Employer satisfaction of university graduates: Key capabilities in early career graduates

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Introduction

Governments in many developed countries like Australia and the United Kingdom are strengthening the role of higher education institutions to contribute to the national economy. The focus of such development is to ensure that universities are fulfilling the moral purpose of higher education to meet the changing needs of employers and the industry. Performance based funding of universities is one of the means used by governments to ensure that the outcomes of higher education contributes to long term sustainability that is economically beneficial to the national economy and that higher education provides socially responsible education.

While not all of the problems in society can be expected to be resolved by higher education, the sector can be seen to have some responsibility for employer dissatisfaction with the attributes of university graduates they recruit from universities. In general terms, graduate attributes are understood as the general skills, knowledge and abilities, beyond the discipline content knowledge, that university graduates have gained during their tertiary studies (Bowden, Hart, King, Trigwell, & Watts 2002; HEC, 1992). Graduate attributes are also commonly referred to as generic skills, graduate qualities, generic attributes, or graduate capabilities. Further, the lists of graduate attributes among Australian universities tend to vary, not only in terms of which attributes are included, but also regarding the nature and level of attainment of the attributes. The range of attributes tend to vary from simple technical skills to complex intellectual abilities and ethical values (Barrie, 2006).

There are concerns worldwide that existing undergraduate programs are not producing graduates with the kinds of lifelong learning skills and professional skills which they need in order to be successful in their professions (AAGE, 1993; AGR, 995; BHERT, 1992; Candy & Crebert, 1991; Candy, Crebert & O’Leary, 1994; Harvey, 1993; Harvey & Green, 1994; ICAA, 1994; NBETT, 1992). Articles in the media (for example, The Australian) have also highlighted the views of various professional accrediting bodies in relation to the gap between employability skills attained by graduates and what employers want in professions including accounting, finance and economics. Also, the most recent study undertaken in Australia by the
Business Industry Group (Australian Industry Group, 2009) with employers suggest that employers recognise employability skills, a positive attitude and work experience as the most important factors when recruiting graduates. The same study also showed employer dissatisfaction in some specific areas including teamwork skills, business and customer awareness and lack of relevant work experience.

Harvey and Green (1994) suggest that in relation to the skills they most prize, the majority of employers are moderately satisfied with the quality graduates they recruit. Studies in the United Kingdom (UK) by Hesketh (2000) with 372 employers suggest the following five skills as most important: verbal communication, learning, written communication, problem solving and teamwork. His study also shows clear evidence that employers are well aware of the quality of graduates from various universities based on previous recruitment experience and some employers use the success of previous graduates to target recruitment from universities with a reputation of producing high quality graduates. According to Murray and Robinson (2001), there is strong evidence that large scale graduate recruiters in UK target a limited number of universities primarily because of the quality of graduates. A study in the UK by Morely & Aynsley (2007) with employer groups suggests that employers cite a range of sources of information on quality and standards in higher education including: personal experience (of past graduates), professional perceptions and networks, league tables and regional links.

A study by Harvey (1993) in the UK found that the top five important qualities sought by employers in recruiting graduates include interpersonal skills, communications skills, intelligence and personality. Similar studies undertaken in Australia by Graduate Careers Australia (GCA) (2007) show that interpersonal and communication skills (written/oral); critical reasoning and analytical skills; problem solving; lateral thinking; technical skills; passion and knowledge of industry; drive; commitment; attitude; cultural alignment; values fit and academic qualification(s) are the top criteria used in graduate recruitment.

A review of recent literature suggests rapidly growing interest amongst Australian universities in becoming engaged with employers and industry bodies (Etzkowitz 2002; Garlick 2000; Gunasekara, 2004; Holland, 2001; Nair & Mertova, 2009). This engagement is very important for universities in order to review and address graduate skills needed in professional practice (e.g., Australian Chamber of Commerce and Industry [ACCI], 2007; Australian Council for Educational Research [ACER], 2002; Australian Industry Group (2006); Department of Education Science and Training [DEST], 2007; Graduate Careers Australia [GCA], 2007).

