

An international profile of industry-relevant competencies and skill gaps in modern graduates

Denise Jackson, The University of Western Australia

DOI:10.3794/ijme.83.288

Received: December 2008

Revised: August 2009

Accepted: October 2009

Abstract

At a time when graduates are increasingly being relied upon to add value and foster innovative practice in organisations, concerns for the impact of an endemic graduate skills gap are growing. Higher education institutions (HEI) are consistently blamed for soft skill deficiencies and many are now pursuing policies on the development of generic skills. This paper unpacks the concept of graduate employability by presenting a table of industry-relevant competencies, including assigned definitions and empirical assessments of their relative importance, identified by employers internationally over the past ten years. Findings articulate what businesses need from today's graduates and depict the nature and extent of graduate skill gaps worldwide. They also confirm an extensive and confusing range of definitions assigned to individual competencies, validating concerns for current graduate employability policies and calling for a fresh approach to profiling industry's requirements of the modern graduate.

Keywords: undergraduate; management; competencies; skills; graduate; Australia; employability

Introduction

Never has the focus on the current state and future of graduate skills been greater, as developed countries struggle to maintain the intellectual capital base required to compete globally. As organisations worldwide tighten their belts, the global economic crisis serves to further inflate businesses' requirements of new graduate recruits and expectations of their ability to add immediate value. Paradoxically, most new graduates are Generation Y, notoriously ambivalent to commitment and less loyal than their predecessors. Organisations are growing increasingly reluctant to invest in their training, particularly in transferable skills, tipping the balance of the responsibility of skill development towards higher education institutions (HEI). HEIs worldwide, however, are accused of producing graduates deficient in the "soft" skills deemed essential for enhanced productivity and innovation in the workplace. This may well stem from inadequacies in the schooling system, but the result is that developed countries are lacking the graduate talent required to sustain and advance their knowledge economies and blame is consistently directed at the design, content and structure of undergraduate programmes.

The aims of this paper are two-fold. Firstly, the nature and extent of the graduate skills gap in the UK, Australia and USA is summarised for competencies identified as important in graduates, derived from a review of recent literature. This reiterates the need for a new and systematic approach to bridging the graduate skills gap. Secondly, the paper aims to provide insight into the nature and extent of ambiguity in definitions assigned to graduate competencies. Acknowledged by the Financial Services Skills Council (FSSC, 2006), empirical studies on graduate employability liberally adopt different terms for competencies, resulting in confused findings which are often used to form the backbone of employability skills programs in HEIs throughout the UK, Australia and USA. This lack of clarity and uniformity drastically heightens the risk of HEIs developing competencies not prioritised by employers, leading to inefficient use of public funding and reduced impact of efforts to address the graduate skills gap.

To enhance the portability and value of findings across a range of disciplinary fields, the identification and conceptual analysis of identified industry-relevant competencies is separated into two sections: generic graduates and business graduates only. Business educators should be able to gain a deeper insight into the nature and extent of the skills gap for their discipline, limited of course by the availability of empirical evidence for each competency.

The paper is structured as follows. Firstly, background to the defining nature and impact of the graduate skills gap prevalent in the USA, UK and Australia is given. Identified competencies and attributes, proffered by industry, are then presented with their conceptual definitions, rated importance, perceived gaps in performance and any other relevant background to that particular area of competence. The findings are

Denise Jackson is completing a PhD at the University of Western Australia, focusing on the required skill sets of business graduates in developed economies. She is also interested in the transition of learned knowledge and skills from business degrees to the workplace. Denise has also published work in the Journal of Management and Organisation and works part-time as a business lecturer at Edith Cowan University.

discussed in light of the aims of the paper, followed by some concluding comments.

Background

Employers from the US, UK and Australia have expressed concern (Casner-Lotto & Barrington, 2006; National Center on Education and the Economy [NCEE], 2007; Confederation of British Industry [CBI], 2008a; Business Council of Australia [BCA], 2006; Business, Industry and Higher Education Collaboration Council [BIHECC], 2007) about the poor development of graduate skills essential for competing globally. Graduate skill shortages exist, predominantly in the science, technology, engineering and mathematics areas, but the focus of this paper is instead on prevailing graduate skill gaps. This concerns the quality rather than quantity of graduates, reinforced by the current economic climate and rising unemployment levels. In further support, a recent CBI survey reported that 32% of employers surveyed in the UK thought that raising the quality of higher education should be a government priority, in comparison to only 2% prioritising increasing the quantity of graduates (CBI, 2007).

