**UNIVERSITY OF TECHNOLOGY SYDNEY**

**UTS Successful Graduates Project**

**An investigation of successful graduates in the early stages of their career across a wide range of professions**

**FINAL REPORT**

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# Acknowledgements

## Executive Summary

This report outlines and analyses the UTS Successful Graduates Research Project. The project was undertaken by the Planning and Quality Unit in partnership with UTS Faculties, professional bodies and key industry organisations from 2001 - 2004. It consisted of a linked set of studies tracking successful graduates from any university in their first years after graduation in the unique context of each profession. Studies have been completed in Accounting, Architecture, Engineering, Education, Information Technology, Journalism, Law, Nursing, Midwifery & Health and Sport Management.

The aims of the project were:

1.     to identify the capabilities that are seen to be most important for successful professional practice in the first years after graduation;
2.     to determine the extent to which the universities have focused on developing these capabilities; and
3.     to review the existing UTS undergraduate curriculum in the light of the study's findings.

The research was guided by a comprehensive professional capability framework developed by Geoff Scott. His framework is based on research on professional and vocational competence and expertise by Schön (1983), Morgan (1988), Gonczi, Hagar and Oliver (1990), Tennant (1991) and, more recently, by Binney and Williams (1995), Gardiner (1995), Scott (1996), Goleman (1998, 2000), Goleman, Boyatzis & McKee (2002), Department of Education, Science and Training (2002) and UK Centre for Research into Quality (2004). The conceptual framework of professional capability is comprised of four interlocked components: Emotional intelligence (Damasio, 1994; Goleman, 1998), cognitive intelligence and creative thinking (Dewey, 1933; Csikszentmihalyi, 1996) as well as appropriate profession-specific skills and knowledge and 'generic skills'.

The study was conducted in two phases: in-depth interviews of graduates and their employers and an online survey of graduates. Successful recent graduates were selected by senior management of UTS industry partners. Criteria for selection included possession of an undergraduate degree in a specific discipline from any university, two to five years out from graduation and successful/ high performance in professional practice as perceived by senior management.

Results revealed that although a high level of profession-specific knowledge is necessary for successful practice it is clearly not sufficient. A range of 'emotional intelligence', cognitive capabilities and generic skills are being identified as crucial success factors. One of the key findings is that it is the combination of key elements of emotional intelligence, cognitive capabilities, generic and job specific skills and knowledge that is telling, not excellence in one domain.

Findings of the present study and other capability data enable UTS Faculties to develop a profession-specific graduate profile. Further, a range of options to review and enhance the validity of assessment and the relevance of the curriculum in undergraduate programs across Faculties has been identified. For example, capabilities ranked highest on importance for successful professional practice by graduates should be included in the curriculum and given focus in assessment. They may be made explicit and listed as key assessment and learning objectives, be part of the formal classroom instruction or they may be addressed in the broader range of formal and informal learning experiences and part of the covert curriculum.

Further, the potential areas for enhancement should be considered. They are the capabilities that were rated high on importance for successful professional practice by graduates but rated low on the extent to which the university course focused on developing these capabilities. As many of these relate to 'emotional intelligence' a decision needs to be made if the university sees it as their role to develop these capabilities and if so, how this can be done.

In addition, this study can guide students' professional internships. Awareness of the top importance items can assist the student to set relevant learning goals and outcomes for the internship. Working towards developing certain key capabilities will make it a more meaningful experience. In regard to assessing the internship, supervisors can be asked to evaluate the student on performance on these key capabilities. Finally, it would be possible to use the results of the study and its professional capability framework to inform development or refinement of E-portfolios for students. An E-portfolio is a virtual exhibition of a student's work which demonstrates his/her capabilities and has increasingly become an important outcome of university education at many universities.

It is recommended that:

1. UTS adopt the Professional Capability Framework as established in this report as the conceptual framework for all UTS graduate profiles.
2. Consistent with the UTS Mission and this framework, all UTS Faculties develop one or more profession-specific graduate profiles based on the successful graduate capability data of the present study in conjunction with other relevant graduate capability data such as CEQ data, Graduate Destination Survey and Course Advisory Committee data.
3. All UTS Faculties use the evidence-based graduate profiles to review and enhance the relevance of the curriculum and the validity of assessment in undergraduate programs.
4. All UTS Faculties consider how to develop and include emotional intelligence, one of the key capabilities for successful professional practice, in the curriculum and assessment of undergraduate programs.
5. UTS professional internships or practica be guided by the successful graduate capability data and profiles in terms of developing learning goals and assessment.

6. All UTS Faculties develop an E-portfolio based on the Professional Capability Framework and the profession-specific graduate profiles.
7. PQU in collaboration with IML reviews and adjusts the UTS Successful Graduates Survey by developing six to eight questions per capability domain to ensure an appropriate balance of number of items per domain.
8. PQU in collaboration with IML supports the development and review of the graduate profiles by collecting and analysing the successful graduate tracking data every two years.
9. PQU in collaboration with IML and the UTS Faculties scale up the sub-studies to achieve a more robust number of respondents for each profession.
10. All UTS Faculties review the profession-specific graduate profile taking into consideration up-to-date evidence of successful graduates tracking data on a regular basis in line with their undergraduate program review.

# 1.0 Introduction

One of the main aims of undergraduate programs at universities is to prepare students for a productive career as a professional. These programs intend to equip students with the capabilities necessary to perform effectively in their chosen profession. Graduate employability or success in professional practice is often perceived as a key indicator of the quality of the university education. "Graduate outcomes are a critical indicator of how effectively universities are defining and instilling the skills and attributes expected of their graduates, with success in the labour market being the most obvious indicator of good outcomes." (Department of Education, Training and Youth Affairs, 1999, p.15).

## 1.1 Link to UTS mission

The University of Technology, Sydney (UTS) has a strong focus on practice-oriented higher education and prides itself on its reputation of enabling learning that is relevant to professional practice. This is reflected in its mission statement: "…It provides higher education to enhance professional practice,…and to enable students to reach their full personal and career potential" (UTS, 2004a). One way of ensuring this is by using several instruments that systematically measure the degree to which students are employable and the level of students' satisfaction with their university experience. At a national level the Graduate Careers Council of Australia delivers its Graduate Destination Survey and Course Experience Questionnaire to more than 100,000 graduates each year with a 65% response rate (Graduate Careers Council of Australia, 2004). At an institutional level UTS runs its own internal surveys to evaluate the quality of teaching and learning. For example, it conducts a range of satisfaction surveys such as the Subject Feedback Survey (SFS), Student Satisfaction Survey (SSS) and Feedback on Teaching Survey (University of Technology, Sydney, 2004b). Results of these surveys are often used as key indicators for successful university performance. For instance, data are used in audits by the Australian Universities Quality Agency (Australian Universities Quality Agency, 2004) and will be used in the new quarter of a billion dollar Australian Universities Learning and Teaching Performance Fund.

**1.2 Rationale of the project**

Results from such surveys provide extensive and consistent evidence that students perceive universities to be of higher quality when they provide learning content and experiences that are relevant to subsequent professional practice. According to Alan Tough's ground-breaking research (1979), a quarter of a century ago, what really motivates students is having access to information about what actually makes for successful practice from those already further down the same learning path. But, until graduates have come to grips with the realities of sustained full-time work, they are not well positioned to make specific recommendations about what sorts of university assessment, curriculum and support constitute the best preparation for the complexities of current professional practice. Yet, it is hard to find studies which have followed up graduates during their first 2-5 years of professional work in order to investigate these issues.

Of course, universities do use a range of procedures already to 'backward map' (Elmore, 1979) from professional experience in order to improve undergraduate learning programs and ensure that what is assessed is valid. Common practices include the use of course or faculty advisory committees, professional accreditation committees and criteria, reference to the Australian Qualifications Framework and employer surveys. Employers and professionals involved in the advisory committee work tend, however, to be very experienced and in senior positions. Because of this they may no longer be familiar with the realities of the early years of professional work, with what is most relevant for new graduates or have a practical understanding of the full range of contexts in which they must operate.

**1.3 Aims of the project**

What follows reports on a research study conducted from 2001 to 2004 at UTS to address this gap in applied higher education. It is a linked set of studies of successful graduates in the early stages of their career across a wide range of professions. The aims of the study are:

1. to identify the capabilities that are seen to be most important for successful professional practice in the first years after graduation;

2.      to determine the extent to which the universities have focused on developing these capabilities; and

3.      to review the existing UTS undergraduate curriculum in the light of the study's findings.

Studies using the same conceptual framework have been completed in accounting, architecture, education, engineering (Scott & Yates, 2002), information technology (Wilson and Scott, 2003), journalism, law, nursing (Scott, 2003) and sport management.

In reporting on the UTS Successful Graduates Research Project, first the conceptual framework for professional capability will be discussed. Second, drawing upon the quantitative and qualitative data obtained through in-depth interviews of successful graduates and their employers and a survey of successful graduates the author identifies the capabilities perceived as most and least important by successful graduates for effective professional practice in each particular profession as well as across professions. In addition, potential areas of good practice and potential areas for enhancement are suggested. Finally, the implications for UTS undergraduate programs are discussed.

## 2.0 The conceptual framework

*"A conceptual framework explains either graphically or in narrative form, the main dimensions of a study – the key factors, constructs or variables – and the presumed relationships between them"* (Huberman and Miles, 2001).

The conceptual framework for professional capability which has guided the present study has been adapted from the framework suggested by Scott (2003). It is based on research on professional and vocational competence and expertise by Schön (1983), Morgan (1988), Gonczi, Hagar and Oliver (1990), Tennant (1991) and, more recently, by Binney and Williams (1995), Gardiner (1995), Scott (1996), Goleman (1998, 2000), Goleman, Boyatzis & McKee (2002), Department of Education, Science and Training (2002) and the U.K. Centre for Research into Quality (2004). There is much

confusion about the exact meaning of terms such as 'competence', 'generic skills', 'generic attributes', 'graduate attributes' and 'generic knowledge' in current discussions of education. The author prefers to use the term 'capability' and sees it as including a combination of emotional intelligence (Damasio, 1994; Goleman, 1998), cognitive intelligence and creative thinking (Dewey, 1933; Csikszentmihalyi, 1996) as well as appropriate profession-specific skills and knowledge and 'generic skills'. In this perspective 'generic skills' are seen as involving skills and associated knowledge which are more readily transferable from one practice situation to a quite different one. This would include, for example, skills like basic word-processing and email skills, the ability to chair meetings, filing, data-management, self-managed learning skills, information literacy and so on. The conceptual framework of professional capability is comprised of four interlocked components represented in Figure 1.

**Figure 1: Framework Professional Capability**

This Figure seeks to demonstrate that the possession of job specific and generic skills (C and D) is necessary but not sufficient for effective professional performance. Professional capability is most tested in a challenging or difficult situation, not when things are running smoothly or routinely. In challenging situations the individual must use a combination of well-developed emotional intelligence (A) and a sharp, contingent way of thinking to diagnose what is going on and establish a suitable strategy for addressing the problem (B). This strategy brings together and competently delivers the appropriate selection of job-specific and generic skills and knowledge (C and D) most suitable to resolve the situation. This suggests, for example, that, if professionals cannot remain calm when things go wrong or are unable to work constructively with staff then, no matter how intelligent they may be or how much they may know, they will not be able to resolve the situation productively. The study's conceptual framework for professional capability suggests, therefore, that it is the combination of brain and heart that ultimately makes the difference.

It is from within this framework that the 38 items which make up the Professional Capability Scale used in the Successful Graduates Surveys have been developed. They have been consistently rated as important by graduates across all of the professions studied so far, although their rank order shows some variation, depending upon the profession involved. The items that make up this scale are given in Chart One.