In 2007 nationwide studies by DEST and GCA on capabilities and skills, articulated clearly what employers see as the most important in university graduates (DEST, 2007; GCA, 2007). These studies show that recruiters are generally satisfied with job-specific skills of graduates, but place greater importance on their interpersonal skills, industry-related experience and ability to promptly apply the knowledge gained at university in the real work settings.

The purpose of this paper is to report on the views of employers on their satisfaction of the quality of university graduates and key capabilities they see as most important in early career graduates. The paper also looks at the employer’s views on key skills and attributes needed in early career graduates to meet the changing industry trends in various professions.

The study was undertaken in a large Australian university. The university offers wide range of courses to more than 40,000 students. The survey was part of the university’s quality management framework for learning and teaching.

**Methodology**

The graduate employer survey which was first initiated in 2004 is part of a suite of surveys available at the university and regarded an important tool primarily for
acquiring employer feedback on the university’s graduate skills and attributes that employers consider as most important;
identifying areas for curriculum development; and,
building closer relationships and continued goodwill between the university and key employers.

The survey invited respondents to identify, from their perspective as an employer, the most important attributes, abilities, skills and knowledge needed by graduates for effective performance in their particular profession in coming years. Respondents were asked to rate the relative importance (1-low to 5-high) of 44 specific aspects of professional capability identified in a set of national and international studies of early career graduates in nine professions (Vescio, 2005). Respondents were then asked to rate the extent to which the graduates possess each of these capabilities.

In most cases the contact in the database was the human resources manager or staff member responsible for graduate recruitment. After an initial phone call, an email invitation which included the link to the online survey was forwarded to the employers. A total of 880 employers were approached and 760 agreed to participate in the survey. Of these 400 valid responses were received. The response sample was representative to most of the field of education offered by the university and it was also representative to public, private and non profit organisations.

A courtesy call was made to non respondents three weeks after the first invitation. Following the courtesy call, a subsequent reminder was sent via email with the link to the online survey.

Results and discussion

The findings of the 2004 and 2008 survey are consistent with employers ranking almost the same top 10 items as most important capabilities with early career graduates. Figure 1 reports the top ten items rated by employers as most important and their performance (measured in terms of the mean satisfaction rating). Performance ranking describes the employers view of the graduates’ competency in the attributes measured in the questionnaire. The full results of the survey including the abilities measured, the mean scores on importance and performance on all 44 items are presented in Table 1, Appendix 1.

Overall the results indicate a significant gap between many attributes developed at the University compared to the expectations of industry. The findings of the two separate studies (2004 and 2008) indicate that employers consistently rate the following 10 areas as most important:

- Being able to communicate effectively (generic skills and knowledge);
- Being flexible and adaptable (personal);
- A commitment to ethical practice (personal);
- Being willing to face and learn from errors and listen openly to feedback (personal);
- Being able to organise work and manage time effectively (generic skills and knowledge);
- Wanting to produce as good a job as possible (personal);
- The ability to empathise with and work productively with people from a wide range of backgrounds (interpersonal);
- A willingness to listen to different points of view before coming to a decision (interpersonal);
- Being able to develop and contribute positively to team-based projects (interpersonal);
- Being able to set and justify priorities (intellectual).
Areas of graduate capability

Legend
No Capability No Capability
1 Being able to communicate effectively 6 Wanting to produce as good a job as possible
2 Being flexible and adaptable 7 The ability to empathise with and work productively with people from a wide range of backgrounds
3 A commitment to ethical practice 8 A willingness to listen to different points of view before coming to a decision
4 Being willing to face and learn from errors and listen openly to feedback 9 Being able to develop and contribute positively to team-based projects
5 Being able to organise work and manage time effectively 10 Being able to set and justify priorities

Figure 1: Importance and performance of the top ten items rated by employers

Of the 10 high importance capabilities, six were ranked relatively low by employers in terms of performance (gap analysis between mean ratings on importance and extent to which graduate possess those capabilities > 1.0). These items were:

- Being able to communicate effectively;
- Being able to organise work and manage time effectively;
- Being willing to face and learn from errors and listen openly to feedback;
- Being able to set and justify priorities;
- Being flexible and adaptable;
- A willingness to listen to different points of view before coming to a decision.

