

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/46529203>

Professional Skills and Capabilities of Accounting Graduates: The New Zealand Expectation Gap?

Article in *Accounting Education* · December 2009

DOI: 10.1080/09639280902719390 · Source: RePEc

CITATIONS

113

READS

3,571

4 authors, including:



Paul K Wells

Auckland University of Technology

38 PUBLICATIONS 495 CITATIONS

SEE PROFILE



Ineke Kranenburg

Auckland University of Technology

3 PUBLICATIONS 134 CITATIONS

SEE PROFILE



Jenny Bygrave

Auckland University of Technology

3 PUBLICATIONS 143 CITATIONS

SEE PROFILE

Professional Skills and Capabilities of Accounting Graduates: The New Zealand Expectation Gap?

Authors: Paul Wells ^a; Philippa Gerbic ^a; Ineke Kranenburg ^a; Jenny Bygrave ^a

Affiliation: ^a Auckland University of Technology, New Zealand

DOI: 10.1080/09639280902719390

Publication Frequency: 5 issues per year

Published in:  [Accounting Education](#)

First Published on: 03 August 2009

Volume 18 No 4

Abstract

Much has been written about teaching and learning deficiencies in accounting education. Universities have grappled with the challenge and developed a number of strategies to address the concerns raised. Many of the recommended strategies for addressing these deficiencies have included a focus on the development of professional capabilities and skills. This paper reports on a study which has identified the capabilities which are considered to be the most important for successful practice in accountancy during the first years after graduation and identified the extent to which New Zealand universities have focused on these in the delivery of their study programmes. Most attempts to measure the nature and extent of change to accountancy degree programmes have collected data from current or graduating students or from the university itself. This study instead collected feedback from accountancy graduates employed in public practice with three to five years post graduation professional experience and from their workplace supervisors. This paper reports on the results of the graduate feedback, provides a useful insight into where progress has been made and identifies where further improvement is necessary.

Keywords: Professional capabilities; teaching and learning quality; accounting education reforms

Introduction

Much has been written about the teaching and learning deficiencies of accounting education (AAA, [1986](#); Accounting Education Change Commission, [1990](#); Albrecht & Sack, [2000](#); Arthur Andersen *et al.*, [1989](#)) in preparing students for accounting practice in the twentieth century. Howieson ([2003](#)) suggests that the new millennium will require even greater changes in accounting practice to meet the changing business environment and that this in turn will further influence the future directions of accounting education.

Suggested strategies for addressing the identified deficiencies have focused on broadening the curriculum and developing alternative delivery strategies. These suggestions have been endorsed by academia (Garner and Dombrowski, [1997](#)), and the professional bodies (IFAC, [1996](#)). A key focus of these suggestions is the development of intellectual, interpersonal and communication skills in the undergraduate accounting programme, the purpose being to 'enable the professional accountant to make successful use of the knowledge gained through education' (IFAC, [1996](#), p. 16). It was also noted that these skills are not usually acquired from specific courses but, rather, they are derived from the total effect of the educational programme and professional experience (IFAC, [1996](#)). Through the encouragement and financial support of the Accounting Education Change Commission (AECC), change to accounting pedagogy has occurred in many of the university accounting programmes in the USA (Sundem, [1999](#)).

Research undertaken by Adler and Milne ([1998](#)) questions the extent of pedagogical change in New Zealand. In response to these findings, this paper seeks to investigate the validity of these claims in New Zealand by surveying recent graduates with work experience in public practice. This study identifies the capabilities which are considered by employers in public practice to be the most important for successful practice in accountancy during the first years after graduation, and discovers the extent to which recent high performing graduates believe that New Zealand universities have focused on these capabilities in the delivery of their programmes.

Background

Prior research on graduate skills and capabilities has tended to focus on identifying the perceived generic skills and capabilities required of accountants in practice as perceived by

1. recruiters and employers (Gammie, Gammie, & Cargill, [2002](#); Hassall, Joyce, Montano, and Anes, [2003](#); Morgan, [1997](#); Schmutte, [1998](#); Warnock, [1997](#));
2. graduates (de Lange, Jackling, and Gut, [2006](#));
3. graduates with professional experience/practitioners (Carr, Chua, & Perera, [2006](#); Deppe, Sonderegger, Stice, Clark, & Streuling, [1991](#));
4. students (Hassall *et al.*, [2003](#); Oswick, Barber, & Speed, [1994](#); Reed & Kratchman, [1989](#); Schmutte, [1998](#); Usoff & Feldman, [1998](#));
5. high school teachers and counsellors (Berry, O'Bryan, & Swanson, [2001](#); Hardin, O'Bryan, & Quirin, [2000](#); Wells and Fieger, [2006](#)); and
6. academics (Kavanagh and Drennan, [2007](#); Morgan, [1997](#)).

Studies found that high school teachers and counsellors did not consider generic skills and capabilities important for accounting practice (Berry *et al.*, [2001](#); Hardin *et al.*, [2000](#); Wells and Fieger, [2006](#)). However, undergraduate students' perceptions of the required generic skills and capabilities of accountants developed as they progressed through their studies (Reed and Kratchman, [1989](#); Warnock, [1997](#)). Despite the development of these perceptions, it was found that a gap still existed between students and employers/recruiters regarding the perceived skill requirements of

accountants (Gammie *et al.*, [2002](#); Hassall *et al.*, [2003](#); Schmutte, [1998](#); Usoff and Feldman, [1998](#); Warnock, [1997](#)).

Universities commonly obtain feedback from current students, graduates or employers on the extent to which a programme prepares graduates for professional practice. However, the authors were only able to locate two such studies and these provided conflicting findings. In the first study (Donelan and Reed, [1992](#)) carried out in the USA, the researchers found that students believed that the accounting programmes provided the required emphasis on generic skill and capability development. In the second study (Gammie *et al.*, [2002](#)) carried out in the UK, the researchers found that a skill development gap existed between the expectations of employers and those of graduates.

The disadvantage of sourcing data from current students and graduates is that they do not have the benefit of professional practice to inform their views. Alternatively, employers often have many years of professional experience and, while they tend to have a clear understanding of the requirements of professional practice, a significant period of time has elapsed since their own tertiary study and their first years of professional practice.

In 2001 the University of Technology, Sydney (UTS) initiated a research programme which sought to address these issues. This programme is based on the assumption that those in the best position to assess the relevance and usefulness of tertiary study are graduates who have three to five years' professional practice after graduation. As a consequence, Scott, Yates and Wilson ([2001](#)) sought to *backward map* (Elmore, [1979](#)) from such a group in order to identify how the undergraduate curriculum and the corresponding assessment strategies might be improved. Backward mapping involves identifying an intended outcome and then the steps necessary to achieve this outcome (Elmore, [1979](#)).