## Chart One: Professional Capability Scales

| **Emotional Intelligence – Personal (A1)** | **Intellectual Capability (B)** |
|---|---|
| 1. Being willing to face and learn from my errors and listen openly to feedback | 20. Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 2. Understanding my personal strengths & limitations | 21. Being able to identify from a mass of detail the core issue in any situation |
| 3. Being confident to take calculated risks and take on new projects | 22. The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 4. Being able to remain calm under pressure or when things go wrong | 23. Being able to diagnose what is really causing a problem and then to test this out in action |
| 5. Having the ability to defer judgement and not to jump in too quickly to resolve a problem | 24. An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable |
| 6. A willingness to persevere when things are not working out as anticipated | 25. Being able to readjust a plan of action in the light of what happens as it is implemented |
| 7. Wanting to produce as good a job as possible | 26. Being able to see how apparently unconnected activities are linked and make up an overall picture |
| 8. Being willing to take responsibility for projects, including how they turn out | 27. Being able to set and justify priorities |
| 9. Having an ability to make a hard decision | 28. An ability to recognise patterns in a complex situation |
| 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 | **Profession-specific skills & knowledge (C)** |
| | 29. Having a high level of current technical expertise relevant to my work area |
| **Emotional Intelligence – Interpersonal (A2)** | **Generic Skills & Knowledge (D)** |
| 12. The ability to empathise with and work productively with people from a wide range of backgrounds | 30. Being able to use I.T. effectively to communicate & perform key work functions |
| 13. A willingness to listen to different points of view before coming to a decision | **31.** Being able to manage my own ongoing professional learning and development |
| 14. Being able to develop and use networks of colleagues to help me solve key workplace problems | 32. An ability to chair and participate constructively in meetings |
| 15. Understanding how the different groups that make up my organisation operate and how much influence they have in different situations | 33. Being able to make effective presentations to clients |
| 16. Being able to work with senior staff without being intimidated | 34. Understanding the role of risk management and litigation in current professional work |
| 17. Being able to give constructive feedback to work colleagues and others without engaging in personal blame | 35. Knowing how to manage projects into successful implementation |
| 18. Being able to motivate others to achieve great things | 36. An ability to help others learn in the workplace |
| 19. Being able to develop and contribute positively to team-based projects | 37. Understanding how organisations like my current one operate |
| | 38. Being able to organise my work and manage time effectively |

The second framework used in the study is based on research on factors that most effectively engage tertiary students in productive adult learning ( Foley, 2000; Scott, 2004). It represents an overall quality assurance framework for learning design and delivery and indicates that tertiary students will be more likely to engage in productive learning when their programs of study:

**R**   Are immediately RELEVANT to their particular background, abilities, needs and experiences;

**A**   Provide more opportunities for ACTIVE learning than they do for passive learning – in particular when they include frequent opportunities for students to make contact with people who are further down the same learning path and to actively search a range of relevant data bases;

**T**   Consistently link THEORY WITH PRACTICE;

**E**   Effectively manage students' EXPECTATIONS right from the outset;

**D**   Ensure that learning proceeds logically and is 'DIGESTIBLE';


**C**   Use a valid graduate CAPABILITY profile to specifically generate appropriate outcomes and assessment tasks. Care is taken to ensure that the subjects used directly address the full capability profile and do not duplicate each other;

**L**   Provide them with opportunities to pursue flexible LEARNING PATHWAYS. Although students are allowed greater flexibility and choice in the subjects undertaken, careful attention is given to ensuring that they still end up with the same spread and quality of capabilities at graduation;

**A**   Ensure that feedback on ASSESSMENT tasks is timely, constructive and detailed;

**S**   Not only include opportunities for SELF-MANAGED LEARNING using both digital and paper-based resources but actively coach students on how to undertake it;

**S**   Provide SUPPORT AND ADMINISTRATIVE SERVICES which are easily accessed, responsive to students needs and which specifically work together to optimise the total experience which a student has of the university or college;

**A**   Ensure that ACCESS to learning times, locations and resources makes participation in the learning program as convenient and productive as possible.


It is from these factors that the eleven items which make up the education quality scale used in the successful graduates studies has been developed.  These items are given in Chart Two.

**Chart Two: Educational Quality Scale**

| | |
|---|---|
| 39. Focus more directly on the capabilities identified as being important above in university courses and assessment<br>40. Use real-life workplace problems identified by successful graduates as a key resource for learning<br>41. Make work-placements which test out the capabilities identified in this study a key focus in each course<br>42. Use successful graduates more consistently as a learning resource in university courses (e.g. as guest speakers)<br>43. Decrease the amount of formal classroom teaching of basic technical skills and use self-instructional guides and I.T. to develop these<br>44. Include learning experiences based on real-life case studies that specifically develop the interpersonal and personal skills needed in my particular profession | 45. When relevant, use I.T. to make learning as convenient and interactive as possible<br>46. Ensure that all teaching staff model the key attributes identified as being important in this study<br>47. Ensure that teaching staff have current workplace experience<br>48. Make assessment more real-world and problem-based and less focused on memorising factual material<br>49 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. |

# 3.0 Method

Through liaison with Associate Deans (Teaching and Learning) in each UTS Faculty key industry partners who have an established relationship with the university, for example, via the professional internship program, were identified. The approach adopted then, in all parallel studies of successful graduates, consisted of inviting senior managers in these organisations to nominate successful or high performing staff members with an undergraduate degree relevant to their particular field (see Appendix B). The staff member needed to be two to five years out from graduation from any university including overseas institutions. Typically, senior management perceived staff members as successful/high performing when they:

- Consistently complete assigned jobs on time and to agreed standards
- Work positively and constructively with fellow workers
- Consistently receive positive feedback from clients/students/participants.

The study was then conducted in two phases. In phase one in-depth interviews were held with a sub-sample of the nominated group of graduates and their supervisors, using a semi-structured interview schedule (see Appendix C). Key questions to the graduates included: Why do you think you were selected as being a successful employee? What is

it about you and how you handle your work that you think has impressed the organisation? Can you think of any situation when you really got to demonstrate your level of ability? Examples of key questions to the supervisors were: Why did you select (name person) as being such an effective employee? Can you think of any situation when (name person) really got to demonstrate his/her impressive level of ability? These interviews were used to test the conceptual framework. They were also used to calibrate and ensure that the online survey used in the second phase of the study was appropriate and contextualised in their particular professional environment. The interviews also provided valuable qualitative data in their own right. It is noteworthy that after the first set of sub-studies (engineering, information technology, law, nursing and sport management) were conducted, the interviews were discontinued for the second set of sub-studies (accounting, architecture, education and journalism) as by that time the conceptual framework had been tested adequately.

In phase two the full sample of nominated graduates were invited to complete the online survey (See Appendix D). An accompanying letter stated that they had been identified as successful staff members by their supervisor who endorsed the research which was probably instrumental in achieving a high response rate (usually around 80%). Table one provides an overview of the participating professions and organisations as well as the number of subjects who were involved in the project.

**Table 1: Type of profession, number of industry partners and subjects involved in the Successful Graduates Project**

| Profession | Industry Partners | Phase I interviews | Phase II survey |
|---|---|---|---|
| **Accounting** | 11 industry partners | N/A | N=17 |
| **Architecture** | 8 architectural firms | N/A | N=20 |
| **Education** | 11 primary schools | N/A | N=22 |
| **Engineering** | 7 engineering companies | 2 grads 2 superv | N=18 |
| **Information Technology** | 6 IT companies | 4 grads 2 superv | N=15 |
| **Journalism** | 5 media companies | N/A | N=35 |
| **Law** | 10 law firms | 2 grads 2 superv | N=25 |
| **Nursing** | 2 teaching hospitals | 2 grads 2 superv | N=18 |
| **Sport management** | 17 sport industry partners | 2 grads 2 superv | N=24 |
| **Total** | | **12 grads 10 superv** | **N=194** |

The online survey asked respondents to rate the capability items in Chart one first on the relative importance in explaining effective performance in professional practice and then on the extent to which the university course they undertook addressed these capabilities. A 5-point Likert Scale (1-low, 5-high) was used to rate the items. Graduates were also invited to explain their ratings and provide case studies of when their capabilities were most tested. Finally, they were asked to rate the items on educational quality (Chart two) for importance and performance and to identify those aspects that were perceived to be most and least productive for their first few years of professional practice. The research had the approval of the university's Human Research Ethics Committee. In addition, the sub-study in education was also approved by the Strategic Research Directorate of the NSW Department of Education and Training.

## 4.0 Results and discussion

Results are presented by grouping the capability items as ranked **highest or lowest on importance** for effective performance by successful graduates in their specific profession as well as for effective performance by successful graduates for all professions together. Further, **potential areas of enhancement** are indicated by identifying those capability items which demonstrate a clear discrepancy in rating between importance for professional practice and university focus.  The criterion for identifying an item as being of high importance is that it should have a mean above 4 which corresponds with 'moderate high' to 'high'.  The criterion for identifying an item as low focus is that its mean falls below 3 which is the neutral point on the five point Likert scale.  The items, which meet these criteria, are labeled as potential areas for enhancement.

**Potential areas of good practice** are also presented.   They are determined by identifying those capability items ranked high on both importance for successful professional practice and university focus.  The criterion for identifying an item as having high importance is, as mentioned above, that it should have an importance mean which is above 4.0.  The criterion for identifying an item as receiving high university focus is that its mean is above 3.5 that is between neutral (3) and moderate high (4) on the 5-point Likert scale.  This test takes into consideration that respondents to higher education quality surveys consistently rank university focus much lower than importance.

In addition, the relative place in importance ranking of job specific skills and knowledge (Scale C), item 29, is determined for each profession as well as for all professions together.

### 4.1   Results successful graduates in all professions
Table two identifies the fourteen capability items ranked highest on importance for effective performance by graduates in all professions. Eleven out of the fourteen items come from the Emotional Intelligence Scale (A), specifically, six come from Personal Emotional Intelligence (A1) and five from Interpersonal Emotional Intelligence (A2).

Two items relates to the Intellectual Ability Scale (B) and another one out of the top fourteen items of importance come from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A clearly dominates the top items.

**Table 2: Top 14 importance items (all professions)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 38 (D) | 1 (4.75) | Being able to organise my work and manage time effectively |
| 7 (A1) | 2 (4.69) | Wanting to produce as good a job as possible |
| 27 (B) | 3 (4.66) | Being able to set and justify priorities |
| 4 (A1) | 4 (4.63) | Being able to remain calm under pressure or when things go wrong |
| 1 (A1) | 5 (4.53) | Being willing to face and learn from my errors and listen openly to feedback |
| 21 (B) | 5 (4.53) | Being able to identify from a mass of detail the core issue in any situation |
| 16 (A2) | 7 (4.46) | Being able to work with senior staff without being intimidated |
| 8 (A1) | 7 (4.46) | Being willing to take responsibility for projects, including how they turn out |
| 19 (A2) | 9 (4.43) | Being able to develop and contribute positively to team-based projects |
| 6 (A1) | 10 (4.42) | A willingness to persevere when things are not working out as anticipated |
| 12 (A2) | 11 (4.41) | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 14 (A2) | 11 (4.41) | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 11 (A1) | 11 (4.41) | Having a sense of humour and being able to keep work in perspective |
| 13 (A2) | 11 (4.41) | A willingness to listen to different points of view before coming to a decision |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, six items with a mean importance rating below 4.0. Table three lists these six capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that even the lowest capability item (32) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale. Further, they come from three scales (Scales A, B and D), mostly from Scale D – generic skills and knowledge.

**Table 3: Lowest importance items (all professions)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 18 (A2) | 33 3.99 | Being able to motivate others to achieve great things |
| 33 (D) | 34 3.90 | Being able to make effective presentations to clients |
| 20 (B) | 35 3.89 | Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 36 (D) | 36 3.88 | An ability to help others learn in the workplace |
| 5 (A1) | 37 3.84 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 32 (D) | 38 3.79 | An ability to chair and participate constructively in meetings |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table four.

**Table 4: Items ranked high on importance and low on university focus (all professions)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 4 (A1) | 4.63 | 2.90 | Being able to remain calm under pressure or when things go wrong |
| 16 (A2) | 4.46 | 2.62 | Being able to work with senior staff without being intimidated |
| 11 (A1) | 4.41 | 2.88 | Having a sense of humour and being able to keep work in perspective |
| 22 (B) | 4.39 | 2.95 | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 35 (D) | 4.19 | 2.99 | Knowing how to manage projects into successful implementation |
| 3 (A1) | 4.16 | 2.78 | Being confident to take calculated risks and take on new projects |
| 9 (A1) | 4.16 | 2.78 | An ability to make a hard decision |
| 10 (A1) | 4.15 | 2.79 | A willingness to pitch in and undertake menial tasks when needed |
| 17 (A2) | 4.14 | 2.57 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 2 (A1) | 4.13 | 2.80 | Understanding my personal strength and limitations |
| 34 (D) | 4.08 | 2.70 | Understanding the role of risk management and litigation in current professional work |
| 37 (D) | 4.06 | 2.45 | Understanding how organisations like my current one operate |
| 23 (B) | 4.04 | 2.95 | Being able to diagnose what is really causing a problem and then test this out in action |
| 15 (A2) | 4.01 | 2.44 | Understanding how the different groups that make up my organisation operate and how much influence they have indifferent situations |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.67 and up which is above the neutral point.

Table 5 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 5: Items ranked high both on importance and university focus (all professions)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 38 (D) | 4.75 | 3.53 | Being able to organise my work and manage time effectively |
| 7 (A1) | 4.69 | 3.85 | Wanting to produce as good a job as possible |
| 27 (B) | 4.66 | 3.65 | Being able to set and justify priorities |
| 21 (B) | 4.53 | 3.54 | Being able to identify from a mass of detail the core issue in any situation |
| 13 (A2) | 4.41 | 3.51 | A willingness to listen to different points of view before coming to a decision |

**4.2 Results successful graduates in accounting**

Table six identifies the twelve capability items ranked **highest on importance** for effective performance by successful accounting graduates. Seven out of the twelve items come from the Emotional Intelligence Scale (A), specifically, four come from Personal Emotional Intelligence (A1) and three from Interpersonal Emotional Intelligence (A2). A further three items relate to the Intellectual Ability Scale (B) and another two out of the top twelve items of importance come from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, the top

items are fairly equally distributed across these three scales with a slight dominance of Scale A.