Studies undertaken by Vescio, (2005) with successful graduates in nine professions in Australia also found similar results with two additional capabilities seen as important: being able to remain calm under pressure or when things go wrong and a willingness to persevere when things are not working out as anticipated. The finding of this survey also aligns with the study undertaken in the UK by Andrews and Higson, (2008) in the business profession. Their study found that work-experience gained during work-based learning programmes such as formal placements and internships represented a significant aspect of graduate experience.

There are significant advantages in reviewing such survey findings especially in the development and review of curriculum and student assessment. According to James et al, (2002), student assessments play a key role in the attainment of learning outcomes and generic or employability skills. Further, Bowden and Marton (1998) argue that the curriculum for any university needs to be developed around the idea that students are being prepared for a future based on the needs of the industry. The study reported in this paper is consistent with these
studies and generally point to areas that universities need to concentrate to improve their curriculum.

Employer surveys generally provide a picture of the needs of the industry and the possible shortfall in the curriculum. It is however, important to acknowledge that to get an overall picture other stakeholder information would need to be sought. One example of such information includes student perception of their courses covered particularly by the generic skills scale used in the national Course Experience Questionnaire (CEQ). An analysis of the national CEQ results by the authors on this scale suggests that graduates have rated two areas (items) with low satisfaction. Satisfaction in the CEQ is measured as the percentage of respondents responding to 4 (Agree) and 5 (Strongly Agree) on a five-point likert scale. The two areas with low satisfaction are ‘the course helped graduates to develop their ability to work as a team member’ (57%) and ‘as a result of my course, I am confident about tackling unfamiliar problems’ (62%). Generally, items in the Generic Skills Scale had satisfaction ratings of less than 80% (see Table 2).

<table>
<thead>
<tr>
<th>No</th>
<th>CEQ Item</th>
<th>Satisfaction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The course helped graduates to develop their ability to work as a team member</td>
<td>57</td>
</tr>
<tr>
<td>2</td>
<td>As a result of my course, I am confident about tackling unfamiliar problems</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>The course sharpened my analytic skills</td>
<td>71</td>
</tr>
<tr>
<td>4</td>
<td>The course developed my problem solving skills</td>
<td>67</td>
</tr>
<tr>
<td>5</td>
<td>The course improved my skills in written communication</td>
<td>71</td>
</tr>
<tr>
<td>6</td>
<td>The course helped me to develop the ability to plan my own work</td>
<td>69</td>
</tr>
</tbody>
</table>

In comparison, results from the National Student Survey (NSS) which is used in UK universities show a much more positive view of stakeholders to generic skills. The two items which measure generic skills in NSS comparable to the CEQ items show percentage satisfaction ratings well above 80% (see Table 3).

<table>
<thead>
<tr>
<th>No</th>
<th>NSS Item</th>
<th>NSS</th>
<th>CEQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My communication skills have improved</td>
<td>87</td>
<td>71</td>
</tr>
<tr>
<td>2</td>
<td>As a result of my course, I am confident about tackling unfamiliar problems</td>
<td>84</td>
<td>62</td>
</tr>
</tbody>
</table>

Analysis of the data (by the authors) on the outcome of generic skills perceptions by stakeholders, revealed a variation existed between private providers in Australia compared to Australian universities. Graduates from private higher education providers show a much more negative view (by as much as 10%) to this dimension compared to Australian university graduates.

