4. Forty-seven percent of the academics surveyed felt that the number of students enrolling in accounting majors had increased or stayed the same 33%. Only 20% of those surveyed thought that numbers had decreased. In terms of the number of students enrolling in non-accounting business majors had increased 62% of the academics reported an increase, 29% thought numbers had stayed the same and only 9% thought that numbers had declined. It was a similar story with the number of students from other disciplines i.e. not studying commerce or business, who were enrolling in accounting courses – 36% of the academics suggested numbers had increased, 48% thought they had stayed the same, and only 16% thought they had decreased.

Insert Table 4 here

When asked about the quality of the students enrolling in accounting courses whether as accounting majors, non accounting business majors or from other fields of study, there was strong agreement (over 90% of academics) that the quality of student had decreased or stayed the same. This perception was most forceful in the case of the quality of students from other disciplines who were studying accounting where only 6% of the academics surveyed thought the quality had increased, 41% thought it had decreased while 53% thought it had stayed the same.

The results provide clear evidence that most academics perceive that the while the number of students enrolling in accounting courses is increasing, the quality of student enrolling is decreasing with implications for workloads and the extent to which necessary skills and attributes not mainstream to course content might be developed. These findings are mentioned again later in the paper when discussing research question 3.

4.2 ***Research Question 1***

Academics were asked to rate each of 47 skills and attributes in terms of how important they perceived them to be to the careers of their students on a scale of 1 being of no priority to 5 being of top priority. The absolute ratings for mean scores in Table 5, indicated that while accounting academics felt all skills listed in the survey (except self promotion 2.9, risk propensity 2.78, and foreign language 2.11) were of moderate or greater importance, analytical skills 4.37, critical thinking 4.34 and continuous learning (being up to date) 4.33, were rated most important to future careers. These were closely followed by in order of ranking written communication 4.3, problem solving 4.29, independent thought 4.27, logical argument 4.25, computer literacy 4.19, and oral communication 4.16. In addition academics felt that

professional attitude 4.09, decision making 4.08, knowledge about ethics 4.07, and being able to read for understanding 4.01 were important for the future careers of their students.

Insert Table 5 here

The same skills also figured prominently in responses to a question at the end of the survey which asked students 'to nominate or summarise the three most important qualities that they should possess for a successful career'. In this instance other skills mentioned and not included on the survey were sensitivity to social justice issues, ability to adapt to change and 'native intelligence'.

In order to add richness to the discussion and reduce the complexity of the findings further analysis of the data relating to the skills set was conducted. Using SPSS Version 14 factor extraction on the 47 variables was performed using principal components analysis with varimax rotation (Tabachnick and Fidell, 1996; Field, 2000). Ten factors or components emerged which collectively explained 67.52% l of the variance among the 47 items.

Insert Table 6 here

Table 6 displays the loadings for each item on the ten components. The commonalities for all items in each component are greater than .51 indicating that each contributed to the component analysis. Examination of the components was conducted by referring to the guidelines provided by Jones and Sin (2003) and based on the work of Birkett (1993). They defined five cognitive and behaviourial generic skills areas as being important to the accounting profession. Comparison with the skills defined in the five areas listed by Jones and Sin with those which loaded on the ten factors produced in this research resulted in definition of the ten factors which were labelled: Personal, Citizenship, Teamwork, Logic, Routine Accounting,

Strategic Management, Entrepreneurship, Cultural Sensitivity, Negotiation and Continuous Learning. These ten factors have been identified as representing the skills which academics perceived as being important to the careers of their students.

In answer to research question 1, from the academics' perspective and in line with Jones and Sin (2003) the skills nominated as most important to their career related to personal and interpersonal attributes, communication and appreciative skills underpinned by routine accounting skills. This finding is similar to other studies (Morgan, 1997; DeLange *et al.*, 2006). Of interest are the other skills relating to cultural sensitivity, entrepreneurship, and negotiation. These skills are probably a reflection of an increasingly global market and the push for better regulation in terms of the accounting profession itself, however individually those skills were not as highly rated in Table 5. It is acknowledged however that this could be due to labelling subjectivity. As with Watty, Cahill and Cooper, 1998 perhaps of greatest interest are the attributes given the lower ranking by respondents. The lowest ranked attribute that academics perceived to be necessary for a successful career was foreign language skills, preceded by risk propensity, and self promotion.