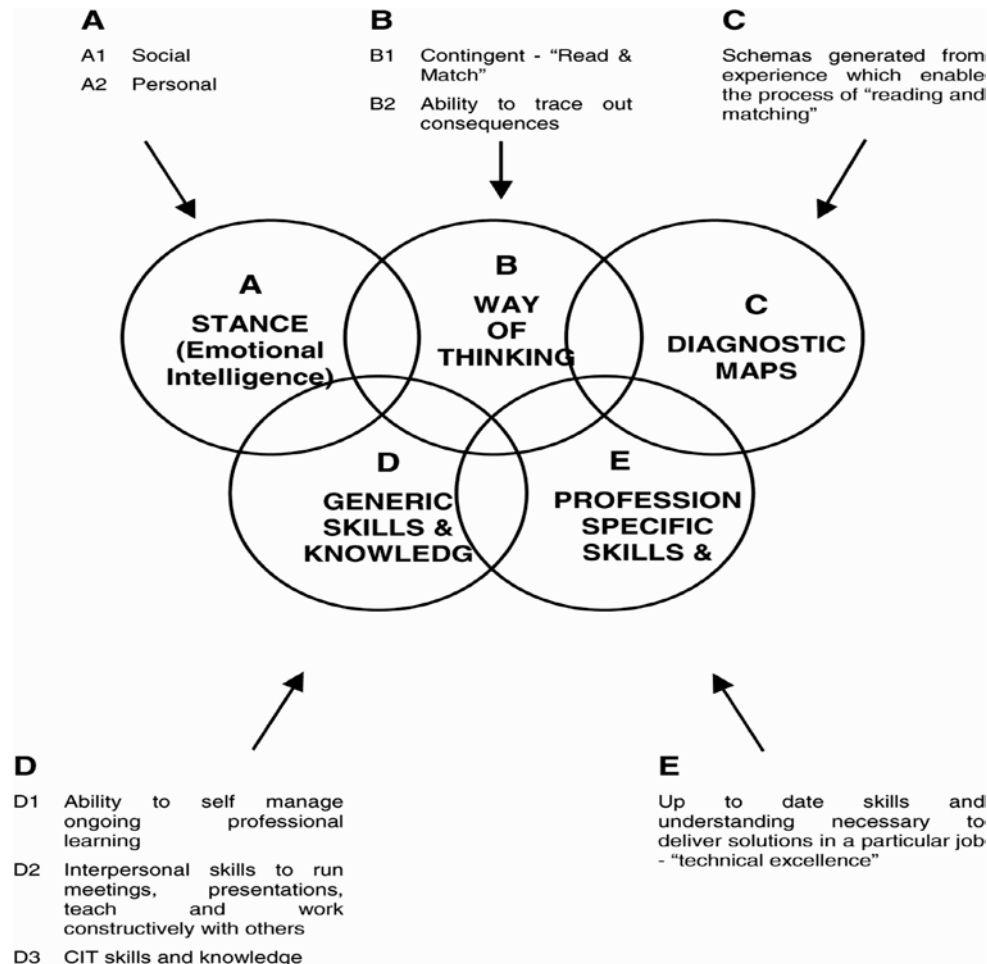
In their study, Scott and Yates ([2002](#)) sought to identify:

1. the capabilities that are most important for successful professional practice during the first few years after graduation;
2. the extent to which the universities of the participating graduates focused on these capabilities; and
3. key ways of improving the content, delivery, support and assessment of the undergraduate programmes in the light of the study's findings. The study used an online survey questionnaire with the questions focused around two research frameworks: professional capability and educational quality.

Professional Capability Framework

The Professional Capability Framework (Scott *et al.*, [2001](#)) was developed, tested and refined using: (1) research on professional competence and expertise by Schön ([1983](#)), Morgan ([1988](#)), Gonczi, Hager and Oliver ([1999](#)), Tennant ([1991](#)), Gardiner ([1995](#)), Goleman ([1998](#)), Scott ([1996](#)), and Harvey, Moon and Geall ([1997](#)); (2)

research undertaken on professional leadership and effective teachers in education (Scott, 1999); and (3) studies of what distinguishes the most effective performers in the Skill Olympics (Workskill Australia, 1995). The recurring findings from this research, which are consistent with the recommendations of Arthur Andersen and Co. *et al.* (1989), Accounting Education Change Commission (1990), Deppe *et al.* (1991), and IFAC (1996), were that professional capability is comprised of five interlocking components. These are represented in [Figure 1](#).



[\[Enlarge Image\]](#)

Figure 1. Professional capability components (Scott *et al.*, 2001)

While this framework identifies the importance of generic and job or profession specific skills (D & E), such skills are not sufficient for effective professional performance. What is of equal importance is that the employee also possesses (Scott *et al.*, 2001, p. 4):

- a high level of social and personal emotional intelligence (A);
- a contingent way of thinking, an ability to 'read' what is going on in each new situation and 'match' (B);
- a capacity to deftly trace out and assess the consequences of alternative courses of action (B);
- a set of 'diagnostic maps' (C) developed from handling previous practice problems in the unique work context.

It is these maps which enable the person to accurately 'read the signs' and figure out what is really going on in each new situation and to determine when and when not to deploy different generic and technical skills. Scott and Yates' (2002) pilot study indicates that it is when things go wrong—when a troubling problem or dilemma emerges—that professional capability is most tested.

Educational Quality Framework

The educational quality (teaching and learning) framework was developed from a research base¹ which identifies the criteria used by students to determine that one tertiary education course is of high quality whereas another is not. The recurring findings can be summarised as a set of quality checkpoints for university programs (Scott *et al.*, 2001). They indicate that students positively evaluate their university courses when they are perceived as being relevant and consistently link theory with practice, provide opportunities for active learning, provide a learning path which is clear and unambiguous and effectively manage students' expectations from the outset.

Purpose of the Study

This study utilises the two research frameworks described above to report on the views of graduates with three to five years' experience who were regarded as high performing by their employers—chartered accountants in public practice in New Zealand. High performing graduates were characterised by employers as providing high levels of client, supervisor and colleague satisfaction with their work, and delivery of projects on time and to a high standard. The purpose of the study was to ascertain:

1. the capabilities which are regarded as being most important for successful professional practice in accountancy during the first years after graduation;
2. the extent to which the universities at which the participating graduates had studied focused on these issues, thereby heeding the accounting education reform recommendations with respect to skill development; and
3. key ways to improve the content, delivery, support and assessment of the undergraduate accounting programmes.

Research Design

This study extended the UTS study and was undertaken by researchers at a New Zealand university in partnership with the UTS Quality Development Unit and New Zealand firms of chartered accountants. The questionnaire used in this study originated from the UTS study and comprised items relating to professional capability and educational quality. The questionnaire comprised 49 items which were sorted into

five capability scales (emotional intelligence: personal; emotional intelligence: interpersonal; intellectual capability; profession-specific skills and knowledge; and, generic skills and knowledge) and one educational quality scale (see Appendix). A two-phased approach (Parlett and Dearden, [1977](#)) was used to establish the validity of the survey instrument and confirm the ability of the professional capability and educational quality frameworks to accommodate the survey response data.

Phase One

The purpose of this initial phase was to ensure that the questionnaire described above was valid for the professional accounting and New Zealand context. First, the items were critiqued in focus groups comprising representatives from the accounting profession. All survey items and the criteria for high performance were confirmed as being relevant to the profession. Four additional items were added to the questionnaire, namely items 29, 30, 41 and 42. Two of these related directly to meeting clients' needs and requirements, one identified the need for courage and persistence, and the other to having an understanding of current professional issues.

The focus group members also provided names of accounting firms which could be approached for the selection of the participant graduates. A target sample of 30 graduates from both regional and urban locations throughout New Zealand was established for this study. Approximately 80 chartered accountancy firms were contacted to identify graduates who were between three to five years out from graduation and were identified as high performers by their supervisors. The researchers needed to canvass a large number of firms because a shortage of graduates with three to five years' experience became apparent. This shortage was due to the tradition of extended overseas travel following graduation.

The second Phase One activity also sought to validate the questionnaire items in the online survey. Two graduates (one male and one female) and their workplace supervisors were interviewed individually using a semi-structured interview schedule based on the questionnaire and its items. The data generated were summarised and scrutinised by the research team. The four additional items previously identified by the employers were confirmed and positioned within the professional capability frameworks.

Phase Two

An online survey instrument based on the results of Phase One was completed by 30 graduates. Respondents were asked to rate each of these items, first on their importance to successful professional practice, and second on the extent to which the university at which they studied had addressed them (performance). They were then invited to explain their ratings and suggest ways of improving undergraduate learning, assessment and support programmes.

The data gathering instrument, sample size, and response rate for both phases of the research programme are summarised in [Table 1](#).

Table 1. Data collection

Phase	Data gathering instrument graduates	Sample size successful graduates	Response rate successful	Sample size supervisors	Response rate supervisors
One	Semi-structured interview schedule	2	100%	2	100%
Two	Online interview schedule	30 (<i>n</i> = 26)	86%	26 (<i>n</i> = 12)	46%

A good response rate (86%) to the online survey by the selected graduates was achieved because they had been invited, as high performing graduates, to complete the online survey.