The following concerns are shared by each country: firstly, competing effectively with less developed countries such as China and India. These countries have access to a cheap and plentiful supply of low-skilled labour and are now producing 5 billion graduates each year (CBI, 2008a), thus addressing higher level skills at significantly lower wages. Secondly, recruiting graduates who are appropriately skilled to add value and feed innovation, enabling these countries to remain globally competitive. Finally, retaining domestic graduates increasingly lost in the migration process (Department for Innovation, Universities & Skills, 2007). Strategies commonly focus on the need for HEIs and industry to engage further through more internship and work placements opportunities and collaboration on curricula development. This, however, requires a systematic unpacking of the components of graduate employability and what businesses require of the modern graduate.

Importance of the graduate skills gap

The importance of accessing appropriately skilled graduates was succinctly summarised by J. Willard Marriott, Jr., Chairman and CEO of Marriott International (Casner-Lotto & Barrington, 2006): “our nation’s long-term ability to succeed in exporting to the growing global marketplace hinges on the abilities of today’s students” (p. 11). The Australian Industry Group (AIG, 2006a) maintained that prevailing skill gaps are restricting the development of new products and processes which will impact on future levels of competitiveness. Australia’s ageing workforce, also present in the UK and USA, will mean increasing reliance on graduates’ skills and knowledge, as executive and operational know-how is lost through retirement (Larkin, 2006).

This all paints a picture of rather intense reliance on our modern Generation Y graduates, who have been described as having a more “an unrealistic view of the world of work, an exaggerated notion of one’s importance and a strong sense of entitlement” (Braid, 2007, p. 15) than their earlier counterparts. Concerns over inflated expectations of career advancement amongst new graduates were confirmed by findings from the Graduate Careers Australia (GCA, 2008) indicating that “nearly two thirds of graduate employers felt that a new graduate has an unrealistic view of the rate at which they can expect to advance within the company” (p. 3).

Ethics and social responsibility are now considered core elements of management education and nothing could better highlight the pitfalls of greed in business executives than the recent global economic crisis. Ghoshal (2005) discussed the influence of management education on the business world and the role of business schools as a breeding ground for unethical executives, calling for curricula input from governors, education management, companies, alumni and professional associations. Schmidt (2008) discussed the possibility of the US credit crunch deriving directly from a failure to teach business students how to behave ethically.

Nature and extent of the gap

Broadly speaking, it appears that employers are satisfied with the development of discipline specific skills in graduates in Australia (BIHECC, 2007) and the UK (Institute of Directors [IOD], 2007). Despite the growing focus on employability skills, functional or discipline area skills are still considered important. Dacre Pool and Sewell (2007) referred to the UK Graduate Prospects Survey which identified one-third of graduate vacancies as requiring subject-specific knowledge and skills, highlighting the underlying and ongoing importance of functional competency. This statistic is supported by a number of studies (National Council of Work Experience [NCWE], 2003; CBI, 2008b; CollegeGrad, 2008), confirming that degree specialty is still important to employers. Empirical evidence and discussion of this area, in terms of its importance and current achievements, is limited for the United States.

We then turn to the “other” elements of the graduate stock of skills and knowledge contributing to their employability: basic and soft skills. It is important, at this point, to recognise the range of definitions and models (Pedagogy for Employability Group, 2004; Yorke, 2004; Yorke & Knight, 2004) of what constitutes

graduate employability. My belief is that as the global economy evolves so will these models, and it is essential to continuously ascertain and articulate employer opinion on what makes a graduate employable, and ensure that undergraduate programs are suitably aligned. Never-ending debate on the proportional focus on graduate functional expertise, soft skills and general intellectual ability, often considered as compromising each other, is often unnecessary and unproductive. Collaborative partnerships between HEIs and industry, and effective competency profiling processes, should appropriately identify the required outcomes of graduate education, with academic expertise defining the best pedagogical pathway to achieve the defined learning goals and their subsequent transfer to the workplace.

There is increasing focus on soft skill deficiencies in graduates across each country (BCA, 2006; Casner-Lotto & Barrington, 2006). In a US survey of IT employers, the Boston Area Advanced Technological Education Connections (BATEC, 2007) group found that employers placed more emphasis on employability skills than technical ones: “technical skills are important, but without employability skills, technical skills are merely commodities. Employability skills turn intellectual commodities into intellectual capital” (p. 34). A UK employment trends survey (CBI, 2008b) found that 27% of employers were dissatisfied with graduates’ generic employability skills; supported by a survey findings from 1000 graduate employers, 40% of which believed that business, non-technical and interpersonal skills were lacking in graduates (Ferguson, 2007). The Association of Graduate Recruiters (AGR) stated there is “a growing divide between institutions which produce dynamic, motivated, switched-on students and the rest” (Sharma, 2008, p.1). Noticeably, there are significantly more employer surveys documenting businesses’ requirements of graduates and examinations of current deficiencies in the United Kingdom than elsewhere.