**Table 6: Top 12 importance items (accounting)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 1 (A1) | 1 (4.88) | Being willing to face and learn from my errors and listen openly to feedback |
| 16 (A2) | 2 (4.80) | Being able to work with senior staff without being intimidated |
| 38 (D) | 3 (4.77) | Being able to organise my work and manage time effectively |
| 4 (A1) | 4 (4.75) | Being able to remain calm under pressure or when things go wrong |
| 27 (B) | 5 (4.71) | Being able to set and justify priorities |
| 21 (B) | 6 (4.64) | Being able to identify from a mass of detail the core issue in any situation |
| 12 (A2) | 7 (4.53) | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 7 (A1) | 8 (4.50) | Wanting to produce as good a job as possible |
| 19 (A2) | 9 (4.47) | Being able to develop and contribute positively to team-based projects |
| 30 (D) | 10 (4.46) | Being able to use IT effectively to communicate and perform key work functions |
| 8 (A1) | 11 (4.44) | Being willing to take responsibility for projects, including how they turn out |
| 26 (B) | 12 (4.42) | Being able to see how apparently unconnected activities are linked and make up an overall picture |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, nine items with a mean importance rating below 4.0. Table seven lists these nine capability items ranked lowest on importance for successful professional performance. It is noteworthy, though, that even the lowest capability item (5) still attracts an importance

rating well above the neutral position (3) on the five point Likert Scale. Further, they come from three scales (Scales A, B and D) thus there is not one scale that dominates in this aspect.

**Table 7: Lowest importance items (accounting)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 10 (A1) | 30 3.94 | A willingness to pitch in and undertake menial tasks when needed |
| 17 (B) | 31 3.93 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 35 (D) | 32 3.92 | Knowing how to manage projects into successful implementation |
| 32 (D) | 33 3.85 | An ability to chair and participate constructively in meetings |
| 34 (D) | 33 3.85 | Understanding the role of risk management and litigation in current professional work |
| 36 (D) | 33 3.85 | An ability to help others learn in the workplace |
| 18 (A2) | 36 3.80 | Being able to motivate others to achieve great things |
| 28 (B) | 37 3.79 | An ability to recognise patterns in a complex situation |
| 5 (A1) | 38 3.67 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table eight.

**Table 8: Items ranked high on importance and low on university focus (accounting)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 1 (A1) | 4.88 | 2.81 | Being willing to face and learn from my errors and listen openly to feedback |
| 16 (A2) | 4.80 | 2.73 | Being able to work with senior staff without being intimidated |
| 26 (B) | 4.42 | 2.62 | Being able to see how apparently unconnected activities are linked and make up an overall picture |
| 23 (B) | 4.29 | 2.93 | Being able to diagnose what is really causing a problem and then to test this out in action |
| 14 (A2) | 4.27 | 2.93 | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 3 (A1) | 4.19 | 2.69 | Being confident to take calculated risks and take on new projects |
| 37 (D) | 4.15 | 2.62 | Understanding how organisations like my current one operate |
| 15 (A2) | 4.13 | 2.73 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.67 and up which is above the neutral point.

Table nine shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 9: Items ranked high both on importance and university focus (accounting)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 38 (D) | 4.77 | 3.77 | Being able to organize my work and manage time effectively |
| 27 (B) | 4.71 | 3.57 | Being able to set and justify priorities |
| 21 (B) | 4.64 | 3.79 | Being able to identify from a mass of detail the core issue in any situation |
| 12 (A2) | 4.53 | 3.87 | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 7 (A1) | 4.50 | 3.69 | Wanting to produce as good a job as possible |
| 19 (A2) | 4.47 | 3.73 | Being able to develop and contribute positively to team-based projects |
| 8 (A1) | 4.44 | 4.00 | Being willing to take responsibility for projects, including how they turn out |
| 6 (A1) | 4.25 | 3.56 | A willingness to persevere when things are not working out as anticipated |
| 29 (B) | 4.15 | 3.54 | Having a high level of current technical expertise relevant to my work area |
| 33 (D) | 4.15 | 3.77 | Being able to make effective presentations to clients |

### 4.3 Results successful graduates in architecture

Table ten identifies the twelve capability items ranked **highest on importance** for effective performance by successful graduates in architecture. Eight out of the twelve items come from the Emotional Intelligence Scale (A), specifically, five come from Personal Emotional Intelligence (A1) and three from Interpersonal Emotional Intelligence (A2). A further two items relate to the Intellectual Ability Scale (B) and another two out of the top twelve items of importance come from the Generic Skills and

Knowledge Scale (D).  Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A, in particular A1, dominates the top capability items.

**Table 10: Top 12 importance items (architecture)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 7 (A1) | 1 (4.90) | Wanting to produce as good a job as possible |
| 4 (A1) | 2 (4.75) | Being able to remain calm under pressure or when things go wrong |
| 27 (B) | 2 (4.75) | Being able to set and justify priorities |
| 38 (D) | 2 (4.75) | Being able to organise my work and manage time effectively |
| 8 (A1) | 5 (4.70) | Being willing to take responsibility for projects, including how they turn out |
| 16 (A2) | 5 (4.70) | Being able to work with senior staff without being intimidated |
| 1 (A1) | 7 (4.68) | Being willing to face and learn from my errors and listen openly to feedback |
| 19 ((A2) | 8 (4.65) | Being able to develop and contribute positively to team-based projects |
| 33 (D) | 8 (4.65) | Being able to make effective presentations to clients |
| 6 (A1) | 10 (4.60) | A willingness to persevere when things are not working out as anticipated |
| 18 (A2) | 10 (4.60) | Being able to motivate others to achieve great things |
| 21 (B) | 10 (4.60) | Being able to identify from a mass of detail the core issue in any situation |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale.  There were, however, five items with a mean importance rating below 4.0.  Table eleven lists these five capability items ranked **lowest on importance** for successful professional performance.  It is noteworthy, though, that even the lowest capability item (29) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale.  Further, they come from three scales (Scales A, C and D) thus there is no item representing Scale B – intellectual capabilities.

**Table 11: Lowest importance items (architecture)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 34 (D) | 34 3.95 | Understanding the role of risk management and litigation in current professional work |
| 15 (A2) | 35 3.90 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 30 (D) | 35 3.90 | Being able to use IT effectively to communicate and perform key work functions |
| 5 (A1) | 37 3.65 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 29 (C) | 37 3.65 | Having a high level of current technical expertise to my work area |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table twelve.

**Table 12: Items ranked high on importance and low on university focus (architecture)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 18 (A2) | 4.60 | 2.80 | Being able to motivate others to achieve great things |
| 12 (A2) | 4.55 | 2.75 | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 17 (A2) | 4.50 | 2.85 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 14 (A2) | 4.47 | 2.58 | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 2 (A1) | 4.30 | 2.55 | Understanding my personal strengths and limitations |
| 35 (D) | 4.30 | 2.40 | Knowing how to manage projects into successful implementation |
| 10 (A1) | 4.20 | 2.95 | A willingness to pitch in and undertake menial tasks when needed |
| 32 (D) | 4.20 | 2.20 | An ability to chair and participate constructively in meetings |
| 9 (A1) | 4.10 | 2.55 | An ability to make a hard decision |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.65 and up which is above the neutral point.

Table thirteen shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 13: Items ranked high both on importance and university focus (architecture)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 7 (A1) | 4.90 | 4.55 | Wanting to produce as good a job as possible |
| 27 (B) | 4.75 | 4.00 | Being able to set and justify priorities |
| 38 (D) | 4.75 | 3.90 | Being able to organise my work and manage time effectively |
| 8 (A1) | 4.70 | 3.75 | Being willing to take responsibility for projects, including how they turn out |
| 19 (A2) | 4.65 | 3.75 | Being able to develop and contribute positively to team-based projects |
| 33 (D) | 4.65 | 3.95 | Being able to make effective presentations to clients |
| 6 (A1) | 4.60 | 3.70 | A willingness to persevere when things are not working out as anticipated |
| 31 (D) | 4.05 | 4.10 | Being able to manage my own ongoing learning and development |

## 4.4 Results successful graduates in education

Table fourteen identifies the twelve capability items ranked **highest on importance** for effective performance by successful graduates in primary education. Ten out of the twelve items come from the Emotional Intelligence Scale (A), specifically, six come from Personal Emotional Intelligence (A1) and four from Interpersonal Emotional Intelligence (A2).  One item relates to the Intellectual Ability Scale (B) and another one out of the top twelve items of importance comes from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A and particularly Scale A1, clearly dominates the top items.

**Table 14: Top 12 importance items (education)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 38 (D) | 1 (4.95) | Being able to organise my work and manage time effectively |
| 11 (A1) | 2 (4.86) | Having a sense of humour and being able to keep work in perspective |
| 7 (A1) | 3 (4.81) | Wanting to produce as good a job as possible |
| 12 (A2) | 4 (4.75) | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 19 (A2) | 4 (4.75) | Being able to develop and contribute positively to team-based projects |
| 4 (A1) | 6 (4.71) | Being able to remain calm under pressure or when things go wrong |
| 27 (B) | 7 (4.70) | Being able to set and justify priorities |
| 1 ((A1) | 8 (4.67) | Being willing to face and learn from my errors and listen openly to feedback |
| 14 (A2) | 9 (4.65) | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 16 (A2) | 10 (4.55) | Being able to work with senior staff without being intimidated |
| 6 (A1) | 11 (4.52) | A willingness to persevere when things are not working out as anticipated |
| 10 (A1) | 11 (4.52) | A willingness to pitch in and undertake menial tasks when needed |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale.  There were, however, five items with a mean importance rating below 4.0.  Table fifteen lists these five capability items ranked **lowest on importance** for successful professional performance.  It is noteworthy, though, that even the lowest capability item (28) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale.  Further, they come from the four scales (Scales A, B, C and D) thus there is not one scale that dominates in this aspect.

**Table 15: Lowest importance items (education)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 32 (D) | 34 3.95 | An ability to chair and participate constructively in meetings |
| 5 (A1) | 35 3.90 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 26 (B) | 35 3.90 | Being able to see how apparently unconnected activities are linked and make up an overall picture |
| 29 (C) | 35 3.90 | Having a high level of current technical expertise to my work area |
| 28 (B) | 38 3.84 | An ability to recognise patterns in a complex situation |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table sixteen.

**Table 16: Items ranked high on importance and low on university focus (education)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 11 (A1) | 4.86 | 2.65 | Having a sense of humour and being able to keep work in perspective |
| 4 (A1) | 4.71 | 2.45 | Being able to remain calm under pressure or when things go wrong |
| 16 (A2) | 4.55 | 2.10 | Being able to work with senior staff without being intimidated |
| 6 (A1) | 4.52 | 2.62 | A willingness to persevere when things are not working out as anticipated |
| 10 (A1) | 4.52 | 2.57 | A willingness to pitch in and undertake menial tasks when needed |
| 17 (A2) | 4.45 | 2.20 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |

| | | | |
|---|---|---|---|
| 18 (A2) | 4.40 | 2.60 | Being able to motivate others to achieve great things |
| 22 (B) | 4.30 | 2.50 | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 36 (D) | 4.30 | 2.80 | An ability to help others learn in the workplace |
| 9 (A) | 4.29 | 2.38 | An ability to make a hard decision |
| 15 (A2) | 4.25 | 2.30 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 2 (A1) | 4.24 | 2.90 | Understanding my personal strengths and limitations |
| 3 (A1) | 4.24 | 2.62 | Being confident to take calculated risks and take on new projects |
| 21 (B) | 4.20 | 2.90 | Being able to identify from a mass of detail the core issue in any situation |
| 23 (B) | 4.20 | 2.45 | Being able to diagnose what is really causing the problem and then test this out in action |
| 37 (D) | 4.20 | 2.65 | Understanding how organisations like my current one operate |
| 24 (B) | 4.15 | 2.70 | An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable |
| 35 (D) | 4.15 | 2.95 | Knowing how to manage projects into successful implementation |
| 24 (B) | 4.15 | 2.70 | An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable |
| 35 (D) | 4.15 | 2.95 | Knowing how to manage projects into successful implementation |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.84 and up which is above the neutral point.

Table seventeen shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 17: Items ranked high both on importance and university focus (education)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 7 (A1) | 4.81 | 3.76 | Wanting to produce as good a job as possible |

**4.5 Results successful graduates in engineering**

Table eighteen identifies the twelve capability items ranked **highest on importance** for effective performance by successful engineering graduates. Eight out of the twelve items come from the Emotional Intelligence Scale (A), specifically, six come from Personal Emotional Intelligence (A1) and two from Interpersonal Emotional Intelligence (A2). A further two items relate to the Intellectual Ability Scale (B) and another two out of the top twelve items of importance come from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A and particularly Scale A1, clearly dominates the top items.