The data generally suggests that both students and employers are on the same page in that generic skills are important contributors to employment and education. The data also suggest that the pedagogical environment is an area that needs further fine tuning so as to narrow the gap between the needs of the industry and that delivered by institutions of higher education. This argument is supported by the more positive view of students in the UK.

The quantitative findings reported in this paper also align with qualitative data provided by the employers. Respondents wrote extensive comments not only on the key trends and changes taking place in various professions but as well outlined key attributes, skills and knowledge needed by early career graduates. The recurring themes on key trends and changes in the industry included: use of technology in business; dealing with a diverse client base; the need for multilingual graduates; addressing the ageing workforce; wages and working conditions of
graduates in some professions with high turnovers; shortage of talented graduates; impact of the
global economy on business and the need for graduates to be strategic thinkers; recruitment and
retention of graduates in regional areas and the need for a national curriculum in some
professions to allow graduate mobility (for example, engineering – see Nair, Patil & Mertova,
2009). Respondents also wrote extensively on key attributes, abilities, skills and knowledge
needed by graduates. The comments were in close alignment to the quantitative findings
presented in Table 1.

Conclusion

The results of the employer survey shows a gap between what employers see as most important
in terms of the skills, knowledge and attributes of recent graduates and their satisfaction. Some
of the key areas identified in the survey where such gaps exist include communication, the
organisation of work and managing time effectively, the willingness to face and learn from
efforts and listening openly to feedback, the ability to set and justify priorities, being flexible and
their adaptability and willingness to listen to different points of view before coming to a
decision.

The findings of this research with employers and professional bodies aligns with the current
Australian government priorities related to improving the quality, standard, equity and meeting
the needs of the industry and professions. The research findings could be used in curriculum
reviews to ensure that course design, student assessments and teaching methods enable students
to attain generic skills rated by employers as most important in early career graduates.

Thus, as with all survey data, the collection of data is just the first stage in developing a good
quality system. What is done with the data is the most critical aspect. A key element of any
quality assurance process is the union of evaluation and improvement (Grebenikov & Shah,
2008). A possible approach to address the issues highlighted in the employer survey is to adopt
a comprehensive quality monitoring mechanism in the educational process cycle, which would
assure a proper alignment of graduate attributes with feedback from employers and further
research to enhance the design of course curricula. This may be approached, for example, by

- Utilising employer survey data to review courses across the university. This was achieved in
  an elite group of eight (Go8) University in Australia which utilised the Employer Survey data
  for the purpose of course reviews, including engineering.
- Utilising research findings to address the shortfall in generic or transferable attributes (e.g.
  communication and teamwork) by integrating project-based learning with more traditional
  instructions. Such was an approach adopted by the University of Queensland, School of
  Engineering (Crosthwaite et al., 2006).
- Design curricula to include assessment of attributes

Clearly, the employer’s survey falls within this scope where institutions of higher education
must act on the results to ensure that their graduates are at the forefront in the recruitment
process. The results of the employer survey highlighted three key areas relevant to universities
more broadly in relation to graduate attributes, that:

a) there is a need to have a clearer understanding of essential generic and professional attributes
   needed in the workplace;

b) universities, in general, need to work more closely with industry so that graduates were
   better equipped for employment; and,

c) competencies required by the industry need to be aligned in educational programmes.

This paper also highlights that though data is easily collectable, there is a need to use the data
data for effective change. However, there is little in research literature of the use of data to
effectively change or design curricula. Further, an area that will be important to investigate is
the designing of curricula to include assessment of core attributes highlighted in employer surveys. The findings of this survey and other research conducted with employers in Australia could be used by the government to design a generic skills survey or assessment to measure the extent to which final year student have achieved the generic skills rated as most important by employers.