The need to profile competencies

The Council for Industry and Higher Education (CIHE, 2008) recognised the importance of articulating employer opinion: “it is thus important for business sectors to be more clear, consistent and effective in signalling their requirements to students and universities” (p. 5). The situation across the US, UK and Australia appears to be that businesses are dissatisfied with the skill development levels and mix in new management graduates and are doing little to convey what they actually require to HEIs. In an attack by Scottish employers on poor communication and other soft skills developed in graduates of Scottish universities, universities hit back that employers needed to be more specific on what they want from graduates (Grant, 2003). This concerns the balance of technical and generic or soft skills and also whether liberal or specialised education is favoured. A UK survey of “City” employers (Green, 2007) revealed that most employers were unimpressed by the overly specialised business degrees and instead favoured a more generalist programme. The National Leadership Program for Liberal Education and America’s Promise (LEAP) agreed that higher education curricula must calibrate to the complex and volatile nature of the work environment and advocated a set of general, essential learning outcomes including knowledge of human cultures and the physical and natural world; the development of intellectual and practical skills; personal and social responsibility and integrative learning (LEAP, 2007). Movement towards the Bologna model is gaining impetus in Australia, indicating favouring of more general and non-specialised degrees by HEIs.

Previous efforts in addressing the skills gap, largely in the form of work-integrated learning initiatives and generic attribute policy, have yet to make a difference. The adoption of the Bologna model in Australia may be perceived as a bid to produce more rounded graduates and enhance employability, yet UK degrees have been based on this model for a number of years and have suffered concurrent problems in soft skill development.

It is important to recognise that the lack of industry input does not apply to all disciplines, archetypal examples being accountancy, engineering and medicine. Here, undergraduate programmes exist in a web of accreditation rules, professional association membership criteria, and an environment of collaborative arrangements between industry and HEIs on work placements and programme design. This is not the case for management and might well explain the skill deficiencies in this field. The CBI identified management and leadership as an area of weakness in the UK. Over half of employers surveyed believed that management skills are the most significant factor contributing to competition (CBI, 2007), yet only 20% of firms described their team leaders’ and supervisors’ skills as good. A study by Porter and Ketels (2003, as cited in CBI, 2007) suggested that the problem lay in lower and middle management and the CBI recommended concentrating on the development of competencies which would allow such managers to complete their work effectively.

Furthermore, employers require accurate indicators for recruitment purposes. Competency profiling would provide some means of comparison for employers to audit graduates, especially useful for small and medium enterprises (SME) who cannot afford complicated recruitment and development tools such as assessment centres and psychometric testing. Degree qualifications are no longer deemed reliable indicators of aptitude as standards vary amongst institutions, and subjects and grades have become inflated in recent years (AGR, 2007).

In Graduate skills and recruitment in the City (FSSC, 2006), a “lack of consensus about how skill sets are

defined and interpreted” (p. 1) was recognised, with organisational frameworks influencing survey respondents’ interpretations. With confusions such as “what may be termed communication by one recruiter can be understood as teamwork by another” (p. 4), it is almost impossible for HEIs to translate competency profile findings into meaningful undergraduate programs addressing industry needs. As the FSSC succinctly put it:

Bluntly stated, each term tends to mean different things to different people. Nonetheless, an analysis of responses does provide a partial insight into the competencies themselves, some of which are more complex than at first they may appear. (p. 36)

Employer opinion: skills required and what they mean

The following section summarises the definitions assigned to the full range of competencies cited as being important in modern graduates. Sources are no more than ten years old, other than a handful of exceptions which provide valuable context to discussion of the particular skill. All sources derive from employer opinion with no direct referencing of academic, student or government opinion, other than an explanation of graduate skill assessments and employability skill frameworks in Australia. All sources are taken from studies at undergraduate level, other than very few exceptions which are clearly marked with italicised brackets as (masters) or (senior management), depending on whether they derive from industry or HEI research. These five cases were included due to the absence of any sourced definition at undergraduate level. Generic definitions are those proffered for all graduates whilst the business definitions are employer perspectives on business undergraduates only. Background information, where available, is given for each competency and is divided into that applicable to all graduates and business graduates only. The purpose of this background information is to provide insight into the perceived importance of the identified skill or attribute and extent of possession in graduates across developed countries.

Considerable effort has been made to keep information in its raw format to retain implied meanings, further adding to the issue of conceptual ambiguity, and to maximise the results’ value in informing future survey design of graduate competency requirements. The data could have been organised in a number of ways, for example, by personal, interpersonal and team competencies or by skills, attributes and knowledge. It is unlikely that for any given method of arrangement there would be total agreement on the categories within which definitions are placed. Overlaps do exist and should be accounted for in future survey design.