**Table 18: Top 12 importance items (engineering)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 19 (A2) | 1 (4.79) | Being able to develop and contribute positively to team-based projects |
| 1 (A1) | 2 (4.60) | Being willing to face and learn from my errors and listen openly to feedback |
| 38 (D) | 3 (4.57) | Being able to organise my work and manage time effectively |
| 2 (A1) | 4 (4.47) | Understanding my personal strengths and limitations |
| 4 (A1) | 5 (4.40) | Being able to remain calm under pressure or when things go wrong |
| 6 (A1) | 5 (4.40) | A willingness to persevere when things are not working out as anticipated |
| 8 (A1) | 5 (4.40) | Being willing to take responsibility for projects, including how they turn out |
| 27 ((B) | 8 (4.36) | Being able to set and justify priorities |
| 3 (A1) | 9 (4.33) | Being confident to take calculated risks and take on new projects |
| 20 (B) | 10 (4.31) | Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 14 (A2) | 11 (4.29) | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 31 (D) | 11 (4.29) | Being able to manage my own ongoing professional learning and development |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, eleven items with a mean importance rating below 4.0. Table nineteen lists these eleven capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that even the lowest capability item (34) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale. Further, they come from two scales (Scales A and D) thus these scales dominates in this aspect.

**Table 19: Lowest importance items (engineering)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 9 (A1) | 28 3.93 | Having an ability to make a hard decision |
| 13 (A2) | 28 3.93 | A willingness to listen to different points of view before coming to a decision |
| 32 (D) | 28 3.93 | An ability to chair and participate constructively in meetings |
| 33 (D) | 28 3.93 | Being able to make effective presentations to clients |
| 37 (D) | 32 3.79 | Understanding how organisations like my current one operate |
| 5 (A1) | 33 3.73 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 10 (A1) | 33 3.73 | A willingness to pitch in and undertake menial tasks when needed |
| 15 (A2) | 35 3.71 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 17 (A2) | 36 3.64 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 36 (D) | 36 3.64 | An ability to help others learn in the workplace |
| 34 (D) | 38 3.14 | Understanding the role of risk management and litigation in current professional work |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table twenty.

**Table 20: Items ranked high on importance and low on university focus (engineering)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 1 (A1) | 4.60 | 2.93 | Being willing to face and learn from my errors and listen openly to feedback |
| 2 (A1) | 4.47 | 2.80 | Understanding my personal strengths and limitations |
| 4 (A1) | 4.40 | 2.93 | Being able to remain calm under pressure or when things go wrong |
| 3 (A1) | 4.33 | 2.53 | Being confident to take calculated risks and take on new projects |
| 31 (D) | 4.29 | 2.86 | Being able to manage my own ongoing professional learning and development |
| 25 (B) | 4.14 | 2.36 | Being able to readjust a plan of action in the light of what happens as it is implemented |
| 35 (D) | 4.14 | 2.57 | Knowing how to manage projects into successful implementation |
| 16 (A2) | 4.07 | 2.64 | Being able to work with senior staff without being intimidated |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.14 and up which is above the neutral point.

Table 21 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 21: Items ranked high both on importance and university focus (engineering)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 19 (A2) | 4.79 | 4.07 | Being able to develop and contribute positively to team-based projects |
| 27 (B) | 4.36 | 3.79 | Being able to set and justify priorities |
| 7 (A1) | 4.27 | 3.87 | Wanting to produce as good a job as possible |
| 21 (B) | 4.14 | 3.71 | Being able to identify from a mass of detail the core issue in any situation |

## 4.6 Results successful graduates in information technology

Table 22 identifies the twelve capability items ranked **highest on importance** for effective performance by successful graduates in information technology. Five out of the twelve items come from the Emotional Intelligence Scale (A), specifically, four come from Personal Emotional Intelligence (A1) and one from Interpersonal Emotional Intelligence (A2).  A further five items relate to the Intellectual Ability Scale (B) and another two out of the top twelve items of importance come from the Generic Skills and Knowledge Scale (D).  Considering that Scale A has 19 items and Scales B and D has each nine items, Scale B dominates the top capability items.

**Table 22: Top 12 importance items (IT)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 1 (A1) | 1 (4.73) | Being willing to face and learn from my errors and listen openly to feedback |
| 8 (A1) | 1 (4.73) | Being willing to take responsibility for projects, including how they turn out |
| 19 (A2) | 3 (4.67) | Being able to develop and contribute positively to team-based projects |
| 23 (B) | 3 (4.67) | Being able to diagnose what is really causing a problem and then test this out in action |
| 22 (B) | 3 (4.67) | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 27 (B) | 6 (4.53) | Being able to set and justify priorities |
| 4 (A1) | 6 (4.53) | Being able to remain calm under pressure or when things go wrong |
| 24 ((B) | 8 (4.47) | An ability to trace out and assess the consequences of alternative courses of action and pick from this the most suitable one |
| 21 (B) | 8 (4.47) | Being able to identify from a mass of detail the core issue in any situation |
| 7 (A1) | 8 (4.47) | Wanting to produce as good a job as possible |
| 38 (D) | 8 (4.47) | Being able to organise my work and manage time effectively |
| 35 (D) | 8 (4.47) | Knowing how to manage projects into successful implementation |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, twelve items with a mean importance rating below 4.0. Table 23 lists these twelve capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that only the lowest capability item (10) attracts an importance rating below the neutral position (3) on the five point Likert Scale. Further, the low importance items come from four scales (Scales A, B, C and D) thus there is not one scale that dominates in this aspect.

**Table 23: Lowest importance items (IT)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 9 (A1) | 27 3.93 | An ability to make a hard decision |
| 18 (A2) | 27 3.93 | Being able to motivate others to achieve great things |
| 20 (B) | 27 3.93 | Knowing there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 33 (D) | 30 3.87 | Being able to make effective presentations to clients |
| 37 (D) | 30 3.87 | Understanding how organisations like my current one operate |
| 5 (A1) | 30 3.87 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 29 (C) | 33 3.80 | Having a high level of current technical expertise relevant to my work area |
| 11 (A1) | 33 3.80 | Having a sense of humour and being able to keep work in perspective |
| 15 (A2) | 33 3.80 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 36 (D) | 36 3.73 | An ability to help others learn in the workplace |
| 34 (D) | 37 3.27 | Understanding the role of risk management and litigation in current professional work |
| 10 (A1) | 38 2.92 | A willingness to pitch in and undertake menial tasks when needed |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table 24.

**Table 24: Items ranked high on importance and low on university focus (IT)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 1 (A1) | 4.73 | 2.53 | Being willing to face and learn from my errors and listen openly to feedback |
| 35 (D) | 4.47 | 2.93 | Knowing how to manage projects into successful implementation |
| 26 (B) | 4.33 | 2.73 | Being able to see how apparently unconnected activities are linked and make up an overall picture |
| 3 (A1) | 4.14 | 2.64 | Being confident to take calculated risks and take on new projects |
| 31 (D) | 4.13 | 2.67 | Being able to manage my own ongoing professional learning and development |
| 17 (A2) | 4.07 | 2.47 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 2 (A1) | 4.07 | 2.47 | Understanding my personal strengths and limitations |
| 16 (A2) | 4.07 | 2.13 | Being able to work with senior staff without being intimidated |

There was no item fitting the characteristics of low importance in professional practice (mean < 3) and high university focus (mean > 3.5).

Table 25 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 25: Items ranked high both on importance and university focus (IT)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 8 (A1) | 4.73 | 3.53 | Being willing to take responsibility for projects, including how they turn out |
| 19 (A2) | 4.67 | 4.29 | Being able to develop and contribute positively to team-based projects |
| 23 (B) | 4.67 | 4.00 | Being able to diagnose what is really causing a problem and then test this out in action |
| 24 (B) | 4.47 | 3.73 | Ability to trace out and assess the consequences of alternative courses of action and from this pick the one most suitable |
| 21 (B) | 4.47 | 3.53 | Being able to identify from a mass of detail the core issue in any situation |
| 13 (A2) | 4.27 | 3.53 | A willingness to listen to different points of view |
| 12 (A2) | 4.20 | 3.73 | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 30 (D) | 4.13 | 3.67 | Being able to use IT effectively to communicate and perform key work functions |

**4.7 Results successful graduates in journalism**

Table 26 identifies the twelve capability items ranked **highest on importance** for effective performance by successful graduates in journalism. Eight out of the twelve items come from the Emotional Intelligence Scale (A), specifically, seven come from Personal Emotional Intelligence (A1) and one from Interpersonal Emotional Intelligence (A2). A further three items relate to the Intellectual Ability Scale (B) and another one out of the top twelve items of importance come from the Generic Skills and Knowledge Scale

(D).  Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A and particularly Scale A1, clearly dominates the top capability items.

**Table 26: Top 12 importance items (journalism)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 4 (A1) | 1 (4.88) | Being able to remain calm under pressure or when things go wrong |
| 21 (B) | 2 (4.87) | Being able to identify from a mass of detail the core issue in any situation |
| 38 (D) | 3 (4.86) | Being able to organise my work and manage time effectively |
| 7 (A1) | 4 (4.78) | Wanting to produce as good a job as possible |
| 27 (B) | 5 (4.73) | Being able to set and justify priorities |
| 6 (A1) | 6 (4.47) | A willingness to persevere when things are not working out as anticipated |
| 8 (A1) | 6 (4.47) | Being willing to take responsibility for projects, including how they turn out |
| 1 (A1) | 8 (4.44) | Being willing to face and learn from my errors and listen openly to feedback |
| 22 (B) | 9 (4.40) | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 11 (A1) | 10 (4.38) | Having a sense of humour and being able to keep work in perspective |
| 13 (A2) | 11 (4.32) | A willingness to listen to different points of view before coming to a decision |
| 9 (A1) | 12 (4.31) | An ability to make a hard decision |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale.  There were, however, seventeen items with a mean importance rating below 4.0.  Table 27 lists these seventeen capability items ranked **lowest on importance** for successful professional performance. It is noteworthy that the two lowest capability item (32 and 33) attract an importance rating below the neutral position (3) on the five point Likert Scale.  Further, the low

importance items come from three scales (Scales A, B, C and D) thus all scales are represented.

**Table 27: Lowest importance items (journalism)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 26 (B) | 22 3.97 | Being able to see how apparently unconnected activities are linked and make up an overall picture |
| 37 (D) | 22 3.97 | Understanding how organisations like my current one operate |
| 31 (D) | 24 3.90 | Being able to manage my own ongoing professional learning and development |
| 35 (D) | 25 3.86 | Knowing how to manage projects into successful implementation |
| 28 (B) | 26 3.80 | An ability to recognise patterns in a complex situation |
| 30 (D) | 27 3.79 | Being able to use IT effectively to communicate and perform key work functions |
| 20 (B) | 28 3.73 | Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 15 (A2) | 29 3.71 | Understanding how the different groups that make up my organisation operate and how much influence they have |
| 17 (A2) | 29 3.71 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 34 (D) | 31 3.66 | Understanding the role of risk management and litigation in current professional work |
| 29 (C) | 32 3.62 | Having a high level of current technical expertise to my work area |
| 23 (B) | 33 3.47 | Being able to diagnose what is really causing a problem and then test this out in action |
| 18 (A2) | 34 3.39 | Being able to motivate others to achieve great things |
| 36 (D) | 35 3.36 | An ability to help others learn in the workplace |
| 5 (A1) | 36 3.19 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 33 (D) | 37 2.48 | Being able to make effective presentations to clients |
| 32 (D) | 38 2.31 | An ability to chair and participate constructively in meetings |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table 28.

**Table 28: Items ranked high on importance and low on university focus (journalism)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 4 (A1) | 4.88 | 2.91 | Being able to remain calm under pressure or when things go wrong |
| 22 (B) | 4.40 | 2.73 | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 11 (A1) | 4.38 | 2.50 | Having a sense of humour and being able to keep work in perspective |
| 9 (A1) | 4.31 | 2.94 | An ability to make a hard decision |
| 25 (B) | 4.30 | 2.90 | Being able to readjust a plan of action in the light of what happens as it is implemented |
| 10 (A1) | 4.22 | 2.81 | A willingness to pitch in and undertake menial tasks when needed |
| 16 (A2) | 4.19 | 2.61 | Being able to work with senior staff without being intimidated |
| 3 (A1) | 4.19 | 2.81 | Being confident to take calculated risks and take on new projects |
| 14 (A2) | 4.10 | 2.77 | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 24 (B) | 4.07 | 2.93 | An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable |

There was no item fitting the characteristics of low importance in professional practice (mean < 3) and high university focus (mean > 3.5).