Participants

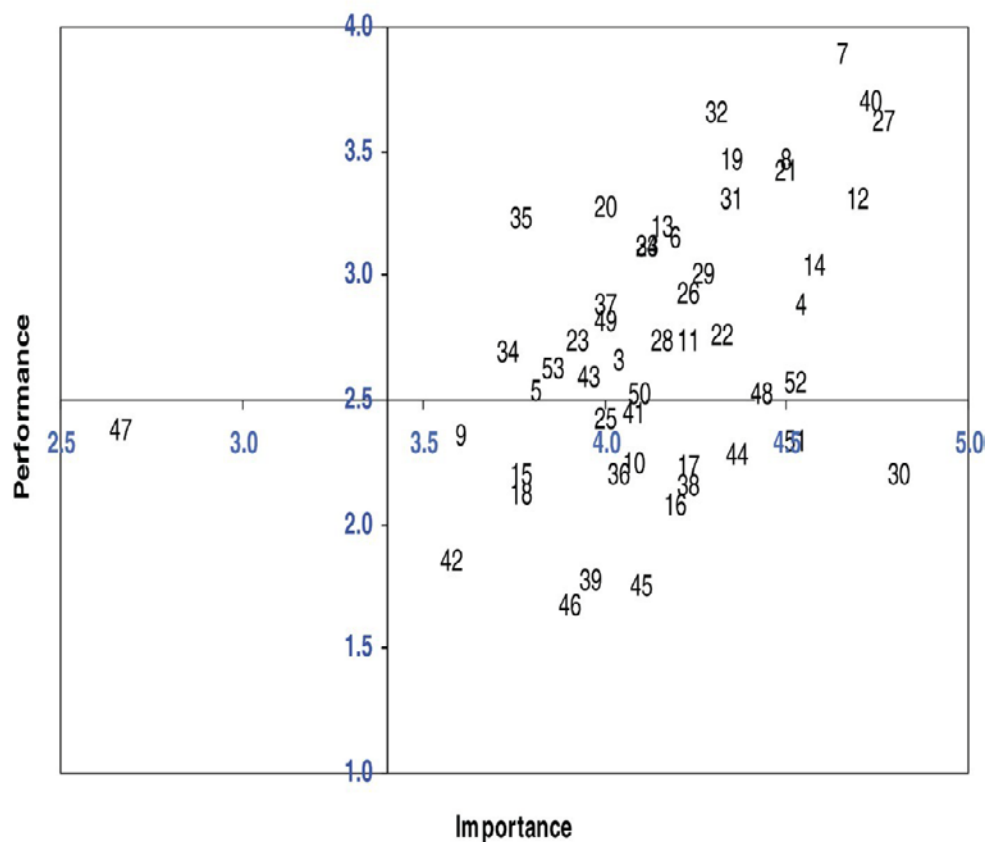
The participants have been categorised by geographical location, type of work undertaken, degree studied and graduating university. Eighty-eight per cent of the respondents described their work as being predominantly in financial statement preparation, auditing and taxation. Sixteen per cent of the graduates held honours degrees in accounting, a further 16% had completed double degrees with one degree in accounting, and the balance had completed a business degree with a single major in accounting. While 54% of the graduates worked in Auckland, the remaining respondents worked in Wellington (19%), Hamilton (12%), Dunedin (12%) and Tauranga (4%). Graduates from seven of New Zealand's eight universities participated in the survey.

The Results

The responses by the graduates to the online survey were used to prepare a scatter graph which shows the mean rating given by respondents on the importance of each item for their successful professional practice and the extent to which the university at which each respondent studied had addressed that item.

Items high on importance and high on performance represent areas of good practice (the top-right quadrant of [Figure 2](#)). Items high on importance but low on performance (the lower-right quadrant of [Figure 2](#)) identify potential areas for improvement or follow-up. Items in the top-left and bottom-left quadrants raise questions of relevance.

Graduate Capabilities and Educational Quality
Mean Importance versus Mean Performance



[\[Enlarge Image\]](#)

Figure 2. Graduate capabilities—importance versus performance

These quantitative results have been complemented by a thematic analysis of the qualitative data generated during the interviews in Phase One and from graduate comments on their ratings in the online survey.

Professional Capability

Top 15 Professional Capability Items—Ranked by Importance

Respondents rated these items based on the 'importance of this capability for successful performance in my current professional work'. These items are set out in [Table 2](#).

Table 2. Top 15 professional capability items—ranked by importance

Importance ranking	Performance ranking	Category	Item
--------------------	---------------------	----------	------

Table 2. Top 15 professional capability items—ranked by importance

Importance ranking	Performance ranking	Category	Item
1	36	Intellectual	30 Being able to understand and respond to clients' requirements in a timely manner
2	4	Intellectual	27 Being able to set and justify priorities
3	2	Generic	40 Being able to organise my work and manage time effectively
4	8	Interpersonal	12 The ability to empathise with and work productively with people from a wide range of backgrounds
5	1	Personal	7 Wanting to produce as good a job as possible
6	26	Personal	1 Being willing to face and learn from my errors and listen openly to feedback
7	16	Interpersonal	14 Being able to develop and use networks of colleagues to help me solve key workplace problems
8	20	Personal	4 Being able to remain calm under pressure or when things go wrong
9	5	Personal	8 Being willing to take responsibility for projects, including how they turn out
10	7	Intellectual	21 Being able to identify from a mass of detail the core issue in any situation
11	6	Interpersonal	19 Being able to develop and contribute positively to team-based projects
12	9	Profession-specific	31 Having a high level of current technical expertise to my work area
13	22	Intellectual	22 The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn
14	3	Generic	32 Being able to use IT effectively to communicate and perform key work functions
15	17	Personal	29 Having the courage and persistence to follow a course of action to its conclusion

Eight out of the top 15 ranked items relate to personal or interpersonal capabilities, four are intellectual and only one is concerned with profession-specific technical expertise. These top ranked items relate to the management of self and work and to working with others. These sentiments were also reflected in the responses from graduates who commented:

Although IT skills are critical they should not devalue the interpersonal skills which I believe are more important

The balance should be more towards group work than individual. There is very little work I do now on my own. Interpersonal skills are very important

Hence these results generally endorse calls by the profession to broaden the undergraduate accounting programme to include the development of intellectual, interpersonal and communication skills.

Top 15 Professional Capability Items—Ranked By Performance in University Courses

Respondents rated these items based on the 'extent to which my university course performed on this capability'. These items are set out in [Table 3](#). Graduate participants agreed that university courses did make a contribution to the development of professional capabilities, but could do so more effectively. Nine of the top 15 items ranked for importance for professional capability were also in the top 15 for performance in university courses. These items are shaded in [Tables 2](#) and [3](#). In addition, 14 of the items with a mean importance rating of 4.0 or higher were also ranked in the top 15 for focus/performance thus suggesting that the universities are taking heed of the calls for curriculum reform.

Table 3. Top 15 professional capability items—ranked by performance in university courses

Performance Ranking	Importance Ranking	Category	Item
1	5	Personal	7 Wanting to produce as good a job as possible
2	3	Generic	40 Being able to organise my work and manage time effectively
3	14	Generic	32 Being able to use IT effectively to communicate & perform key work functions
4	2	Intellectual	27 Being able to set and justify priorities
5	9	Personal	8 Being willing to take responsibility for projects, including how they turn out
6	11	Inter-personal	19 Being able to develop and

Table 3. Top 15 professional capability items—ranked by performance in university courses

Performance Ranking	Importance Ranking	Category	Item
			contribute positively to team-based projects
7	10	Intellectual	21 Being able to identify from a mass of detail the core issue in any situation
8	4	Inter-personal	12 The ability to empathise with and work productively with people from a wide range of backgrounds
9	12	Profession-specific	31 Having a high level of current technical expertise to my work area
10	31	Intellectual	20 Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project
11	39	Generic	35 Being able to make effective presentations to clients
12	23	Interpersonal	13 A willingness to listen to different points of view before coming to a decision
13	21	Personal	6 A willingness to persevere when things are not working out as anticipated
14	25	Intellectual	24 An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable
15	26	Generic	33 Being able to manage my own ongoing professional learning and development

It is also noteworthy that three of the five professional capability items considered most important in [Table 2](#) (Items 27, 40, 7) also featured in the top five focus ranking in [Table 3](#), thus again suggesting a degree of congruence between the calls from the profession and the response by the universities. These conclusions are further supported by the following graduate comments:

The key strength of the university I went to was the emphasis on team-work, presentations and interpersonal skills.