Limitations of study

1. The study is based on the general view of employers. Discipline specific areas were not investigated
2. Employers participating in this survey come from a limited database maintained by the university. There is a critical need for university faculties, research centres, careers office to maintain a database of employers so as to achieve a reasonable response sample.

References


## Appendix 1

### Table 1: Importance: Performance rating for areas of graduate capability

<table>
<thead>
<tr>
<th>Importance</th>
<th>Areas of graduate capability</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean 04</td>
</tr>
<tr>
<td>Mean 04</td>
<td></td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>Being willing to face and learn from errors and listen openly to feedback</td>
<td>3.46</td>
</tr>
<tr>
<td>Mean 08</td>
<td></td>
<td>4.10</td>
</tr>
<tr>
<td></td>
<td>Understanding personal strengths &amp; limitations</td>
<td>3.23</td>
</tr>
<tr>
<td>Rank 08</td>
<td></td>
<td>3.70</td>
</tr>
<tr>
<td></td>
<td>Being confident to take calculated risks and take on new projects</td>
<td>3.22</td>
</tr>
<tr>
<td>Item #</td>
<td></td>
<td>4.23</td>
</tr>
<tr>
<td></td>
<td>Being able to remain calm under pressure or when things go wrong</td>
<td>3.17</td>
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<tr>
<td></td>
<td></td>
<td>3.88</td>
</tr>
<tr>
<td></td>
<td>Having the ability to defer judgement and not to jump in too quickly to resolve a problem</td>
<td>3.03</td>
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<tr>
<td></td>
<td></td>
<td>4.07</td>
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<tr>
<td></td>
<td>A willingness to persevere when things are not working out as anticipated</td>
<td>3.19</td>
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<tr>
<td></td>
<td></td>
<td>4.49</td>
</tr>
<tr>
<td></td>
<td>Wanting to produce as good a job as possible</td>
<td>3.73</td>
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<tr>
<td></td>
<td></td>
<td>4.17</td>
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<tr>
<td></td>
<td>Being willing to take responsibility for projects, including how they turn out</td>
<td>3.4</td>
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<tr>
<td></td>
<td></td>
<td>3.44</td>
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<tr>
<td></td>
<td>Having an ability to make a hard decision</td>
<td>2.74</td>
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<tr>
<td></td>
<td></td>
<td>4.13</td>
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<tr>
<td></td>
<td>A willingness to pitch in and undertake menial tasks when needed</td>
<td>3.09</td>
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<td></td>
<td></td>
<td>4.20</td>
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<td></td>
<td>Having a sense of humour and being able to keep work in perspective</td>
<td>3.49</td>
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<td></td>
<td></td>
<td>4.64</td>
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<tr>
<td></td>
<td>A commitment to ethical practice</td>
<td>3.93</td>
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<td></td>
<td></td>
<td>4.10</td>
</tr>
<tr>
<td></td>
<td>A commitment to sustainable practice</td>
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<tr>
<td></td>
<td></td>
<td>4.59</td>
</tr>
<tr>
<td></td>
<td>Being flexible and adaptable</td>
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<td></td>
<td></td>
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<td>The ability to empathise with and work productively with people from a wide range of backgrounds</td>
<td>3.65</td>
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<td></td>
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<td>4.37</td>
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<tr>
<td></td>
<td>A willingness to listen to different points of view before coming to a decision</td>
<td>3.54</td>
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<tr>
<td></td>
<td></td>
<td>4.13</td>
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<td></td>
<td>Being able to develop and use networks of colleagues to help solve key workplace problems</td>
<td>3.43</td>
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<tr>
<td></td>
<td></td>
<td>3.79</td>
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<td></td>
<td>Understanding how the different groups that make up the organisation operate and how much influence they have in different situations</td>
<td>2.88</td>
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<td></td>
<td></td>
<td>3.95</td>
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<td></td>
<td>Being able to work with senior staff without being intimidated</td>
<td>3.28</td>
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<tr>
<td></td>
<td></td>
<td>3.97</td>
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<tr>
<td></td>
<td>Being able to give constructive feedback to work colleagues and others without engaging in personal blame</td>
<td>3.04</td>
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<tr>
<td></td>
<td></td>
<td>3.70</td>
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<tr>
<td></td>
<td>Being able to motivate others to achieve great things</td>
<td>2.98</td>
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<tr>
<td></td>
<td></td>
<td>4.24</td>
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<tr>
<td></td>
<td>Being able to develop and contribute positively to team-based projects</td>
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<td></td>
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<td>3.31</td>
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<tr>
<td></td>
<td>Having an international perspective</td>
<td>2.92</td>
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<td></td>
<td></td>
<td>3.82</td>
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<tr>
<td></td>
<td>Knowing that there is never a fixed set of steps for solving workplace problems or carrying out a project</td>
<td>2.95</td>
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<tr>
<td></td>
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<td>4.20</td>
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<tr>
<td></td>
<td>Being able to identify from a mass of detail the core issue in any situation</td>
<td>2.93</td>
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<tr>
<td></td>
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<td>3.72</td>
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<td></td>
<td>The ability to use previous experience to figure out what is going on when a current situation takes an unexpected turn</td>
<td>2.75</td>
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<td></td>
<td></td>
<td>4.04</td>
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<tr>
<td></td>
<td>Being able to diagnose what is really causing a problem and then to test this out in action</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.97</td>
</tr>
<tr>
<td></td>
<td>An ability to trace out and assess the consequences of alternative courses of action and, from this, pick the one most suitable</td>
<td>3.04</td>
</tr>
</tbody>
</table>
### Areas of graduate capability