Table 29 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 29: Items ranked high both on importance and university focus (journalism)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 21 (B) | 4.87 | 3.67 | Being able to identify from a mass of detail the core issue in any situation |
| 38 (D) | 4.86 | 3.55 | Being able to organise my work and manage time effectively |
| 7 (A1) | 4.78 | 4.06 | Wanting to produce as good a job as possible |
| 8 (A1) | 4.47 | 3.72 | Being willing to take responsibility for projects, including how they turn out |
| 13 (A2) | 4.32 | 3.68 | A willingness to listen to different points of view before coming to a decision |

## 4.8 Results successful graduates in law

Table 30 identifies the fourteen capability items ranked **highest on importance** for effective performance by successful law graduates. Seven out of the fourteen items come from the Emotional Intelligence Scale (A), specifically, six come from Personal Emotional Intelligence (A1) and one from Interpersonal Emotional Intelligence (A2). A further four items relate to the Intellectual Ability Scale (B) and one out of the top fourteen items of importance comes from the Profession Specific Skills and Knowledge Scale (C) and the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, the top items are fairly equally distributed across the four scales with a slight dominance of Scale A1 and B.

**Table 30: Top 14 importance items (law)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 21 (B) | 1 (4.84) | Being able to identify from a mass of detail the core issue in any situation |
| 7 (A1) | 2 (4.77) | Wanting to produce as good a job as possible |
| 38 (D) | 3 (4.72) | Being able to organise my work and manage time effectively |
| 27 (B) | 4 (4.68) | Being able to set and justify priorities |
| 29 (C) | 5 (4.56) | Having a high level of current technical expertise relevant to my work area |
| 4 (A1) | 6 (4.54) | Being able to remain calm under pressure or when things go wrong |
| 6 (A1) | 7 (4.50) | A willingness to persevere when things are not working out as anticipated |
| 1 ((A1) | 8 (4.46) | Being willing to face and learn from my errors and listen openly to feedback |
| 24 (B) | 9 (4.44) | An ability to trace out and assess the consequences of alternative courses of action, and, from this, pick the one most suitable |
| 8 (A1) | 10 (4.40) | Being willing to take responsibility for projects, including how they turn out |
| 16 (A1) | 10 (4.40) | Being able to work with senior staff without being intimidated |
| 19 (A2) | 10 (4.40) | Being able to develop and contribute positively to team-based projects |
| 22 (B) | 10 (4.40) | An ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, ten items with a mean importance rating below 4.0. Table 31 lists these ten capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that even the lowest capability item (20) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale. Further, they come from three scales (Scales A, B and D) thus there is not one scale that dominates in this aspect.

**Table 31: Lowest importance items (law)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 25 (B) | 29 3.96 | Being able to readjust a plan of action in the light of what happens as it is implemented |
| 33 (D) | 29 3.96 | Being able to make effective presentations to clients |
| 9 (A1) | 31 3.92 | An ability to make a hard decision |
| 15 (A2) | 31 3.92 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 18 (A2) | 33 3.88 | Being able to motivate others to achieve great things |
| 23 (B) | 33 3.88 | Being able to diagnose what is really causing a problem and then to test this out in action |
| 32 (D) | 33 3.88 | An ability to chair and participate constructively in meetings |
| 37 (D) | 33 3.88 | Understanding how organisations like my current one operate |
| 36 (D) | 37 3.80 | An ability to help others learn in the workplace |
| 20 (B) | 38 3.64 | Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**.  The items which meet these criteria are presented in Table 32.

**Table 32: Items ranked high on importance and low on university focus (law)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 4 (A1) | 4.54 | 2.96 | Being able to remain calm under pressure or when things go wrong |
| 1 (A1) | 4.46 | 2.42 | Being willing to face and learn from my errors and listen openly to feedback |
| 16 (A2) | 4.40 | 2.44 | Being able to work with senior staff without being intimidated |
| 37 (D) | 4.38 | 2.96 | Knowing how to manage projects into successful implementation |
| 3 (A1) | 4.19 | 2.35 | Being confident to take calculated risks and take on new projects |
| 5 (A1) | 4.19 | 2.92 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 11 (A1) | 4.19 | 2.68 | Having a sense of humour and being able to keep work in perspective |
| 36 () | 4.16 | 2.32 | Understanding the role of risk management and litigation in current professional work |
| 2 (A1) | 4.15 | 2.468 | Understanding personal strengths and limitations |
| 17 (A2) | 4.04 | 2.40 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 10 (A1) | 4.04 | 2.46 | A willingness to pitch in and undertake menial tasks when needed |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.64 and up which is above the neutral point.

Table 33 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 33: Items ranked high both on importance and university focus (law)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 21 (B) | 4.84 | 4.36 | Being able to identify from a mass of detail the core issue in any situation |
| 29 (C) | 4.56 | 3.96 | Having a high level of current technical expertise relevant to my work area |
| 27 (B) | 4.68 | 3.92 | Being able to set and justify priorities |
| 7 (A1) | 4.77 | 3.88 | Wanting to produce as good a job as possible |
| 31 (D) | 4.16 | 3.64 | Being able to manage my ongoing professional learning and development |
| 13 (B) | 4.32 | 3.52 | A willingness to listen to different points of view before coming to a decision |

**4.9 Results successful graduates in nursing**

Table 34 identifies the twelve capability items ranked **highest on importance** for effective performance by successful nursing graduates. Eight out of the twelve items come from the Emotional Intelligence Scale (A), specifically, four come from Personal Emotional Intelligence (A1) and four from Interpersonal Emotional Intelligence (A2). A further three items relate to the Intellectual Ability Scale (B) and another one out of the top twelve items of importance comes from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, Scale A dominates the top capability items.

**Table 34: Top 12 importance items (nursing)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 12 (A2) | 1 (4.94) | The ability to empathise and work productively with people from a wide range of backgrounds |
| 1 (A1) | 2 (4.88) | Being willing to face and learn from my errors and listen openly to feedback |
| 38 (D) | 3 (4.82) | Being able to organise my work and manage time effectively |
| 13 (A2) | 4 (4.76) | A willingness to listen to different points of view before coming to a decision |
| 27 (B) | 4 (4.76) | Being able to set and justify priorities |
| 14 (A2) | 6 (4.73) | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 22 (B) | 7 (4.71) | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 4 (A1) | 8 (4.65) | Being able to remain calm under pressure or when things go wrong |
| 7 (A1) | 8 (4.65) | Wanting to produce as good a job as possible |
| 25 (B) | 8 (4.65) | Being able to readjust a plan of action in the light of what happens as it is implemented |
| 11 (A1) | 11 (4.63) | Having a sense of humour and being able to keep work in perspective |
| 15 (A2) | 11 (4.63) | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, seven items with a mean importance rating below 4.0. Table 35 lists these seven capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that even the lowest capability item (32) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale. Further, they

come from three scales (Scales A, B and D), mostly from Scale D – Generic Skills and Knowledge.

**Table 35: Lowest importance items (nursing)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 18 (A2) | 32 3.94 | Being able to motivate others to achieve great things |
| 3 (A1) | 33 3.88 | Being confident to take calculated risks and take on new projects |
| 20 (B) | 33 3.88 | Knowing there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 33 (D) | 35 3.81 | Being able to make effective presentations to clients |
| 35 (D) | 36 3.75 | Knowing how to manage projects into successful implementation |
| 30 (D) | 37 3.63 | Being able to use IT effectively to communicate and perform key work functions |
| 32 (D) | 38 3.47 | An ability to chair and participate constructively in meetings |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table 36.

**Table 36: Items ranked high on performance and low on university focus (nursing)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 4 (A1) | 4.65 | 2.50 | Being able to remain calm under pressure or when things go wrong |
| 5 (A1) | 4.29 | 2.53 | Having the ability to defer judgement and not to jump in too quickly to resolve a problem |
| 11 (A1) | 4.63 | 2.82 | Having a sense of humour and being able to keep work in perspective |
| 16 (A2) | 4.53 | 2.69 | Being able to work with senior staff without being intimidated |
| 17 (A2) | 4.53 | 2.87 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 22 (B) | 4.71 | 2.59 | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 28 (B) | 4.35 | 2.94 | An ability to recognise patterns in a complex situation |
| 37 (D) | 4.35 | 2.53 | Understanding how organisations like my current one operate |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.47 and up which is above the neutral point.

Table 37 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 37: Items ranked high both on importance and university focus (nursing)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 7 (A1) | 4.65 | 3.81 | Wanting to produce as good a job as possible |
| 12 (A2) | 4.94 | 3.63 | The ability to empathise with and work productively with people from a wide range of backgrounds |
| 14 (A2) | 4.73 | 3.56 | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 27 (B) | 4.76 | 3.93 | Being able to set and justify priorities |
| 34 (D) | 4.44 | 3.53 | Understanding the role of risk management and litigation in current professional work |
| 38 (D) | 4.82 | 3.63 | Being able to organise my work and manage time effectively |

## 4.10    Results successful graduates in the sport industry

Table 38 identifies the twelve capability items ranked **highest on importance** for effective performance by successful sports industry graduates. Six out of the twelve items come from the Emotional Intelligence Scale (A), specifically, four come from Personal Emotional Intelligence (A1) and two from Interpersonal Emotional Intelligence (A2).  A further three items relate to the Intellectual Ability Scale (B) and another three out of the top twelve items of importance come from the Generic Skills and Knowledge Scale (D). Considering that Scale A has 19 items and Scales B and D has each nine items, the top items are fairly equally distributed across these three scales.

**Table 38: Top 12 importance items (sport)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 38 (D) | 1 (4.92) | Being able to organise my work and manage time effectively |
| 27 (B) | 2 (4.75) | Being able to set and justify priorities |
| 14 (A2) | 3 (4.71) | Being able to develop and use networks of colleagues to help me solve key workplace problems |
| 4 (A1) | 4 (4.68) | Being able to remain calm under pressure or when things go wrong |
| 7 (A1) | 5 (4.67) | Wanting to produce as good a job as possible |
| 8 (A1) | 5 (4.67) | Being willing to take responsibility for projects, including how they turn out |
| 35 (D) | 5 (4.67) | Knowing how to manage projects into successful implementation |
| 25 ((B) | 8 (4.58) | Being able to readjust a plan of action in the light of what happens as it is implemented |
| 11 (A1) | 9 (4.54) | Having a sense of humour and being able to keep work in perspective |
| 22 (B) | 10 (4.50) | The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn |
| 16 (A2) | 11 (4.46) | Being able to work with senior staff without being intimidated |
| 37 (D) | 11 (4.46) | Understanding how organisations like my current one operate |

The majority of items had a mean importance rating above 4.0 which is between 'moderately high' and 'high' on the five point Likert Scale. There were, however, five items with a mean importance rating below 4.0. Table 39 lists these five capability items ranked **lowest on importance** for successful professional performance. It is noteworthy, though, that even the lowest capability item (36) still attracts an importance rating well above the neutral position (3) on the five point Likert Scale. Further, they come from three scales (Scales A, B and D) thus there is not one scale that dominates in this aspect.

**Table 39: Lowest importance items (sport)**

| Item no (Scale) | Importance rank (Mean) | Item description |
|---|---|---|
| 2 (A1) | 34 3.96 | Understanding my personal strengths and limitations |
| 28 (B) | 34 3.96 | An ability to recognize patterns in a complex situation |
| 20 (B) | 36 3.92 | Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project |
| 17 (A2) | 37 3.83 | Being able to give constructive feedback to work colleagues and others without engaging in personal blame |
| 36 (D) | 38 3.75 | An ability to help others learn in the workplace |

Items rated high on importance for successful professional practice (mean > 4) but rated low on the extent to which the university course focused on this item (mean < 3) identify **potential areas for enhancement**. The items which meet these criteria are presented in Table 40.

**Table 40: Items ranked high on importance and low on university focus (sport)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 16 (A2) | 4.46 | 2.92 | Being able to work with senior staff without being intimidated |
| 6 (A1) | 4.42 | 2.71 | A willingness to persevere when things are not working out as anticipated |
| 10 (A1) | 4.42 | 2.78 | A willingness to pitch in and undertake menial tasks when needed |
| 1 (A1) | 4.32 | 2.92 | Being willing to face and learn from my errors and listen openly to feedback |
| 34 (D) | 4.29 | 2.67 | Understanding the role of risk management and litigation in current professional work |
| 9 (A1) | 4.21 | 2.92 | An ability to make a hard decision |
| 15 (A2) | 4.17 | 2.78 | Understanding how the different groups that make up my organisation operate and how much influence they have in different situations |
| 18 (A2) | 4.17 | 2.88 | Being able to motivate others to achieve great things |
| 32 (D) | 4.04 | 2.58 | An ability to chair and participate constructively in meetings |
| 5 (A1) | 4.04 | 2.84 | Having the ability to defer judgment and not to jump in too quickly to resolve a problem |

There was no item fitting the characteristics of low importance in professional practice and high university focus as the mean importance rating for all items was 3.22 and up which is above the neutral point.