The group-based work at university aimed to develop the interpersonal aspects to a high level. This is critical in my work.

Of particular note is the absence (with one exception) of profession-specific skills in both the top 15 importance and performance rankings. This is despite two of the five items (41, 42) in the profession-specific skills and knowledge category specifically being added by employers in Phase One of the project. In addition, only one item from the top 15 most important items, *Being able to understand and respond to clients' requirements in a timely manner* received a mean focus/performance rating of less than 2.5. This suggests that, while universities are seeking to focus on the development of their students' professional capabilities, there is a gap between the expectations of graduates and what university programmes provide regarding responsiveness to clients' requirements (the item added by employers).

These views are illustrated by a graduate who commented:

University has provided a very sound platform for technical growth and using IT for client support/service. However, university does not really deal with project management, mentoring, or workflow management or client meetings/interaction

Lowest 5 Professional Capability Items—Ranked By Performance in University Course

[Table 4](#) identifies the five capabilities that graduates consider universities to be 'least successful in developing' in their programmes. This category was examined to ascertain the extent of congruence between the performance ranking and importance ranking at the lower end. This examination revealed two items with significant divergence between importance and focus/performance: *an ability to help other learn in the workplace*; and *being able to work with senior staff without being intimidated*.

Table 4. Lowest 5 professional capability items—ranked by performance in university course

Performance ranking	Importance ranking	Category	Item
38	19	Generic	38 An ability to help others learn in the workplace
39	38	Interpersonal	18 Being able to motivate others to achieve great things
40	22	Interpersonal	16 Being able to work with senior staff without being intimidated
41	42	Profession-specific	42 An ability to communicate and sell a range of services offered by the firm according (or tailored) to the needs of the client.
42	34	Profession-specific	39 Understanding how organisations like my current one operate

In addition, two of the five items are from the *Emotional Intelligence: Interpersonal skills* category and two are from the *Profession-Specific Skills and Knowledge*

category. While the graduate participants are questioning the effectiveness of the universities' learning and assessment strategies to develop profession-specific skills, it is unclear from these findings whether there was a lack of learning activities involving teamwork or a lack of focus on assessing teamwork skills in learning activities undertaken.

These findings are further supported by the mean focus/performance scores for the items. Of the five professional capability categories, the three categories with the greatest number of items receiving a focus/performance mean of less than 2.5 are *Emotional Intelligence: Interpersonal* (four out of eight items), and *Profession-Specific Skills and Knowledge* (four out of five items). This included three of the four items added to the inventory from Phase One of the study. Of particular note, four items in the *emotional intelligence: interpersonal* category (items 15-18) required active employee interventions to interpersonal situations rather than passive responses and potentially relate to conflict resolution.

While eight of the ten Intellectual Capability items received a focus/performance mean of more than 2.5, the remaining two items related to on-the-job processes (Items 25 and 30). The perceived importance of these items is reflected in the following individual responses:

When things go wrong you need to be able to adapt and fix the situation. This tests professional capability as clients come to us most of the time when they do not know the answers and we are expected to provide them with the answers based on our professional skills.

As a practitioner you are most challenged when things are going wrong. Things can go wrong for a number of reasons, in and out of our control, and the test is whether you are capable enough to deal with changes and problems as they occur while still achieving clients' objectives.

... in practice there is a strong focus on judgement, handling pressure, and being confident enough to take on new projects,...

This did, however, prompt some of the graduates to question the appropriateness of the university environment for the development of these skills as indicated by the following comments:

... these skills are not able to be successfully achieved or developed in a university environment

I don't know how you would teach it—but the ability to take responsibility for a job and put the effort in to complete a task in a timely manner is SO important. A real lesson to learn is that if the task were straightforward, chances are the client wouldn't need us to perform it

Educational Quality

Top Five Education Quality Items—Ranking in Importance

Participants rated the educational items based on the 'importance of this strategy in making learning relevant, interests and engaging'. In considering how universities could improve course content and delivery, the graduates wanted learning that was 'real-life', practical and relevant to New Zealand, and taught by academic staff with current experience. All five of the top importance ranked education quality items related to connecting learning with the real world. These items are set out in [Table 5](#).

Table 5. 3Top 5 education quality items—ranking in importance

Importance ranking overall	Performance ranking	Item
1	8	51 Ensure that teaching staff have current workplace experience
2	4	52 Make assessment more real-world and problem-based and less focused on memorising factual material
3	5	48 Include learning experiences based on real-life case studies that specifically develop the interpersonal and personal skills needed in my particular profession
4	9	44 Use real-life workplace problems identified by successful graduates as a key resource for learning
5	10	45 Make work-placements which test out the capabilities identified in this study a key focus in each course

Lowest Five Educational Quality Items—Ranked by Effective Use/Performance in University Courses

Participants rated these items based on the 'extent to which my university course used this strategy effectively'. Participants generally gave low rankings to the performance of universities in effectively using relevant and interesting learning strategies. The main issue for graduates was lack of real life, practical relevance in their learning. It is also possible that concerns at the lack of focus by universities on item 48 *Include learning experiences based on real life case studies that specifically develop the interpersonal and personal skills needed in my profession*—influenced the focus ratings on the remaining four items. These items are set out in [Table 6](#). The most significant finding with the educational quality items is the marked discrepancy between the importance for professional capability development and focus of university courses on each item. This is illustrated in [Tables 5](#) and [6](#), where the three shaded items which appear in the top five ranked most important quality items also appear in the lowest five ranked delivered quality items.

Table 6. Lowest 5 educational quality items—ranked by effective use/performance in university courses

Performance ranking overall	Importance ranking	Item
7	11	47 Decrease the amount of formal classroom teaching of basic technical skills and use self-instructional guides and IT to develop these
8	1	51 Ensure that teaching staff have current workplace experience
9	4	44 Use real-life workplace problems identified by successful graduates as a key resource for learning
10	5	45 Make work-placements which test out the capabilities identified in this study a key focus in each course
11	9	46 Use successful graduates more consistently as a learning resource in university courses (e.g. as guest speakers)

Graduate participants provided the following comments on ways of improving teaching and learning strategies

Universities must include more team-work and presentation skills in classes, in addition to focusing classes on real examples and case studies.

University tends to have prescribed black and white answers whereas in practise(sic) we start with grey and work our way to black or white. This involves professional judgment, action planning, flexibility to modify the action plan, a dynamic and more integrated approach to solving problems. University does not cater to this particularly well

Have more case studies on real life New Zealand situations. Use successful graduates as guest speakers, etc. Have part of the course being based around a work placement.

Encourage team skills and presentations.

... concentrating on real life case studies and scenarios that are relevant to the workplace i.e. real work place examples.

Practical application of the skills acquired and ability to look beyond the simple answer to understand why something is the way it is and not just take it as it is.

The work experience component of the degree was probably the most relevant, it gave you the opportunity to experience everything first hand and put the theory learnt into practice.

These comments suggest a high level of support for the inclusion of work experience in programmes of study. While these comments are consistent with recommendations

by Albrecht and Sack (2000), they differ to the findings from Carr *et al.* (2006). These latter researchers, who surveyed alumni from a New Zealand university, found that work experience was not considered to be as important as other issues such as professional standards, statutory requirements, professional judgement and ethical awareness.