4.3 ***Research Question 2***

Research Question 2 was designed to gauge the perceptions of academics concerning the level of priority they perceived had been given to the development of the professional skills required. Academics were asked to rate each of 47 skills and attributes in terms of the level of priority (1 being of no priority to 5 being of top priority) given to the development of these skills during delivery of the program. A series of *t*-tests were carried out to assess whether the mean ratings for the level of importance to career and the level of priority given to each of these skills was significantly different. As can be seen in Table 5 results for all skills were

significantly negatively different. That is, academics across institutions in Australia felt that there was not enough emphasis placed on the skills they perceived as being necessary for their student careers in the programs that were delivered. The only three skills that academics felt had been delivered to expectation from their perspective were technical bookkeeping, advanced technical accounting and research skills.

With regard to the skills that academics rated as being highly important (the top 12), the priority given to all those skills during programs did not match expectations with significant differences on all 12 skills and attributes. Other skills where the emphasis delivered in programs fell way short of academics expectations in terms of the importance of these skills to student careers included flexibility, creativity, cross cultural communication and company promotion.

Once again, in order to add richness to the discussion and reduce the complexity of the findings further analysis of the data relating to the skills set was conducted. Factor extraction on the ratings of 47 variables delivered was performed using principal components analysis with varimax rotation (Tabachnick & Fidell, 1996; Field, 2000). Seven factors or components emerged which collectively explained 68.8% of the variance among the 47 items as described in Table 7.

Insert Table 7 here

Table 7 displays the loadings for each item on the seven components. The commonalities for all items in each component are greater than .5 (with one exception) indicating that each contributed to the component analysis. Comparison with the skills defined in the five areas listed by Jones and Sin (2003) with those which loaded on the seven factors produced in this research resulted in labelling of the seven factors as follows: Problem Solving, Personal and Strategic Management,

Routine Accounting, Citizenship, Cultural Sensitivity, Work Ethic Personal and Appreciative. These seven factors have been identified as representing the skills which academics believed had been delivered or emphasised as part of the degree program.

While there are similarities between the skills which academics perceived to be important to student careers and those skills which were emphasised during the degree programs in terms of the factor labels (routine accounting, personal, citizenship, cultural sensitivity and negotiation), the level of emphasis fell way short of academic expectations when t scores in Table 5 are examined.

In conclusion, in response to Research Question 2, academics did ***not*** perceive that an appropriate level of priority had been afforded to delivering the skills that they perceived as being important to the careers of their students.

*4.4 **Research Question 3***

Research question 3 was designed to investigate 'what factors are impacting on the ability of accounting academics to effectively prepare graduates for practice'. To examine this question respondents were asked to rank on a scale of 1 (no influence) to 5 (very strong influence) the influence of (a) the research work of academics on what takes place in practice in today's business environment and, (b) the influence of practitioners on the work of accounting/business educators in today's tertiary environment? Interestingly, the response to both questions was very little influence to some influence (mean scores of 2.5 and 2.9 respectively). Results contained in Table 8 would seem to indicate that academics link to practitioners and vice versa is tenuous with implications for providing graduates with well rounded set of skills and attributes as they enter the profession.

Insert Table 8 here

Respondents were then asked to nominate how well educators were preparing graduates to meet the needs and expectations of accounting practitioners in today's business environment. Of the 88 usable responses 6 thought that this was being 'very well' done, 50 thought that this was being 'well' done, and nly 5 respondents suggested that this was being done poorly. However 27 respondents or 31% of the sample were 'not sure'.

In order elaborate further on the responses above, respondents were asked to consider and rank on a scale of 1 (strongly disagree) to 5 (strongly agree) 12 factors which might impinge on the preparation of graduates for practice and the ability of academics to promote change in accounting education. Results are contained in Table 9.

Insert Table 9 here

These results would seem to indicate that accounting academics feel that factors which impinge on their ability to prepare graduates with the necessary skills and attributes for the profession include lack of time to make contact and involve practitioners in developing curriculum or delivering content sometimes resulting in failure to stay current with business developments and changes. Insufficient budgets to improve the interface between practice and education which led to lack of recognition by practitioners of the academic research underpinning course content. Inadequate rewards for teaching efforts afforded by universities resulted in academics concentrating on research and producing courses which emphasized memorization of facts and not enough emphasis on 'softer' skills. As was discussed previously, reference was also made to the fact that the quality of students entering accounting courses was declining and suggesting that many students did not posses the basic skills necessary to cope.