Table 41 shows items that rank high both on importance (mean > 4) and university focus (mean > 3.5) identifying **potential areas of good practice.**

**Table 41: Items ranked high both on importance and university focus (sport)**

| Item no (Scale) | Mean Importance | Mean University focus | Item description |
|---|---|---|---|
| 33 (D) | 4.25 | 4.00 | Being able to make effective presentations to clients |
| 21 (B) | 4.38 | 3.92 | Being able to identify from a mass of detail the core issue in any situation |
| 13 (A2) | 4.29 | 3.92 | A willingness to listen to different points of view before coming to a decision |
| 19 (A2) | 4.33 | 3.83 | Being able to develop and contribute positively to team-based projects |
| 38 (D) | 4.92 | 3.79 | Being able to organize my work and manage time effectively |
| 27 (B) | 4.75 | 3.75 | Being able to set and justify priorities |
| 11 (A1) | 4.54 | 3.70 | Having a sense of humour and being able to keep work in perspective |
| 7 (A1) | 4.67 | 3.67 | Wanting to produce as good a job as possible |
| 24 (B) | 4.17 | 3.63 | An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable |
| 8 (A1) | 4.67 | 3.58 | Being willing to take responsibility for projects, including how they turn out |
| 30 (D) | 4.42 | 3.58 | Being able to use IT effectively to communicate & perform key work functions |
| 35 (D) | 4.67 | 3.54 | Knowing how to manage projects into successful implementation |

## 4.11    The place of Professional Specific Skills and Knowledge

In regard to the place of job specific skills and knowledge (Scale C) measured by Item 29, the ranking for importance for all professions is 28/38 which is relatively low.  When analysing the place of these skills and knowledge for each profession (see Table 42) it appears that in each case they are ranked towards the lower end of the importance list

with the exception of law.  It is noteworthy, however, that the mean importance ratings are well above 3.50 on the Likert scale, thus between moderately high and high.

**Table 42: Place of Item 29 on importance by profession**

| Profession | Rank order/38 | Mean Importance |
|---|---|---|
| Accounting | 25 | 4.15 |
| Architecture | 38 | 3.65 |
| Education | 37 | 3.90 |
| Engineering | 27 | 4.00 |
| Information Technology | 33 | 3.80 |
| Journalism | 32 | 3.62 |
| Law | 6 | 4.56 |
| Nursing | 27 | 4.38 |
| Sport Management | 29 | 4.08 |
| All Professions | 28 | 4.06 |

This indicates that having a high level of disciplinary knowledge is assumed but not sufficient for successful professional practice.  It needs to be complimented with having capabilities in the other domains such as emotional intelligence, cognitive skills and creative thinking for high performance in the workplace.  It is difficult to explain why successful graduates in law rate the importance of disciplinary knowledge relatively high.  It could be that high performance in their profession relies more on disciplinary knowledge than in other professions, however the same argument could be used for accounting and engineering, professions which require a high level of technical knowledge but receive a lower importance ranking.

**4.12    Comparisons and contrasts of most important capabilities**

One of the main aims of the present study is to identify the capabilities that are seen as most important by successful graduates in the early stages of their career across a wide range of professions.  This section compares and contrasts the top importance items identified by the different professions.  The results indicate that although each profession has its own unique set of top capabilities there are some common features.  In all sub-studies, with the exception of law, it is evident that the top capabilities come from three

domains: Emotional Intelligence, Way of Thinking and Generic Skills and Knowledge. Professional Specific Skills and Knowledge are consistently rated lower on importance for effective professional practice. When comparing the relative importance of the different domains, it is Emotional Intelligence that dominates the majority of professions, thus, it seems that well developed personal and interpersonal capabilities are imperative for effective professional performance in a range of professions. This is clearly supported by Table 2 in which the top importance items for all professions are listed. As mentioned previously, eleven out of these fourteen items (almost 80%!) relate to Emotional Intelligence - a clear indication of the level of dominance. In certain professions, such as primary education and nursing with a strong focus on nurturing students and caring for patients, this seems a plausible finding. It is most interesting, however, that in other professions with a strong focus on numbers and materials such as accounting and engineering, the same type of capabilities dominates. Some of the top important capabilities common to a range of professions are: *Being willing to face and learn from my errors and listen openly to feedback, being able to remain calm under pressure or when things go wrong, wanting to produce as good a job as possible, the ability to empathise with and work productively with people from a range of backgrounds, being able to work with senior staff without being intimidated* and *being able to develop and contribute positively to team-based projects.*

It is noteworthy that in two professions, law and information technology, the capability domain Way of Thinking (B) plays a dominant role. Capabilities such as *Being able to identify from a mass of detail the core issue in any situation, an ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable* and *being able to set and justify priorities* are perceived as pertinent for effective performance. This can be explained by the need for superior logical thinking and creative reasoning skills in the context of these particular professions.

When examining the lowest importance capabilities it is evident that there is a specific set of capabilities for the unique context of each profession. There are, however, several items that consistently receive a low ranking which relate to leadership capabilities such as chairing meetings or motivating others to achieve and learn. They may be less

important because the successful graduates are still in the early stages of their career and may not take a leadership role yet.

It is interesting to note that across all professions there was not one capability item which was rated as low importance for successful practice and rated high on university focus. In other words, universities does not seem to focus on developing capabilities that are seen as unimportant for effective professional practice. This is good news. On the other hand, there are a number of items in each profession which are seen as important for successful practice but do not receive adequate focus at university. They were labeled as potential areas of enhancement. Capability items labeled as potential areas enhancement as well as items labeled as potential areas of good practice have strong implications for reviewing undergraduate programs. This issue is further discussed in the next chapter.

Finally, it should be emphasised that, although the overall number of respondents to the survey is fairly robust, the number of subjects in each specific profession is rather small; therefore findings in each sub-study should be viewed as exploratory. It is suggested to scale up these studies in the future which will warrant more definite conclusions when interpreting the findings.

## 4.13    Educational quality

Successful graduates were also asked to rate a set of items on educational quality for importance and university focus. Their responses are summarized in Table 43 in terms of mean importance and university ratings. These results are for successful graduates of all professions.

**Table 43: Results Educational Quality Scale**

| Mean Importance | Mean University Focus | Item No and Description |
|---|---|---|
| 4.38 | 2.99 | 48. Make assessment more real-world and problem-based and less focused on memorising factual material |
| 4.33 | 2.51 | 40. Use real-life workplace problems identified by successful graduates as a key resource for learning |
| 4.26 | 2.99 | 47. Ensure that teaching staff have current workplace experience |
| 4.23 | 2.74 | 44. Include learning experiences based on real-life case studies that specifically develop the interpersonal and personal skills needed in my particular profession |
| 4.09 | 2.79 | 39. Focus more directly on the capabilities identified as being important by this study in university courses and assessment |
| 4.08 | 2.45 | 42. Use successful graduates more consistently as a learning resource in university courses (eg. as guest speakers) |
| 4.08 | 2.64 | 41. Make work-placements which test out the capabilities identified in this study a key focus in each course |
| 3.86 | 2.70 | 46. Ensure that all teaching staff model the key attributes identified as being important in this study |
| 3.81 | 2.64 | 49. Use performance on the capabilities identified as the most important in earlier parts of this study as the focus of assessment and feedback on all learning tasks |
| 3.67 | 2.73 | 45. When relevant, use IT to make learning as convenient and interactive as possible |
| 2.76 | 2.42 | 43. Decrease the amount of formal classroom teaching of basic technical skills and use self-instructional guides and IT to develop these |

Analysing the top three items of the table it appears that successful graduates perceive a close relationship with the workplace as highly important in terms of assessment of learning, content (workplace problems and scenarios) and background of the teaching staff. Further, the development of personal and interpersonal skills is viewed as highly important which is consistent with the results earlier mentioned in this chapter in relation to identification of the top important capabilities in which emotional intelligence dominated in most professions. When we consider the extent to which the university

focuses on these issues it is clear that there is a discrepancy between the two mean ratings which suggests another potential area of enhancing undergraduate programs at UTS.

## 5.0 Implications for enhancing undergraduate programs at UTS

### 5.1 Review of curriculum and assessment

Results of the present study can be used to review and enhance the validity of assessment and the relevance of the curriculum in undergraduate programs.  First of all, it is suggested that a profile of a graduate be developed based on the top importance capability data in the context of each specific profession.  Other relevant capability data such as CEQ data, Graduate Destination Survey and Course Advisory Committee data would be useful to consider also when developing the profession-specific profile. Subsequently, graduate capabilities mentioned in the graduate profile should be included and developed in the curriculum and given focus in assessment in undergraduate programs.  For example, in the undergraduate program for sport management, top importance capabilities such as understanding (sporting) organisations, setting priorities, managing projects, making effective presentations, contributing to team-based projects, using IT effectively and analysing the best option are all capabilities requiring a focus in assessment and inclusion in the curriculum.  They may be made explicit and listed as key assessment and learning objectives, be part of the formal classroom instruction or they may be addressed in the broader range of formal and informal learning experiences and part of the covert curriculum.

Further, the potential areas for enhancement should be considered.  As many of these items relate to Emotional Intelligence a decision needs to be made if the university sees it as their role to develop these capabilities and if so, how this can be done.  Should aspects of Emotional Intelligence be covered in one subject or in several subjects and how can they best be sequenced?  Some academics may perceive that it is not their task to develop this type of abilities or that this are personal attributes which cannot be learned. Goleman, Boyatzis & McKee (2002), however, state that emotional intelligence can be learned with the provision that some will be better at it than others.  Their research

indicates that developing these capabilities is essential for successful leadership in the workplace.  Further, it is clear from responses on the Educational Quality Scale that successful graduates perceive real-life learning experiences which develop personal and interpersonal skills as one of the most important experiences at university.

There are several other ways in which this study can enhance the curriculum and assessment.  At certain stages during their time at university, students' perceptions can be measured using the same Professional Capability Scale as that completed by the successful graduates.  Results of beginning students can provide a valuable insight in students' expectations and needs. By completing the same survey as the successful graduates as they enter university students can set their perceptions of what their chosen profession involves into a realistic context. This is an important component of expectations management. It can also be used to justify why assessment and the learning program which feeds it, is designed as it is. This process is further enhanced if one of the successful graduates addresses first year students, either face to face or on videotape.

## 5.2 Professional internships

The results of this study can also guide students' professional internships.  Awareness of the top importance items can assist the student to set relevant learning goals and outcomes for the internship.   Working towards developing certain key capabilities will make it a more meaningful experience.  In regard to assessing the internship, supervisors can be asked to evaluate the student on performance on these key capabilities.

Although emotional intelligence cannot be taught there is considerable evidence that it can be learnt – once students know the elements of it that are critical to effective early career practice. In this regard, professional internships have been found to provide the most appropriate context in which certain personal, interpersonal and generic skills can be developed, according to a recent study (Crebert, Bates, Bell, Patrick & Cragnolini, 2004).

For example, if both students and workplace supervisors are alerted to the top ranking items on Emotional Intelligence from the present study, these can be given focus when workplace performance is assessed. Supervisors can look at how students behave in these areas when things go wrong whilst they are on their practicum. Similarly students can self-assess against the same Emotional Intelligence 'hot spots' and compare their results with their supervisors.

## 5.3 Development of E-portfolio

Finally, it would be possible to use the results of the study and its professional capability framework to develop an E-portfolio for students. An E-portfolio is a virtual exhibition of a student's work which demonstrates his/her capabilities and has increasingly become an important outcome of university education at many universities. Items of the exhibition may include an essay with or without lecturer's comments, a research report, an evaluation of a practicum supervisor, photographs of a university project and a video clip of a student's performance. The professional capability framework (the four interlocked domains) can form the framework of the E-portfolio. The top importance items provide recommendations for aspects of capabilities that need to be developed in order to become a successful graduate in their specific profession.

# 6.0 Conclusion and recommendations

Using quantitative and qualitative data collected through in-depth interviews and an online survey of 194 successful graduates this research project has identified the capabilities which successful graduates identify as being most important for effective early career performance across a wide range of professions. Considering the top capabilities a profile can be developed for a successful graduate in the unique context of their profession. One of the key findings is that it is the combination of key elements of emotional intelligence, cognitive capabilities, generic and job specific skills and knowledge that is telling, not excellence in one domain. All faculty-specific sub-studies consistently identify emotional intelligence as a key component of effective early career professional performance. Yet this component of professional capability is not achieving

the attention it deserves in university assessment and learning. There are clear indications that key aspects of emotional intelligence may not be amenable to traditional classroom teaching but they are learnable, once students are alerted to which ones are critical to successful professional performance.  All parallel studies consistently show that possession of a high level of job specific skill and knowledge is necessary but it is not sufficient for professional success.

There is little doubt that the focus for quality in higher education is shifting from an analysis of inputs (e.g. subject content) to gauging the extent to which students are satisfied with the learning designs they experience and the support they receive whilst at university. The next predicted development will be the focus on outcomes – on the extent to which the total university experience has demonstrably added value to the capabilities students need for successful early career performance in their chosen profession or discipline. Thus, it is here that the distinctive 'backward mapping' strategy used in the present study provides one practical guide for the future of learning and teaching in higher education.