Discussion

This study has highlighted the importance of personal, intellectual and interpersonal aspects of professional capabilities needed to be successful in the workplace. The importance of interpersonal and communication skill development in accounting courses was also highlighted in a recent Australian study by de Lange *et al.* (2006), which concluded that there was a need in the course to give more emphasis to developing those skills. In this study, however, there was a greater congruence between the importance of specific professional capabilities and the extent to which these skills were developed in the university courses. Where this was not the case, the items tended to be related to those skills or attributes that are best suited to be being developed in a workplace environment or are difficult to assess within a classroom or academic environment. The challenge for universities is to consider further which assessment strategies and learning environments are best suited to developing these skills. The results also confirm that professional success requires far more than the possession of a high level of technical expertise.

One new finding to emerge from this research is the importance of responsiveness to clients' needs and requirements as a professional capability. This was initially identified by employers as a distinct aspect of professional capability in Phase One and its importance for success was subsequently confirmed by the high-performing graduates. This in turn supports claims by Howieson (2003, p. 69) that 'although a command of technology will be an important component of an accountant's skill set, of more significance will be skills in analysis, innovative problem solving, communication and client relations'.

The results indicate that universities have heeded the recommendations for the reform of accounting education by also focusing on professional skill development, but they also suggest that there is room for improvement. Two key areas for improvement relate to teamwork and the application of learning to real world situations or professional practice.

University courses need to develop learning and assessment strategies which promote and encourage teamwork including conflict resolution. Associated with this is the development of assessment strategies for the professional capability skills required to be demonstrated in team-based activities and the establishment of marking rubrics or criteria for assessing students' capability development against this prescribed skill set. Perhaps one of the greatest challenges is the development of realistic learning and assessment strategies in conflict resolution. Alternatively, such skills and capabilities may be more appropriately learned *on the job* in the professional accounting context.

A further clear signal received is the desire to work with real-world problems. Possible solutions to this issue include the use of case studies and integrating work placement activities or internships into the formal study course. The benefits of these learning strategies are that students are encouraged to assimilate and integrate information, consider multiple and conflicting perspectives, and deal with situations of uncertainty within the accounting discipline context. Such strategies have been successfully implemented at a number of New Zealand universities. For example, Gerbic and McConchie (2001) discuss an integrated approach to business study and internship within an accounting qualification, and Teixeira (2003) discusses the use of a case study based approach to learning in an introductory accounting course. Likewise in Australia, Medlin, Graves and McGowan (2003) report on curriculum strategies to integrate capability development within a broader graduate qualities framework successively throughout core courses within a three year degree structure. Further evidence of support for this type of initiative is provided by CPA Australia with the development of a video series for use in introductory accounting courses.

This raises an important issue about the role of universities in developing successful accounting professionals. The accounting profession recognises two contexts in which professional accounting capabilities will be developed: university and the workplace. While our study did not directly address the role of professional experience in developing successful practitioners, it did endorse the role of both contexts. The issue is one of balance between the two different learning environments. It may be that the role of university courses is to introduce professional capabilities and build a platform for initial competence to enable professional capabilities to be extended and refined within a context and accounting environment. Brown, Collins, and Duguid (1989) suggest that 'situated learning' emphasises the development of capabilities within their community of practice. There are major challenges in incorporating this kind of learning within a university course which is a different community of practice. Donovan (2005) acknowledges this dilemma and argues for a partnership between the universities and the accounting profession in developing professional capabilities where the profession can provide a real world environment for learning.

Limitations

The major findings of this study should be viewed in the light of a number of limitations; first, the small number of participants in the study. Despite the large number of recent accounting graduates employed by chartered accountants in public practice, most high-performing graduates leave New Zealand for an extended overseas experience once they have completed the professional educational requirements. In New Zealand, three years of professional practice often coincide with the completion of the practical practice and professional competence requirements for admission to the New Zealand Institute of Chartered Accountants (NZICA). The second limitation is that the participants are restricted to those employed by chartered accountants in public practice. The researchers recognise that large numbers of accounting graduates are employed in accounting roles in other organisational or corporate environments. Third, graduates who have met the professional requirements of the NZICA but who are working successfully in other organisational environments have not been included in this study.

Conclusions and Further Directions

This paper has presented graduates' perspectives of the professional capabilities and skills needed in the accounting profession and the extent to which they are developed within New Zealand university courses. Emotional intelligence, as represented by personal and interpersonal capabilities, may have emerged as being more significant than professional skills. The importance of client responsiveness has also been identified as a key capability. The role of university courses in developing professional capabilities in teamwork and providing real world learning experiences were identified as areas for improvement. This raises the importance of the balance between university and workplace environments for preparing and developing professional capabilities.

Further studies are needed to establish how professional capabilities are developed in a workplace context. Also of value would be an investigation of recent graduates employed in the corporate sector to ascertain whether the perception of these graduates differs significantly from those employed in public practice. Finally, the perceptions of employers in relation to high-performing or successful graduates would enrich the feedback on professional capability development in accounting.

Acknowledgments

The authors wish to thank Geoff Scott and staff at the UTS Quality Development Unit for their support and assistance with this project, and two anonymous reviewers for their helpful advice.

Appendix: Online Survey Scales

Table A1. Professional capability

^aThese items were included in the accounting surveys after consultation with New Zealand accounting professionals.

Emotional intelligence: personal

1. Being willing to face and learn from my errors and listen openly to feedback
2. Understanding my personal strengths and limitations
3. Being confident to take calculated risks and take on new projects
4. Being able to remain calm under pressure or when things go wrong
5. Having the ability to defer judgement and not to jump in too quickly to resolve a problem
6. A Willingness to persevere when things are not working out as anticipated
7. Wantting to produce as good a job as possible
8. Being willing to take responsibility for projects, including how they turn out
9. Having an ability to make a hard decision

10. A willingness to pitch in and undertake menial tasks when needed
11. Having a sense of humour and being able to keep work in perspective
29. Having the courage and persistence to follow a course of action to its conclusion^a

Emotional intelligence: interpersonal

12. The ability to empathise with and work productively with people from a wide range of backgrounds
13. A willingness to listen to different points of view before coming to a decision
14. Being able to develop and use networks of colleagues to help me solve key workplace problems
15. Understanding how the different groups that make up my organisation operate and how much influence they have in different situations
16. Being able to work with senior staff without being intimidated
17. Being able to give constructive feedback to work colleagues and others without engaging in personal blame
18. Being able to motivate others to achieve great things
19. Being able to develop and contribute positively to team-based projects

Intellectual capability

20. Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project
21. Being able to identify from a mass of detail the core issue in any situation
22. The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn
23. Being able to diagnose what is really causing a problem and then to test this out in action
24. An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable
25. Being able to readjust a plan of action in the light of what happens as it is implemented
26. Being able to see how apparently unconnected activities are linked and make up an overall picture
27. Being able to set and justify priorities
28. An ability to recognise patterns in a complex situation
30. Being able to understand and respond to clients' requirements in a timely manner^a

Profession-specific skills and knowledge

31. Having a high level of current technical expertise relevant to my work area
36. Understanding the role of risk management and litigation in current professional work
39. Understanding how organisations like my current one operate
41. Having an understanding of the current issues in my professional field^a
42. An ability to communicate and sell a range of services offered by the firm according (or tailored) to the needs of the client^a

Generic skills and knowledge

32. Being able to use IT effectively to communicate and perform key work functions

- 33. Being able to manage my own ongoing professional learning and development
- 34. An ability to chair and participate constructively in meetings
- 35. Being able to make effective presentations to clients
- 37. Knowing how to manage projects into successful implementation
- 38. An ability to help others learn in the workplace
- 40. Being able to organise my work and manage time effectively

Table A2. Educational quality

- 43. Focus more directly on the capabilities identified as being important in university courses and assessment
- 44. Use real life workplace problems identified by successful graduates as a key resource for learning
- 45. Make work placements which test out the capabilities identified in this study a key focus in each course
- 46. Use successful graduates more consistently as a learning resource in university courses
- 47. Decrease the amount of formal classroom teaching of basic technical skills and use self instructional guides and IT to develop these
- 48. Include learning experiences based on real life case studies that specifically develop the interpersonal and personal skills needed in my particular profession
- 49. When relevant, use IT to make learning as convenient and interactive as possible
- 50. Ensure that all teaching staff model the key attributes identified as being important in this study
- 51. Ensure that teaching staff have current workplace experience
- 52. Make assessment more real world and problem based and less focused on memorising factual material
- 53. Use performance on the capabilities identified as being most important in earlier parts of this survey as the focus for assessment and feedback on all learning tasks

Notes

See, for example, summaries of this research in Scott ([1996](#)) and Foley ([2000](#)).