In response to Research question 3, it would appear that there are several factors impacting on the ability of accounting academics to prepare graduates for practice. Most notably, the quality of students entering courses, the interface between academics and practice and the recognition that each needs to afford to the other (Donovan, 2005), and the recognition and rewards given to academics in terms of teaching and research activities.

5. Limitations

Because our observations were limited to a relatively small sample we must be cautious in interpreting our findings and in suggesting their generalisability. As a means of data collection, questionnaire response rates may be affected by negative or apathetic attitudes towards questionnaires particularly in large organisations. While sampling was random, in an attempt to be representative, it is not claimed that these views are indicative of the views of all accounting academics.

It should also be noted that the present study was based on self-report measures. Self-report measures can be affected by leniency bias (Thornton 1968) but Heneman (1974) reports that self-report measures may be subject to less leniency and range restriction than other measures. The use of self-report data is justified on the basis that the focus of this study was to allow individuals to express their view of about a subject that was of importance to them all.

Given the aforementioned limitations there are some potential rival explanations to the findings that cannot be ruled out. The present findings cannot therefore be considered definitive. Future research could examine whether the findings in this study are generalisable to other educational settings within and outside Australia. In addition, the population for this study was drawn from accounting

academic staff. The study could be replicated to include staff from other academic areas of business courses to enable comparisons to be drawn.

6. Conclusion

This study has defined the professional skills and attributes viewed by accounting academics as being important to the future careers of their students. The results however suggest that there is a considerable gap between the professional skills and attributes that academics consider necessary for their students to be successful in their careers and those skills and attributes that they as academics are delivering in accounting programs or courses. Factors highlighted as affecting the ability of accounting academics to effectively prepare graduates for practice included lack of time to establish and maintain an active interface with practice affecting the recognition that accounting academics and practitioners need to afford to each other; inadequate rewards for teaching efforts afforded by universities resulting in academics concentrating on research and producing courses which emphasized memorization of facts and not enough emphasis on 'softer' skills; and the fact that the quality of students entering accounting courses was declining leading to a necessity to concentrate of basic and technical skills at the expense of the 'softer' skills. The findings would support claims made often by employers that accounting graduates are not well-equipped to take an immediate role within many employers' businesses and must be in some cases trained quite extensively before they become fully functional.

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Demographic Details						
	1 - 3 yrs	**3 - 6 yrs**	**7 -10 yrs**	**11-15 yrs**	**over 15 yrs**	
Length time full time academic	18	9	12	12	39	
	Audit	**Ethics**	**Fin Acct**	**Finance**	**Mangt Acct**	**Other**
Primary teaching interest	21	3	20	5	22	Info Sys 4 Res Meth 2 Tax 2 Fin Plan 2
	Ass Lect	**Lect B**	**Lect C**	**Ass Prof**	**Prof**	
Current academic rank	9	35	32	10	4	
Gender	**Female**	**Male**				
	36	54				
	20 - 30	**31 - 40**	**41 - 50**	**51 - 60**	**61 - 70**	
Age	5	14	40	27	4	

Table 1: Details of Accounting Academics included in sample

Accounting Software
Appreciation of cross cultural diversity
Business Decision Modeling
Change Management
Company Promotion
Computer Literacy (I can use)
Computer Technology (Systems)
Continuous Learning
Creativity
Critical Thinking
Cross Cultural Appreciation
Cross Cultural communication
Cultural Sensitivity
Customer Service Orientation
Decision Making
Entrepreneurship
Ethics
Flexibility
Foreign Language
Good Citizenship
Independent Thought
Interdisciplinarity
Interpersonal
Leadership
Listening
Logical Argument
Measurement (able to quantify)
Negotiation
Oral Communication
Problem Solving
Professional Attitude
Project Management
Reading for Understanding
Research
Resource Management
Risk Analysis
Risk Propensity
Self Motivation
Self Promotion
Social Justice
Strategic Management
Teamwork
Technical Bookkeeping
Tenacity
Values
Work Ethic
Written Communication

Table 2: List of attributes considered important for accounting graduates (Albrecht and Sack, 2000)

Perceptions about business/accounting education	
The various majors (i.e. finance, accounting, marketing, information systems) are too isolated from each other	* 3.52
An accounting major is perceived by students as less challenging and rewarding than other fields of study	* 2.1
An accounting career is not perceived by the community as having the growth opportunities that other disciplines have	* 3.5
Accounting and business education in Australia today is keeping up with what is actually occurring in the business environment	* 3.5
** 1= Strongly Disagree 3 = Neutral 5 = Strongly Agree*	