Based on the findings outlined in this report it is recommended that:
1. UTS adopt the Professional Capability Framework as established in this report as the conceptual framework for all UTS graduate profiles.
2. Consistent with the UTS Mission and this framework, all UTS Faculties develop one or more profession-specific graduate profiles based on the successful graduate capability data of the present study in conjunction with other relevant graduate capability data such as CEQ data, Graduate Destination Survey and Course Advisory Committee data.
3. All UTS Faculties use the evidence-based graduate profiles to review and enhance the relevance of the curriculum and the validity of assessment in undergraduate programs.
4. All UTS Faculties consider how to develop and include emotional intelligence, one of the key capabilities for successful professional practice, in the curriculum and assessment of undergraduate programs.

5. UTS professional internships or practica be guided by the successful graduate capability data and profiles in terms of developing learning goals and assessment.

6. All UTS Faculties develop an E-portfolio based on the Professional Capability Framework and the profession-specific graduate profiles.

7. PQU in collaboration with IML reviews and adjusts the UTS Successful Graduates Survey by developing six to eight questions per capability domain to ensure an appropriate balance of number of items per domain.

8. PQU in collaboration with IML supports the development and review of the graduate profiles by collecting and analysing the successful graduate tracking data every two years.

9. PQU in collaboration with IML and the UTS Faculties scale up the sub-studies to achieve a more robust number of respondents for each profession.

10. All UTS Faculties review the profession-specific graduate profile taking into consideration up-to-date evidence of successful graduates tracking data on a regular basis in line with their undergraduate program review.

# References

Australian Universities Quality Agency. (2004). *Audit Manuals.* Retrieved June 8, 2004 from
> http://www.auqa.edu.au.

Binney, G. & Williams, C. (1995). *Leaning into the future: changing the way people Change organisations*, Brearley, London.

Crebert, G., Bates, M., Bell, B., Patrick, C. & Cragnolini, V. (2004). Developing generic skills at university, during work placement and in employment: Graduates' perceptions. *Higher Education Research and Development 23* (2), 147-165.

Csikszentmihalyi, M. (1996). *Creativity: flow and the psychology of discovery & invention*, Harper Collins, New York

Damasio, A. (1994). *Descartes Error: emotion, reason & the human brain*, Picador, New York.

Department of Education, Science and Training. (2002). *Employability skills for the future*, Australian Government, AGPS, Canberra.

Department of Education, Training and Youth Affairs (1999). *Quality of Australian Higher Education,* AGPS, Canberra.

Dewey, J. (1933). *How we think*, Heath & Co, Lexington, Massachusetts.

Elmore, R.F. (1979). Backward mapping: implementation research and policy decisions, *Political Science Quarterly,* 94, 4, 601-16.

Foley, G (2000*). Understanding Adult Education and Training,* Allen & Unwin, Sydney.

Gardiner, H (1995). *Leading Minds,* Basic Books, New York.

Goleman, D. (1998). *Working with Emotional Intelligence*, Bloomsbury, London.

Goleman, D. (2000). Leadership that gets results, *Harvard Business Review*, March-April, 2000: 78 – 90.

Goleman, D., Boyatzis, R., and McKee, A. (2002). *Primal leadership: realizing the power of emotional intelligence,* Harvard Business School Press, Boston, MA.

Gonczi, A., Hager, P. & Oliver, L. (1990). *Establishing Competency Based Standards for the Professions*, NOOSR, DETYA .

Graduate Careers Council of Australia (2004). *Research Centre .* Retrieved June 7, 2004 from http:// www.gradlink.edu.au/content/view/full/57.

Huberman, M & Miles, M (2001): 'Data management and analysis methods', in Conrad, C et al (Eds) : *Qualitative Research in Higher Education*, Pearson, Boston, pp. 553 – 571.

Morgan, G (1988). *Riding the Waves of Change: Managerial competencies for a turbulent world,* Jossey Bass, San Francisco.

Schön, D. (1983). *The Reflective Practitioner,* Basic Books, New York.

Scott, G. (1996). 'Change, competence & education' in Ryan, G (Ed): *Learner Assessment & Program Evaluation*, APLN, Sydney, pp. 75-107.

Scott, G. (1999). *Change Matters: Making a Difference in Education & Training*, Allen & Unwin, Sydney.

Scott, G. (2003), Using successful graduates to improve the quality of curriculum and assessment in nurse education, *Australasian Nurse Educators Conference,* Rotarua, New Zealand, September.

Scott, G. & Yates, W. (2002). Using successful graduates to improve the quality of undergraduate engineering programs, *European Journal of Engineering Education,* 27, 4, 363-78.

Scott, G. & Wilson, D. N. (2002). Tracking and Profiling Successful IT Graduates: An Exploratory Study in Wenn, A., McGrath, M. & Burstein, F. (eds): *Enabling Organisations and Society through Information Systems - Proceedings of the 13th Australasian Conference on Information Systems*, Victoria University of Technology, Melbourne, December, pp. 1185-1195.

Tennant, M. (1991). Expertise as a dimension of adult development, *New Education*, 13, 2, 49-56.

Tough, A. (1979). *The Adults' Learning Project,* OISE Press, Toronto.

UK Centre for Research into Quality. (2004). Retrieved 8 June, 2004 from http://www.uce.ac.uk/crq.

University of Technology, Sydney. (2004a). *UTS Mission and strategy.* Retrieved 21 December, 2004 from http://www.uts.edu.au/about/mission.html.

University of Technology, Sydney. (2004b). *Surveys.* Retrieved 8 June, 2004 from http://www.pqu.uts.edu.au/surveys/index.html.

# APPENDIX A

**UTS Successful Graduates Research**

**Project Coordinator: Johanna Vescio**

**PROJECT BRIEF**

1. To scale up the current successful graduates research into new areas of UTS. Initial areas would include completing the Architecture study and then commencing Accounting in the Faculty of Business, Law and Humanities & Social Science.

2. To produce a 'one pager' which outlines the aims, methodology and benefits of the approach. This could also outline what has so far been done at UTS, some of the outcomes and the ATN and international replications of the research.

3. To discuss the methodology with other Faculties not yet involved with a view to identify where a study might best be undertaken in each Faculty.

4. To complete a report on the research for the School of Leisure, Sport and Tourism.

5. To commence a cross study analysis to identify where there are common or different patterns in the results.

6. To liaise with Josie Palermo from RMIT on how the ATN might scale up research in the areas of Engineering and Accounting.

7. To identify and document ways of actioning the findings in the UTS curriculum and assessment practices.

# APPENDIX B

## UTS Successful Graduates Research Project - pre-project overview

An investigation of successful graduates in the early stages of their career across a wide range of professions

**Purpose**

This project is being undertaken by the Planning and Quality Unit in partnership with UTS Faculties, professional bodies and employers. It consists of a linked set of studies tracking successful graduates in their first years after graduation in the unique context of each profession. The aims of the project are:

3. to identify the capabilities that are seen to be most important for successful professional practice in the first years after graduation;
4. to determine the extent to which the universities have focused on developing these capabilities;
5. to review the existing undergraduate curriculum in the light of the study's findings.

**Method**

The research is being guided by a comprehensive professional capability framework and involves a two-phase methodology: in-depth interviews and an online survey. Successful recent graduates of any university are selected by senior management of UTS industry partners. Criteria for selection include possession of an undergraduate degree in a specific discipline, two to five years out from graduation and successful/ high performance in professional practice as perceived by senior management.

**Benefits**

This research provides us with a better understanding of the learning content and experiences that are evidently relevant to subsequent professional practice. Through the findings profiles of successful graduates within a particular professional context as well as a profile of a successful graduate across professions can be developed. It will enable UTS, in an increasingly competitive higher education environment, to position itself in a more distinctive way, particularly in the area of practice-oriented education.

**Project progress**

So far studies have been completed in Engineering, Information Technology, Nursing, Midwifery and Health and Sport Management. Studies for Architecture and Law are nearing completion or scheduled for 2003-4. Preliminary results reveal that although a high level of technical/professional specific knowledge is necessary for successful practice it is clearly not sufficient. A range of 'emotional intelligence' and cognitive capabilities are being identified as crucial success factors.

**Links and networking**
The Australian Technology Network of Universities (ATN) is looking to undertake follow up studies in each university in the areas of engineering and accounting. A separate study on accounting has already been completed and published at Auckland University of Technology with a study of engineering by AUT and Auckland University about to commence. An extensive parallel study of 322 effective principals in the NSW Public Education System has also recently been completed.


Johanna Vescio
Project Co-ordinator
Senior Lecturer Faculty of Business
September 2003

# APPENDIX C

## Pro forma email message to industry partners in law

Dear

The Faculty of Law together with the Planning and Quality Unit at the University of Technology, Sydney (UTS) is currently conducting a research project in regard to tracking successful graduates and would like to invite you, as a key Industry Partner, to participate in this exciting project.

The aim of the project is:

1. To identify the capabilities which are seen to be most important for successful professional legal practice
2. To determine the extent to which UTS focuses on developing these capabilities and adjust the curriculum accordingly.

We are looking for successful (high performing) graduates who would like to participate in the project. They will be asked to fill in a questionnaire on-line, which will take approximately 20 minutes to complete. We are approaching you to nominate appropriate staff members.

Could you nominate one to five people in your firm with the following characteristics:

1. a successful (high performing) lawyer with an undergraduate degree in law from any university
2. Two to five years out from graduation.

Please note that we are not looking for UTS graduates only; they can be a graduate from any university including overseas.

If you can identify someone who "fits the bill", it would be greatly appreciated if you could send me her/his name, position at your firm and email address by **21 November 2003**.

The benefit to your firm is that you will receive a copy of the final report with results ie. capabilities of successful graduates in law, which may assist you with recruitment of new staff. In addition, you will be listed as a firm who employs high performing graduates.

Please note that all responses will be treated as being confidential and only aggregate data will be published.

If you need more information, don't hesitate to contact the project coordinator by telephone on 9514 5142 or by email on johanna.vescio@uts.edu.au.

Many thanks for your assistance and kind regards

Professor Andrew Mowbray     Johanna Vescio
Associate Dean, Faculty of Law    Project Coordinator
University of Technology, Sydney   Planning and Quality Unit
               University of Technology, Sydney

# APPENDIX D

## Successful Graduates Research Project  -Interview Schedule

# Questions for Graduate Selected

### Introduce purpose of interview
- To gather in views of successful performers approximately 3 years after they have graduated on what really makes a difference to their professional performance and what does not.
- To use this information to "backward map" to our university courses to make them more relevant and better delivered.

**Name:**

**Company:**

**Date:**

1. **Tell us briefly about your present work and what you have been doing since you joined the company**

2. **Why do you think you were selected as being such an effective employee?** What is it about you and how you handle your work that you think has impressed the company
   - Open response
   - Then probe x stance (Emotional Intelligence), way of thinking and diagnostic maps, Generic Skills/Knowledge, Job-specific Skills/Knowledge

**3. Can you think of any situation when you really got to demonstrate your level of ability?**
This might have been a time when things got tricky, when something unexpected happened or when things went wrong
- Describe the situation/problem
- Describe how you handled it and, if this worked, why this was so

**4. What advice would you give to a new graduate entering a job like yours?**
- What are the most tricky aspects of the job
- What aspects are most satisfying

**5. How well did your University course prepare you for this job?**
- What was the course and where did you do it
- What aspects of the course have proven most relevant?
- What aspects of the course have proven least relevant?
- How could the course have been run better?
- What, now that you are experienced, do you think should have been emphasised in the course but wasn't?

# Successful Graduates Research Project

# Questions for Supervisor

## Introduce purpose of interview
- To gather in views of supervisors on what distinguishes a successful performer approximately 3 years after they have graduated on what really makes a difference to their professional performance and what does not.
- To use this information to "backward map" to our university courses to make them more relevant and better delivered.

**Name:**

**Company:**

**Position:**

**Date:**

1. **Why did you select (name person) as being such an effective employee?** What is it about (name person) and how s/he handles his/her work that has impressed you so much?
   - Open response
   - Then probe x stance (Emotional Intelligence), way of thinking and diagnostic maps, Generic Skills/Knowledge, Job-specific Skills/Knowledge

2. **Can you think of any situation when (name person) really got to demonstrate his/her impressive level of ability?**
   This might have been a time when things got tricky, when something unexpected happened or when things went wrong
   - Describe the situation/problem
   - Describe how (name person) handled it and, if this worked, why this was so

**3. What advice would you give to a new graduate entering a job like (name person)?**
- What are the most tricky aspects of the job
- What aspects are most satisfying

**4. Given what we have discussed today, how well do you think current University Courses develop the sorts of skills you require?**
- What aspects of current courses that prepare people like (name) are proving most relevant?
- What aspects of these current courses are proving least relevant?
- How can these courses be run better?
- What do you think should have been emphasised in these courses but isn't?