References

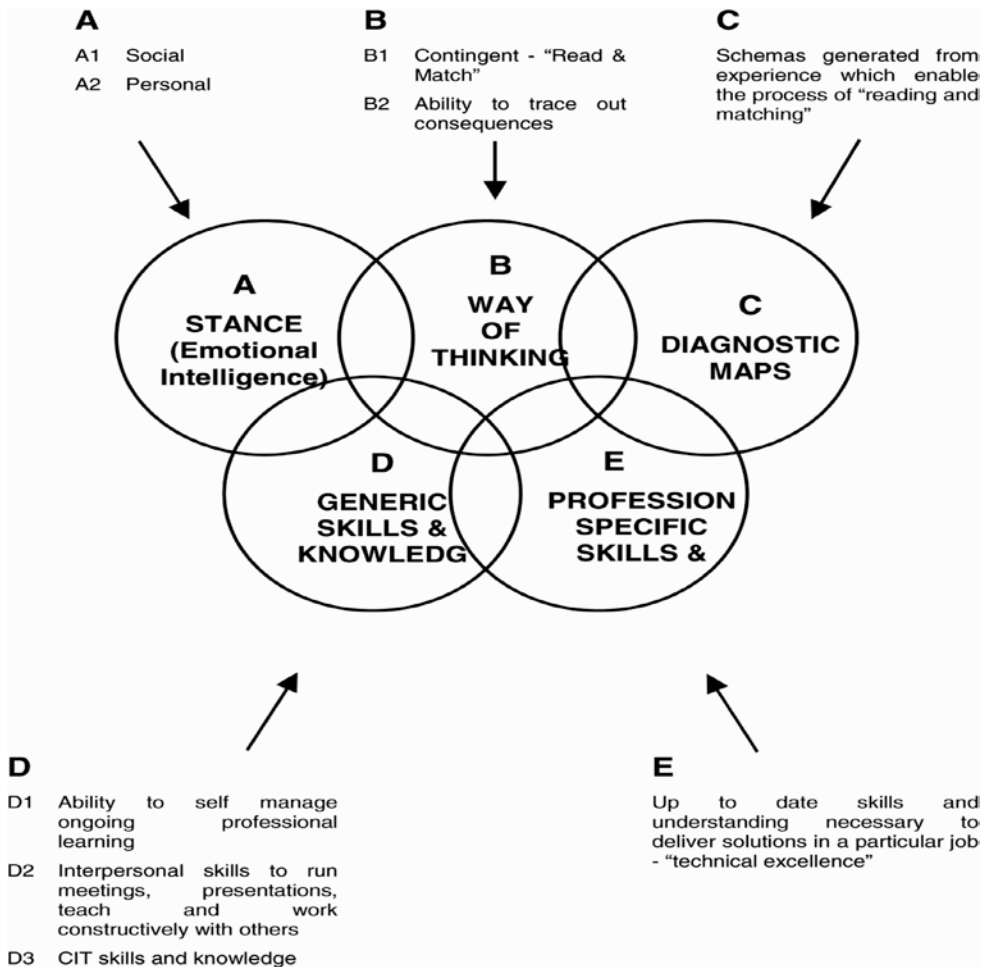
- 1. AAA (1986) Future Accounting Education: Preparing for the expanding profession. *Issues in Accounting Education* 1:1 , pp. 168-195.

- 2. Accounting Education Change Commission (1990) Objectives of Education for Accountants: Position Statement Number One. *Issues in Accounting Education* **5:2** , pp. 307-312.
- 3. Adler, R. and Milne, M. (1998) The challenges of learner-centred education. *Chartered Accountants Journal* **77:1** , pp. 12-17.
- 4. Albrecht, W. S. and Sack, R. J. (2000) *Accounting Education: Charting the course though a perilous future* **16** , American Accounting Association , Florida — AAA Accounting Education Series
- 5. Arthur, Andersen, Arthur, Young, Coopers & Lybrand, Deloitte Haskins & Sells, Ernst & Whinney Peat Marwick Main & Co and Price Waterhouse and Touche Ross (1989) *Perspectives on Education: Capabilities for Success in the Accounting Profession*
- 6. Berry, K. T., O'Bryan, D. and Swanson, P. K. (2001) High School Business Educators' Perceptions of the Knowledge, Skills and Abilities Needed by Accounting Majors Relative to Other Business Majors. Paper presented at the AAA Northeast Regional Meeting Portland, Maine
- 7. Brown, J., Collins, A. and Duguid, P. (1989) Situated cognition and the culture of learning. *Educational Researcher* **18:1** , pp. 32-41. [[crossref](#)]
- 8. Carr, S., Chua, F. and Perera, H. (2006) [University accounting curricula: the perceptions of an alumni group](#). *Accounting Education: An International Journal* **15:4** , pp. 359-376. [[informaworld](#)]
- 9. de Lange, P., Jackling, B. and Gut, A. -M. (2006) Accounting graduates' perceptions of skills emphasis in undergraduate courses: an investigation from two Victorian universities. *Accounting and Finance* **46:3** , pp. 365-386.
- 10. Deppe, L. A., Sonderegger, E. O., Stice, J. D., Clark, D. C. and Streuling, G. Fred (1991) Emerging competencies in the practice of accountancy. *Journal of Accounting Education* **9:2** , pp. 257-290. [[crossref](#)]
- 11. Donelan, J. G. and Reed, R. O. (1992) Characteristics of accounting programs: a survey of students' perceptions. *Journal of Accounting Education* **10:1** , pp. 191-209. [[crossref](#)]
- 12. Donovan, C. (2005) [The benefits of academic/practitioner collaboration](#). *Accounting Education: An International Journal* **14:4** , pp. 445-452. [[informaworld](#)]
- 13. Elmore, R. F. (1979) 'Backward mapping'; implementation research and policy decisions. *Political Science Quarterly* **94:4** , pp. 606-616. [[crossref](#)]
- 14. Foley, G. (2000) *Understanding Adult Education and Training* Allen & Unwin , Sydney
- 15. Gammie, B., Gammie, E. and Cargill, E. (2002) [Personal skills development in the accounting curriculum](#). *Accounting Education: An International Journal* **11:1** , pp. 63-78. [[informaworld](#)]
- 16. Gardiner, H. (1995) *Leading Minds* Basic Books , New York
- 17. Garner, R. M. and Dombrowski, R. F. (1997) Recruiting the 'best and the brightest': the role of university accounting programs and state CPA societies. *Issues in Accounting Education* **12:2** , pp. 299-314.
- 18. Gerbic, P. and McConchie, A. MacFarlane, B. and Ottwill, R. (eds) (2001) Innovation and entrepreneurship. *Effective Learning and Teaching in Practice in Business and Management* pp. 166-181. Kogan Page , London
- 19. Goleman, D. (1998) *Working With Emotional Intelligence* Bloomsbury , London