Table 3: Perceptions of accounting academics about business/accounting education in Australia

	Decreased	Stayed the same	Increased
Number of students enrolling as accounting majors	20%	33%	47%
Number of students enrolling as non-accounting business majors	9%	29%	62%
Number of students not studying business or accounting enrolling in accounting courses	16%	48%	36%
Quality of students enrolling as accounting majors	50%	42%	8%
Quality of students enrolling as non-accounting business majors	44%	48%	8%
Quality of students not studying commerce or business enrolling in accounting courses	41%	53%	6%

Table 4: Perceptions of accounting academics about size and quality of student populations in accounting courses

Attribute/Skill	Mean			Paired Samples Test		
	Required for career	Delivered in Degree	Diff	t	df	Sig (2-tailed)
Technical Bookkeeping	3.95	3.91	0.04	0.281	86	0.779
Advanced Technical	3.87	3.66	0.21	1.643	87	0.104
Research	3.31	3.12	0.19	1.552	88	0.124
Teamwork	3.91	3.53	0.38	3.485	87	0.001
Analytical	4.37	3.91	0.46	5.365	90	0.000
Critical thinking	4.34	3.67	0.67	6.418	90	0.000
Continuous Learning	4.33	3.65	0.68	5.172	90	0.000
Written Communication	4.3	3.83	0.47	5.463	86	0.000
Problem Solving	4.29	3.76	0.53	5.948	89	0.000
Independent Thought	4.27	3.5	0.77	8.195	89	0.000
Logical Argument	4.25	3.62	0.63	5.852	87	0.000
Computer Literacy	4.19	3.69	0.5	6.009	89	0.000
Oral Communication	4.16	3.5	0.66	6.976	89	0.000
Professional Attitude	4.09	3.21	0.88	8.443	89	0.000
Decision Making	4.08	3.58	0.5	5.914	89	0.000
Ethics	4.07	3.43	0.64	5.592	89	0.000
Reading for Understanding	4.01	3.56	0.45	4.188	87	0.000
Industry Standards	3.97	3.42	0.55	5.481	87	0.000
Work Ethic	3.96	3.15	0.81	8.185	87	0.000
Creativity	3.95	3.01	0.94	7.925	89	0.000
Self Motivation	3.94	3.08	0.86	7.838	86	0.000
Values	3.93	3.11	0.82	7.316	85	0.000
Flexibility	3.93	2.9	1.03	9.117	89	0.000
Interpersonal	3.81	3.08	0.73	6.980	89	0.000
Interdisciplinary	3.64	2.84	0.8	7.146	89	0.000
Tenacity	3.56	2.77	0.79	8.15	85	0.000
Leadership	3.53	2.7	0.83	7.043	89	0.000
Measurement	3.52	3.21	0.31	3.483	89	0.000
Listening	3.49	2.6	0.89	8.254	89	0.000
Cross Cultural Communication	3.49	2.55	0.94	5.861	90	0.000
Decision Modelling	3.42	2.89	0.53	5.461	89	0.000
Citizenship	3.42	2.58	0.84	7.415	90	0.000
Customer Orientation	3.41	2.6	0.81	6.276	89	0.000
Strategic Management	3.39	2.84	0.55	6.202	87	0.000
Computing Technology	3.37	2.79	0.58	5.578	89	0.000
Risk Analysis	3.34	2.61	0.73	7.896	87	0.000
Negotiation	3.34	2.5	0.84	8.796	89	0.000
Cultural Sensitivity	3.33	2.87	0.46	5.014	88	0.000
Social Justice	3.33	2.65	0.68	6.039	87	0.000
Accounting Software	3.31	2.92	0.39	3.861	88	0.000
Cross Cultural Appreciation	3.29	2.89	0.4	7.116	90	0.000
Project Management	3.17	2.46	0.71	5.883	84	0.000
Change Management	3.12	2.31	0.81	7.168	88	0.000
Resource Management	3.1	2.57	0.53	5.42	86	0.000
Company Promotion	3.03	2.13	0.9	7.964	86	0.000
Entrepreneurship	3.01	2.39	0.62	5.379	89	0.000
Self Promotion	2.9	2.22	0.68	7.485	86	0.000
Risk Propensity	2.78	2.16	0.62	6.813	85	0.000
Foreign Language	2.11	1.51	0.6	5.129	89	0.000