<table>
<thead>
<tr>
<th>Importance</th>
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<th>Mean 08</th>
<th>Rank 08</th>
<th>Item #</th>
<th>Performance</th>
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<tr>
<td>4.03</td>
<td>4.10</td>
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<td>29</td>
<td></td>
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<tr>
<td>3.80</td>
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<td>3.99</td>
<td>29</td>
<td>34</td>
<td></td>
<td>3.11</td>
</tr>
</tbody>
</table>

#### Being able to readjust a plan of action in the light of what happens as it is implemented
Mean 04: 3.03, Mean 08: 3.05

#### Being able to see how apparently unconnected activities are linked and make up an overall picture
Mean 04: 2.84, Mean 08: 2.92

#### Being able to set and justify priorities
Mean 04: 3.01, Mean 08: 3.14

#### An ability to recognise patterns in a complex situation
Mean 04: 3.01, Mean 08: 3.02

#### Being an independent thinker
Mean 04: 3.25, Mean 08: 3.17

#### Being creative and enterprising
Mean 04: 3.11, Mean 08: 3.21

#### Having a high level of current technical expertise relevant to current work requirements
Mean 04: 3.16, Mean 08: 3.04

#### Understanding the role of risk management and litigation in current professional work
Mean 04: .90, Mean 08: 2.72

#### Understanding how organisations operate
Mean 04: 2.65, Mean 08: 2.83

#### Being able to use IT effectively to communicate & perform key work functions
Mean 04: 3.67, Mean 08: 3.66

#### Being able to manage ongoing professional learning and development
Mean 04: 3.21, Mean 08: 3.23

#### An ability to chair and participate constructively in meetings
Mean 04: 2.70, Mean 08: 2.77

#### Being able to communicate effectively
Mean 04: 3.40, Mean 08: 3.38

#### Knowing how to manage projects into successful implementation
Mean 04: 2.79, Mean 08: 2.89

#### An ability to help others learn in the workplace
Mean 04: 3.03, Mean 08: 2.98

#### Being able to organise work and manage time effectively
Mean 04: 3.35, Mean 08: 3.28

Items ranked high on importance and performance are marked in grey. These should continue to be emphasised in the curriculum. Areas attracting the lowest performance ratings are marked in black.

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