- 20. Gonczi, A., Hager, P. and Oliver, L. (1999) *Establishing Competency Based Standards in the Professions* Australian Government Publications Service , Canberra
- 21. Hardin, J. R., O'Bryan, D. and Quirin, J. J. Reckers, P. M. J. (ed) (2000) Accounting versus Engineering, Law and Medicine: Perceptions of Influential High school Teachers. *Advances in Accounting* **17** , pp. 205-220. JAI Press Inc , Stamford, CA
- 22. Harvey, L., Moon, S. and Geall, V. (1997) Graduates' Work: Organisational change and students' attributes. — Available at <http://www0.bcu.ac.uk/crq/publications/gw/> (accessed 21 November 2008)
- 23. Hassall, T., Joyce, J., Montano, J. L. A. and Anes, J. A. D. (2003) [The vocational skills gap for management accountants: the stakeholders' perspectives.](#) *Innovations in Education and Teaching International* **40**:1 , pp. 78-88. [[informaworld](#)]
- 24. Howieson, B. (2003) Accounting practice in the new millennium: is accounting education ready to meet the challenge?. *The British Accounting Review* **35**:2 , pp. 69-103.
- 25. IFAC (1996) *Pre-qualification Education, Assessment of professional competence and experience of requirements of professional accountants* IFAC , New York
- 26. Kavanagh, M. and Drennan, L. (2007) Graduate Attributes and Skills: Are we as accounting academics delivering the goods. Paper presented at the Accounting and Finance Association of Australia and New Zealand 2007 Conference Gold Coast, Australia — July
- 27. Medlin, J., Graves, C. and McGowan, S. (2003) [Using diverse professional teams and graduate qualities framework to develop generic skills within a commerce degree.](#) *Innovations in Education and Teaching International* **40**:1 , pp. 61-70. [[informaworld](#)]
- 28. Morgan, G. (1988) *Riding the Waves of change: Managerial competencies for a turbulent world* Jossey Bass , San Francisco
- 29. Morgan, G. (1997) [Communication skills required by accounting graduates: practitioner and academic perceptions.](#) *Accounting Education: An International Journal* **6**:2 , pp. 93-107. [[informaworld](#)]
- 30. Oswick, C., Barber, P. and Speed, R. (1994) [A study of the perception of public accounting skills held by UK students with accounting and non-accounting career aspirations.](#) *Accounting Education: An International Journal* **3**:4 , pp. 283-296. [[informaworld](#)]
- 31. Parlett, M. and Dearden, G. Parlett, M. and Dearden, G. (eds) (1977) Introduction to illuminative evaluation. *Introduction to Illuminative Evaluation: Studies in Higher Education Series* pp. 1-7. Pacific Soundings Press , California
- 32. Reed, S. A. and Kratchman, S. H. (1989) A longitudinal and cross-sectional study of students' perceptions of the importance of job attributes. *Journal of Accounting Education* **7**:2 , pp. 171-193. [[crossref](#)]
- 33. Schmutte, J. (1998) Student and public accounting firm recruiter attitudes towards the desirability of student characteristics: a longitudinal study. *Journal of Accounting Education* **16**:3-4 , pp. 429-461. [[crossref](#)]
- 34. Schön, D. (1983) *The Reflective Practitioner* Basic Books , New York
- 35. Scott, G. Ryan, G. (ed) (1996) Change Competence in Education. *Learner Assessment and Programme Evaluation* pp. 75-107. APLN , Sydney

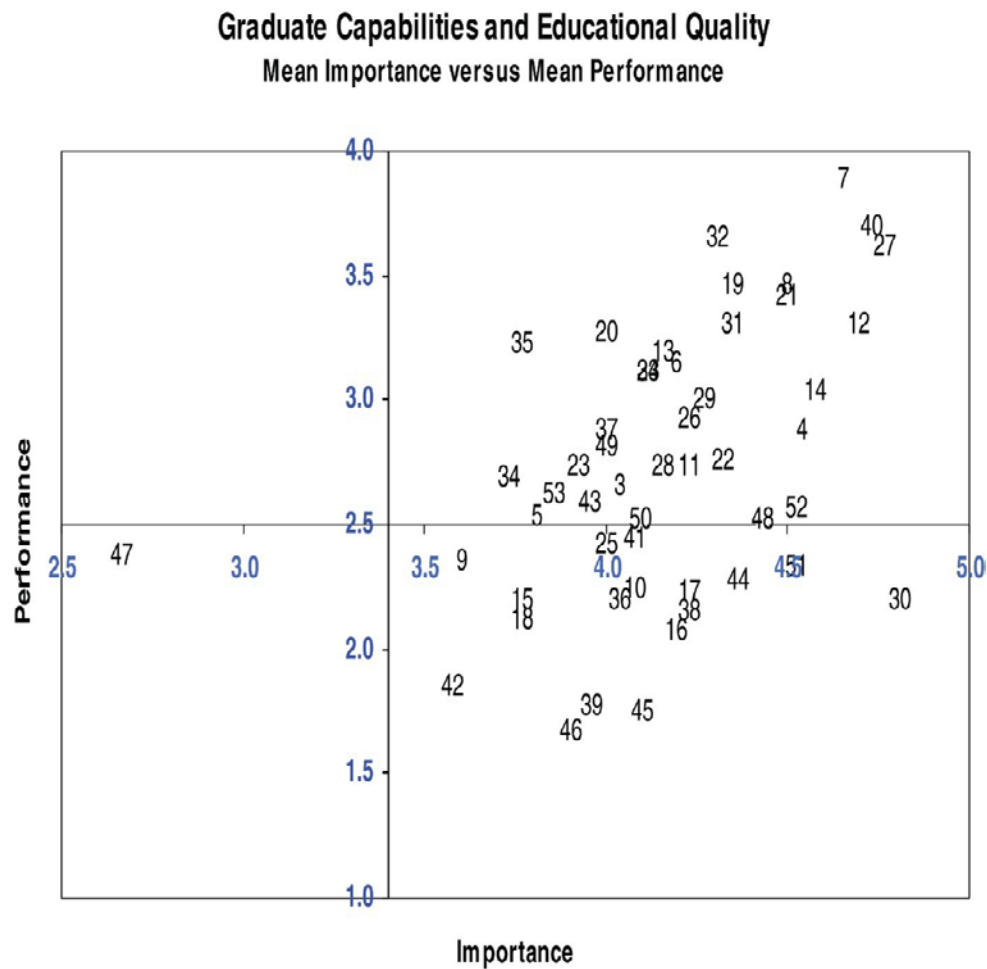
- 36. Scott, G. (1999) *Change Matters: Making a Difference in Education and Training* Allen & Unwin , Sydney
- 37. Scott, G. and Yates, W. (2002) [Using successful graduates to improve the quality of undergraduate engineering programmes. *European Journal of Engineering Education* 27:4 , pp. 363-378. \[informaworld\]](#)
- 38. Scott, G., Yates, W. and Wilson, D. (2001) *Tracking and profiling successful graduates* — Available at <http://www.qdu.uts.edu.au/pdf%20documents/Success.Eng.Graduates.pdf> (accessed 30 October 2006)
- 39. Sundem, G. (1999) *The Accounting Education Change Commission: Its history and impact* 15 , AAA , Florida — Accounting Education Series
- 40. Teixeira, A. (2003) *Improving Student Perceptions and Retention: Re-engineering the first course in accounting through context based learning* Auckland — Unpublished manuscript
- 41. Tennant, M. (1991) Expertise as a dimension of adult development. *New Education* 13:2 , pp. 49-56.
- 42. Usoff, C. and Feldman, D. (1998) Accounting students' perceptions of important skills for career success. *Journal of Education for Business* 73:4 , pp. 215-220.
- 43. Warnock, K. (1997) Selecting the accountants of the future. *Accountancy Ireland* 29:3 , pp. 6-7.
- 44. Wells, P. and Fieger, P. (2006) High school teachers' perceptions of accounting: an international study. *Australian Journal of Accounting Education* 12:1 , pp. 29-51.
- 45. Workskill Australia (1995) *The Continuous Learning Improvement Program* Workskill Australia , Sydney

List of Figures



[\[Enlarge Image\]](#)

Figure 1. Professional capability components (Scott *et al.*, 2001)



[\[Enlarge Image\]](#)