Table 5: Skills Considered Important to Career and extent to which delivered (1=No priority, 5=Top Priority)

	Component									
	1	2	3	4	5	6	7	8	9	10
Company Promotion	.792									
Work Ethic	.748									
Self Motivation	.723									
Self Promotion	.693									
Independent ProffStds	.545									
Research Management	.539									
Customer	.513									
Professional Attitude	.483									
Values		.843								
Social Justice		.733								
Citizenship		.725								
Ethics		.719								
Oral Communicaton			.767							
Interpersonal			.708							
Teamwork			.693							
Flexibility			.538							
Listening			.526							
Written Communication			.474							
Logical Argument				.843						
Reading for Understanding				.757						
Independent Thought				.680						
Technical Bookkeeping					.867					
Advanced Technical					.767					
Analytical					.658					
Accounting Software					.551					
Change Management						.757				
Decision Modelling						.756				
Strategic Management						.562				
Foreign Language							.780			
Entrepreneurship							.721			
Leadership							.509			
Risk Propensity							.419			
Cultural Sensitivity								.813		
Cross Cultural Comms								.658		
Cross Cultural Appreciation								.563		
Project Management									.751	
Negotiation									.570	
Tenacity									.518	
Continuous Learning										.639
Computer Technology										.612

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 12 iterations.

Table 6: ACADEMICS – factors for skills considered important to future careers of students

	Component						
	1	2	3	4	5	6	7
ProbSol	.817						
Analytical	.816						
WrittComms	.722						
Teamwork	.715						
CritThink	.714						
Logicargue	.697						
DecMaking	.678						
OralComms	.672						
IndThought	.627						
ReadUnderstand	.570						
DecModel	.562						
SelfProm		.831					
CoyProm		.814					
ResMan		.727					
RiskProp		.718					
Entrepren		.691					
StratMan		.636					
RiskAnal		.617					
Tenacity		.580					
ProjMan		.544					
Leadership		.538					
SocJust			.742				
Ethics			.711				
Citizen			.664				
Research			.651				
Values			.561				
AdvTech				.739			
ACCSoft				.727			
IndProffStds				.596			
TechBkeep				.584			
CompTech				.504			
CultSens					.750		
CCultComms					.635		
Interpersonal					.473		
WorkEthic						.744	
SelfMotiv						.674	
Measurement							.684
Negotiation							.619

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 12 iterations.

Table 7: ACADEMICS – factors for skills considered developed within degree

1. What influence does the research work of accounting/business educators have on what takes place in practice in today's business environment?	* 2.5				
What influence do practitioners currently have on the work of accounting/business educators in today's tertiary environment?	* 2.9				
	V Poorly	**Poorly**	**Well**	**V Well**	**Not Sure**
How well are accounting/business educators preparing graduates to meet the needs and expectations of accounting practitioners in today's business environment?	1	4	55	6	27
** 1=No Influence 3=Some Influence 5=Very Strong Infuence 6=Not sure*					

Table 8: Perceived Interface between Accounting Academics and Practice

Reasons	
1.Academics are too preoccupied with research to keep curriculum up to date	3.7
2.Academics are not afforded sufficient time to involve practitioners in *developing curriculum*	4.44
3.Course/subject time constraints do not permit sufficient involvement of practitioners *in delivery of content*	3.98
4.Academic research underpinning course content is not often recognised by practitioners	4.19
5.Teaching efforts are not adequately rewarded at universities	4.61
6.Universities have insufficient budgets to allow significant changes to improve the interface between practice and education	4.18
7.Academic staff have little time to establish business contacts outside the school, resulting in a failure to stay current with business developments and changes	4.14
8.Students enrolling in accounting classes today don't have the basic skills needed to learn at a fast enough pace	3.71
9.There is currently too much reliance on memorization of facts in accounting/business education	3.86
10.There is too much emphasis on technical skills and not enough emphasis on generic skills	3.26
11.There is too much emphasis on generic (softer) skills and not enough emphasis on technical skills	2.7
12.Enhancing the learning experience using technology and associated software packages is not being emphasised sufficiently in accounting/business education	3.42
1=Strongly Disagree 3 = Neutral 5 = Strongly Agree	

Table 9: Factors impacting on the ability of accounting academics to prepare graduates for practice