# FRAMEWORK
# PROFESSIONAL CAPABILITY

**A**

A1 Social
A2 Personal

**B**

B1 Contingent - "Read and
Match"
B2 Ability to trace out
consequences

**C**

Schemas generated from
experience which enable
the process of "reading
and matching"

**A**

**STANCE
(EMOTIONAL
INTELLIGENCE)**

**B**

**WAY OF
THINKING**

**C**

**DIAGNOSTIC
MAPS**

**D**

**GENERIC
SKILLS AND
KNOWLEDGE**

**E**

**PROFESSION
SPECIFIC
SKILLS AND
KNOWLEDGE**

**D**

 D1 Ability to self manage
ongoing professional learning
D2 Interpersonal skills to run
meetings, presentations,
teach and work
constructively with others
D3 CIT skills and knowledge

**E**

 Up-to-date skills and
understanding necessary to
deliver solutions in a
particular job - "technical
excellence"

# APPENDIX E

## UTS
## Online Survey
## Successful Graduate Capability Study

**Making University Studies More Relevant**
Successful graduates can help ensure that current students' learning is grounded in real-world practice and relevant. Through this first-ever survey of successful recent graduates we hope to identify your views on what really counts in the first few years of professional practice. This will complement regular consultation with employers and professional bodies and help ensure that the content and assessment of courses are relevant.

With this in mind, in early 2001 The University of Technology, Sydney (UTS) undertook a small set of in-depth interviews with successful recent graduates now working in the I.T. and Engineering professions in Australia. What we found clearly demonstrated that, although technical excellence is important for successful performance, it must be combined with a particular set of personal and interpersonal attributes, a distinctive set of cognitive abilities and a unique mix of generic skills and understandings.

This survey is intended to test out and build on the findings from the interview phase of the study with a broader range of successful graduates so that we can be confident about our results. What emerges will then be used to improve the quality of the university courses which prepare people to enter your profession.

You have been nominated as a relatively recent graduate who is performing well in your company. It is because of this that you are being asked to contribute to the survey phase of this research.

**How to complete the survey**
1. The survey consists mainly of a set of statements for you to rate. It also gives space for you to comment on your ratings and other issues, including important things we may have overlooked.
2. In some cases you will be asked to rate an item for importance, in other cases you will be asked to rate how well your university course addressed that item. Simply click on the box which best represents your point of view.
3. You can save and return to your responses as you wish. When you have finished the survey simply click "finish".
4. Normally the survey takes about 40 minutes of total time to complete.

**What will happen to the results**
1. They will be used to improve the quality of both course design and subject assessment for students who take courses like the one you did.
2. We will send you a summary of our findings if you indicate that you would like this.

We are aware that this survey may take some time to complete. For this reason we have included a feature that will enable you to save your answers part way through and to return to the questionnaire at a later stage. To do this please bookmark the survey and scroll to the bottom of the page and select the 'save and continue later' button.

Click here to enter the online survey.

ABOUT YOURSELF

- Name of the company where you currently work:

  _____

- Year you joined this company:

  _____

- Your current job title:

  _____

- What, briefly, are the main things you do in your present job?:

  _____

  _____

- Main degree you undertook to prepare you for your present employment

  Degree:              _____

  University:          _____

  Year completed:      _____

**WHAT ACCOUNTS FOR YOUR EFFECTIVE PERFORMANCE AT WORK & HOW WELL DID YOUR UNIVERSITY COURSE PREPARE YOU FOR THIS?**

Below are a series of statements, sorted into the different aspects of professional capability identified in the pilot phase of this study.

First, we would like you to rate how important you believe each of the abilities listed has been for the current high level of performance in your own work (the left hand column). That is, how much has each of the items listed contributed to your successful work performance. The rating scale runs from 1 (a low contribution) to 5 (a high contribution).

Then we would like you to identify, using the rating scale in the right hand column, the extent to which the university course you undertook as preparation for your professional work actually focused on each item. This rating scale also runs from 1 (low) to 5 (high).

# MY PERSONAL ABILITIES

The following items first seek your views on how important you believe a range of personal abilities have been in accounting for your successful performance at work. Then you are asked to rate the extent to which your University course focused on these abilities.

For each item please select the number which best describes your rating for importance and for focus. There is space below for you to comment on your ratings and to add any to other information you think would be helpful.

| Importance of this for successful performance in my current professional work | | | | | | Extent to which my University Course focused on this ability | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Low | 2 | 3 Med | 4 | 5 High | | 1 Low | 2 | 3 Med | 4 | 5 High |
| ❑ | ❑ | ❑ | ❑ | ❑ | 49. Being willing to face and learn from my errors and listen openly to feedback | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 50. Understanding my personal strengths & limitations | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 51. Being confident to take calculated risks and take on new projects | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 52. Being able to remain calm under pressure or when things go wrong | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 53. Having the ability to defer judgement and not to jump in too quickly to resolve a problem | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 54. A willingness to persevere when things are not working out as anticipated | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 55. Wanting to produce as good a job as possible | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 56. Being willing to take responsibility for projects, including how they turn out | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 57. Having an ability to make a hard decision | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 58. A willingness to pitch in and undertake menial tasks when needed | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 59. Having a sense of humour and being able to keep work in perspective | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | 12. Other (Please describe): | ❑ | ❑ | ❑ | ❑ | ❑ |

**Please explain any key themes you can see running through your ratings and list any aspects we have missed which you believe are important.**

_____

_____

_____

_____

_____

_____

_____

_____

------------------------------------------------------------------------------------------------------------------------------------------------
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**MY INTERPERSONAL ABILITIES**

The following items first seek your views on how important you believe a range of interpersonal abilities have been in accounting for your successful performance at work. Then you are asked to rate the extent to which your University course focused on these abilities.

For each item please select the number which best describes your rating for importance and for focus. There is space below for you to comment on your ratings and to add any to other information you think would be helpful.

| Importance of this capability for successful performance in my current professional work | | | | | | Extent to which my University Course focused on this ability | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Low | 2 | 3 Med | 4 | 5 High | | 1 Low | 2 | 3 Med | 4 | 5 High |
| ❑ | ❑ | ❑ | ❑ | ❑ | • The ability to empathise with and work productively with people from a wide range of backgrounds | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • A willingness to listen to different points of view before coming to a decision | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to develop and use networks of colleagues to help me solve key workplace problems | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Understanding how the different groups that make up my organisation operate and how much influence they have in different situations | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to work with senior staff without being intimidated | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to give constructive feedback to work colleagues and others without engaging in personal blame | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to motivate others to achieve great things | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to develop and contribute positively to team-based projects | ❑ | ❑ | ❑ | ❑ | ❑ |

**Please explain any key themes you can see running through your ratings and list any aspects we have missed which you believe are important.**

# MY INTELLECTUAL ABILITIES

The following items first seek your views on how important you believe a range of intellectual abilities have been in accounting for your successful performance at work. Then you are asked to rate the extent to which your University course focused on these abilities.

**For each item please select the number which best describes your rating for importance and for focus. There**

| Importance of this capability for successful performance in my current professional work | | | | | | Extent to which my University Course focused on this capability | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Low | 2 | 3 Med | 4 | 5 High | | 1 Low | 2 | 3 Med | 4 | 5 High |
| | | | | | • Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project; | | | | | |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to identify from a mass of detail the core issue in any situation | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to diagnose what is really causing a problem and then to test this out in action | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to readjust a plan of action in the light of what happens as it is implemented | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to see how apparently unconnected activities are linked and make up an overall picture | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Being able to set and justify priorities | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • An ability to recognise patterns in a complex situation | ❑ | ❑ | ❑ | ❑ | ❑ |

**Please explain any key themes you can see running through your ratings and list any aspects we have missed which you believe are important.**

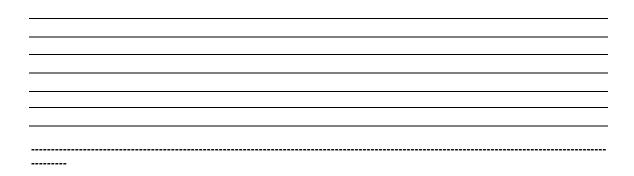-------------------------------------------------------------------------------------------------------------------------
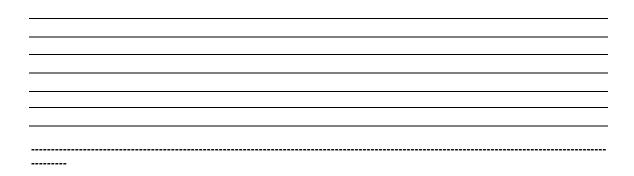---------

**MY SPECIFIC SKILLS AND KNOWLEDGE**

The following items first seek your views on how important you believe a range of job-specific and generic skills have been in accounting for your successful performance at work. Then you are asked to rate the extent to which your University course focused on these things.

For each item please select the number which best describes your rating for importance and focus. There is space below for you to comment on your ratings and add any other information you think would be helpful.

| Importance of this skill for successful performance in my current professional work | | | | | | Extent to which my University Course focused on this skill | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Low | 2 | 3 Med | 4 | 5 High | | 1 Low | 2 | 3 Med | 4 | 5 High |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Having a high level of current technical expertise relevant to my work area | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Being able to use I.T. effectively to communicate & perform key work functions | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Being able to manage my own ongoing professional learning and development | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • An ability to chair and participate constructively in meetings | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Being able to make effective presentations to clients | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Understanding the role of risk management and litigation in current professional work | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Knowing how to manage projects into successful implementation | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • An ability to help others learn in the workplace | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Understanding how organisations like my current one operate | ❏ | ❏ | ❏ | ❏ | ❏ |
| ❏ | ❏ | ❏ | ❏ | ❏ | • Being able to organise my work and manage time effectively | ❏ | ❏ | ❏ | ❏ | ❏ |

**Please explain any key themes you can see running through your ratings and list any aspects we have missed which you believe are important.**

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Under which situation is your professional capability most tested:

When things are going well   When things are running normally      When things are going wrong
❑                                    ❑                                          ❑

Please briefly explain your answer

_____
_____
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**A PROFESSIONALLY CHALLENGING SITUATION YOU HAVE EXPERIENCED**
Think of one time at work over the past 2 or 3 years when you believe that your professional capabilities were really tested.

Please describe it briefly below. Outline the situation, explaining how it came about and what you found most challenging about it. Note who was involved, where it happened, how you went about figuring out what to do and how well this worked.

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**KEEPING UNIVERSITY LEARNING RELEVANT**

Below are some suggested ways of making university courses in your area more interesting, engaging and relevant to the needs of the current profession. Could you first rate the importance of each strategy for making learning relevant, interesting and engaging. Then rate the extent to which the university course you undertook handled that aspect effectively.
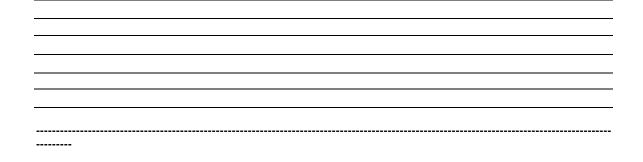
For each item please select the number which best describes your rating for importance and the extent to which your university course used it effectively. There is space below for you to comment on your ratings and add any other information you think would be helpful.

| Importance of this strategy in making learning relevant, interesting & engaging | | | | | | Extent to which my University Course used this strategy effectively | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Low | 2 | 3 Med | 4 | 5 High | | 1 Low | 2 | 3 Med | 4 | 5 High |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Focus more directly on the capabilities identified as being important above in university courses and assessment | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Use real-life workplace problems identified by successful graduates as a key resource for learning | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Make work-placements which test out the capabilities identified in this study a key focus in each course | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Use successful graduates more consistently as a learning resource in university courses (e.g. as guest speakers) | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Decrease the amount of formal classroom teaching of basic technical skills and use self-instructional guides and I.T. to develop these | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Include learning experiences based on real-life case studies that specifically develop the interpersonal and personal skills needed in my particular profession | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • When relevant, use I.T. to make learning as convenient and interactive as possible | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Ensure that all teaching staff model the key attributes | ❑ | ❑ | ❑ | ❑ | ❑ |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | identified as being important in this study | | | | | |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Ensure that teaching staff have current workplace experience | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • Make assessment more real-world and problem-based and less focused on memorising factual material | ❑ | ❑ | ❑ | ❑ | ❑ |
| ❑ | ❑ | ❑ | ❑ | ❑ | • 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. | ❑ | ❑ | ❑ | ❑ | ❑ |

**Please explain any key themes you can see running through your ratings and list**

**any aspects we have missed which you believe are important.**

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**IN SUMMARY**

- Given what you have discovered really counts for successful professional practice, what aspects of your studies  at university have proven most relevant
(please briefly list these out and say why they have proven relevant)

_____
_____
_____
_____
_____

- Given what you have discovered really counts for successful professional practice, what aspects of your studies  at university have proven least relevant
(please briefly list these out and say why they have not proven relevant)

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- What should Universities now concentrate upon if they want to make their courses relevant to the needs of graduates in their first five years of professional work?

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