Figure 2. Graduate capabilities—importance versus performance

List of Tables

Table 1. Data collection

Phase	Data gathering instrument graduates	Sample size successful graduates	Response rate successful	Sample size supervisors	Response rate supervisors
One	Semi-structured interview schedule	2	100%	2	100%
Two	Online interview schedule	30 (<i>n</i> = 26)	86%	26 (<i>n</i> = 12)	46%

Table 2. Top 15 professional capability items—ranked by importance

Importance ranking	Performance ranking	Category	Item
1	36	Intellectual	30 Being able to understand and respond to clients' requirements in a timely manner
2	4	Intellectual	27 Being able to set and justify priorities
3	2	Generic	40 Being able to organise my work and manage time effectively
4	8	Interpersonal	12 The ability to empathise with and work productively with people from a wide range of backgrounds
5	1	Personal	7 Wanting to produce as good a job as possible
6	26	Personal	1 Being willing to face and learn from my errors and listen openly to feedback
7	16	Interpersonal	14 Being able to develop and use networks of colleagues to help me solve key workplace problems
8	20	Personal	4 Being able to remain calm under pressure or when things go wrong
9	5	Personal	8 Being willing to take responsibility for projects, including how they turn out
10	7	Intellectual	21 Being able to identify from a mass of detail the core issue in any situation
11	6	Interpersonal	19 Being able to develop and contribute positively to team-based projects
12	9	Profession-specific	31 Having a high level of current technical expertise to my work area
13	22	Intellectual	22 The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn
14	3	Generic	32 Being able to use IT effectively to communicate and perform key work functions
15	17	Personal	29 Having the courage and persistence to follow a course of action to its conclusion

Table 3. Top 15 professional capability items—ranked by performance in university courses

Performance Ranking	Importance Ranking	Category	Item
1	5	Personal	7 Wanting to produce as good a job as possible
2	3	Generic	40 Being able to organise my work and manage time effectively
3	14	Generic	32 Being able to use IT effectively to communicate & perform key work functions
4	2	Intellectual	27 Being able to set and justify priorities
5	9	Personal	8 Being willing to take responsibility for projects, including how they turn out
6	11	Inter-personal	19 Being able to develop and contribute positively to team-based projects
7	10	Intellectual	21 Being able to identify from a mass of detail the core issue in any situation
8	4	Inter-personal	12 The ability to empathise with and work productively with people from a wide range of backgrounds
9	12	Profession-specific	31 Having a high level of current technical expertise to my work area
10	31	Intellectual	20 Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project
11	39	Generic	35 Being able to make effective presentations to clients
12	23	Interpersonal	13 A willingness to listen to different points of view before coming to a decision
13	21	Personal	6 A willingness to persevere when things are not working out as anticipated
14	25	Intellectual	24 An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable
15	26	Generic	33 Being able to manage my own ongoing professional learning and

Table 3. Top 15 professional capability items—ranked by performance in university courses

Performance Ranking	Importance Ranking	Category	Item
			development

Table 4. Lowest 5 professional capability items—ranked by performance in university course

Performance ranking	Importance ranking	Category	Item
38	19	Generic	38 An ability to help others learn in the workplace
39	38	Interpersonal	18 Being able to motivate others to achieve great things
40	22	Interpersonal	16 Being able to work with senior staff without being intimidated
41	42	Profession-specific	42 An ability to communicate and sell a range of services offered by the firm according (or tailored) to the needs of the client.
42	34	Profession-specific	39 Understanding how organisations like my current one operate

Table 5. 3Top 5 education quality items—ranking in importance

Importance ranking overall	Performance ranking	Item
1	8	51 Ensure that teaching staff have current workplace experience
2	4	52 Make assessment more real-world and problem-based and less focused on memorising factual material
3	5	48 Include learning experiences based on real-life case studies that specifically develop the interpersonal and personal skills needed in my particular profession
4	9	44 Use real-life workplace problems identified by successful graduates as a key resource for learning
5	10	45 Make work-placements which test out the capabilities identified in this study a key focus in each course

Table 6. Lowest 5 educational quality items—ranked by effective use/performance in university courses

Performance ranking overall	Importance ranking	Item
7	11	47 Decrease the amount of formal classroom teaching of basic technical skills and use self-instructional guides and IT to develop these
8	1	51 Ensure that teaching staff have current workplace experience
9	4	44 Use real-life workplace problems identified by successful graduates as a key resource for learning
10	5	45 Make work-placements which test out the capabilities identified in this study a key focus in each course
11	9	46 Use successful graduates more consistently as a learning resource in university courses (e.g. as guest speakers)

Table A1. Professional capability

“These items were included in the accounting surveys after consultation with New Zealand accounting professionals.

Emotional intelligence: personal

1. Being willing to face and learn from my errors and listen openly to feedback
2. Understanding my personal strengths and limitations
3. Being confident to take calculated risks and take on new projects
4. Being able to remain calm under pressure or when things go wrong
5. Having the ability to defer judgement and not to jump in too quickly to resolve a problem
6. A Willingness to persevere when things are not working out as anticipated
7. Wanting to produce as good a job as possible
8. Being willing to take responsibility for projects, including how they turn out
9. Having an ability to make a hard decision
10. A willingness to pitch in and undertake menial tasks when needed
11. Having a sense of humour and being able to keep work in perspective
29. Having the courage and persistence to follow a course of action to its conclusion^a

Emotional intelligence: interpersonal

12. The ability to empathise with and work productively with people from a wide range of backgrounds
13. A willingness to listen to different points of view before coming to a decision
14. Being able to develop and use networks of colleagues to help me solve key workplace problems

- 15. Understanding how the different groups that make up my organisation operate and how much influence they have in different situations
- 16. Being able to work with senior staff without being intimidated
- 17. Being able to give constructive feedback to work colleagues and others without engaging in personal blame
- 18. Being able to motivate others to achieve great things
- 19. Being able to develop and contribute positively to team-based projects
- Intellectual capability
- 20. Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project
- 21. Being able to identify from a mass of detail the core issue in any situation
- 22. The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn
- 23. Being able to diagnose what is really causing a problem and then to test this out in action
- 24. An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable
- 25. Being able to readjust a plan of action in the light of what happens as it is implemented
- 26. Being able to see how apparently unconnected activities are linked and make up an overall picture
- 27. Being able to set and justify priorities
- 28. An ability to recognise patterns in a complex situation
- 30. Being able to understand and respond to clients' requirements in a timely manner^a
- Profession-specific skills and knowledge
- 31. Having a high level of current technical expertise relevant to my work area
- 36. Understanding the role of risk management and litigation in current professional work
- 39. Understanding how organisations like my current one operate
- 41. Having an understanding of the current issues in my professional field^a
- 42. An ability to communicate and sell a range of services offered by the firm according (or tailored) to the needs of the client^a
- Generic skills and knowledge
- 32. Being able to use IT effectively to communicate and perform key work functions
- 33. Being able to manage my own ongoing professional learning and development
- 34. An ability to chair and participate constructively in meetings
- 35. Being able to make effective presentations to clients
- 37. Knowing how to manage projects into successful implementation
- 38. An ability to help others learn in the workplace
- 40. Being able to organise my work and manage time effectively

Table A2. Educational quality

43. Focus more directly on the capabilities identified as being important in university courses and assessment
44. Use real life workplace problems identified by successful graduates as a key resource for learning
45. Make work placements which test out the capabilities identified in this study a key focus in each course
46. Use successful graduates more consistently as a learning resource in university courses
47. Decrease the amount of formal classroom teaching of basic technical skills and use self instructional guides and IT to develop these
48. Include learning experiences based on real life case studies that specifically develop the interpersonal and personal skills needed in my particular profession
49. When relevant, use IT to make learning as convenient and interactive as possible
50. Ensure that all teaching staff model the key attributes identified as being important in this study
51. Ensure that teaching staff have current workplace experience
52. Make assessment more real world and problem based and less focused on memorising factual material
53. Use performance on the capabilities identified as being most important in earlier parts of this survey as the focus for assessment and feedback on all learning tasks