The competencies have been categorised into (a) the task requirements of graduate positions, akin with a job description, and (b) personal characteristics deemed important by employers. In accordance with Boyatzis (2008), Cockerill *et al.*, (1995), and Spencer and Spencer (1993), personal characteristics have been subdivided into threshold and distinguishing competencies. Threshold competencies, often referred to as key or core competencies, are those considered to be the minimum required of graduates to perform their job adequately, in contrast to distinguishing competencies, which differentiate high from average performers. Similar to the personal specifications used by human resource departments for graduate jobs, threshold competencies would make up the essential elements and distinguishing the ideal. The allocation of competencies to threshold and distinguishing categories is based explicitly on the presented employer literature for each competency. For example, cultural and diversity management is classed as a distinguishing competency as the focus of the entry is on collaboration and learning rather than adhering to legislation.

Further to the categories of task requirements, threshold and distinguishing competencies, employer literature specifies three additional competencies: project management, coaching and meeting management. These are classed as an extension of the task requirements categories, deemed to be more applicable to a graduate’s later career rather than their initial position following university.

International competency and skills gap profile for modern graduates

1. Task requirements: graduate level

Competency: Application and use of technology

Definition (Generic)

1. The ability to use (new) technology interactively (Rychen, 2002).
2. Technology skills that contribute to effective execution of tasks (BIHECC, 2007).
3. Keyboard and data entry skills; understanding of the importance of data entry and integrity, and an appreciation that software sometimes produces errors and to question results (Field, 2001).
4. “Basic IT skills, including familiarity with word processing, spreadsheets, file management and use of internet search engines” (CBI, 2008b, p. 23).
5. “Select and use appropriate technology to accomplish a given task, apply computing skills to problem-solving” (Casner-Lotto & Barrington, 2006, p. 16).

Background information (Generic)

1. Dacre Pool and Sewell (2007) deemed the ability to use new technologies as a highly important element in the employability of graduates.
2. Cited in the 2008 AGR survey as becoming increasingly important in graduate recruitment (Sharma, 2008).
3. 61% of a survey of 233 UK employers (CIHE, 2008) considered IT skills important in graduates.
4. Over three quarters of a sample of 400 US employers believed that the application of information technology would become increasingly important in the workplace over the next five years (Casner-Lotto & Barrington, 2006).
5. Ranked the skill which most UK employers are satisfied with in recent graduates (CIHE, 2008).
6. 85% of a survey of 500 UK employers stated that recent graduates demonstrated ICT skills “always” or “often” (IOD, 2007); confirmed in another UK survey which found that 98% of employers are satisfied with graduates’ IT skills (CBI, 2008b).

Additional contributing sources: Department of Education, Training and Youth Affairs (DETYA, 2000), McLarty (2000), Scott and Yates (2002), National Centre for Vocational Education Research (NCVER, 2003), Bell (2004, as cited in Hurt, 2007), Knight and Yorke (2004).

Competency: Problem solving (PS)

Definition (Generic)

1. “Ability to analyse and transform information as a basis for making decisions and progressing toward the solution of practical problems” (Hambur *et al.*, 2002, p. 2).
2. “Selection and use of appropriate methods to find solutions” (Knight & Yorke, 2004, p. 8).
3. “Analysing facts and circumstances and applying creative thinking to develop appropriate solutions” (CBI, 2008b, p. 23).
4. “Use knowledge, facts, and data to solve workplace problems; apply math and science concepts to problem solving (Casner-Lotto & Barrington, 2006, p. 16).

Background information (Business)

1. Identified as a business graduate deficiency by Quelch (2005, as cited in Brotheridge & Long, 2006): “learn little about how to analyze and solve complex, messy problems that confront today’s business managers and leaders as they seek to navigate the global economy” (p. 833).

Background information (Generic)

1. Field (2002) maintained that a systems approach to problem solving is required.
2. GSA: Certain stages of PS can be followed across disciplinary areas with common elements: (a) identification and analysis, (b) selection and organisation of relevant information, (c) representation, (d) identification of strategies, and (e) application and evaluation of strategies (Hambur *et al.*, 2002).
3. Cited as one of the greatest skill deficiencies in Australian graduates (DETYA, 2000).
4. Nicholson (2006) believed it would become increasingly important in the years to come.
5. Rated the most important soft skill for innovation by Australian employers (AIG, 2006a).
6. Ranked the 9th most important sought after skill in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
7. Ranked the 7th most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).
8. PS in the employability skills framework has the following facets: developing creative, innovative solutions; developing practical solutions; showing independence and initiative in identifying and solving problems; PS in teams; applying a range of strategies to PS, using mathematics including budgeting and financial management to solve problems; applying PS strategies across a range of areas; testing assumptions and accounting for context and resolving customer concerns in relation to PS (Department of Education, Science & Training [DEST], 2002).

Additional contributing sources: Gabric and McFadden (2000), Australian Chamber of Commerce and Industry (ACCI, 2002), BCA (2006), Hager and Holland (2006), BIHECC (2007), AIG (2006b).

Competency: Decision management (DM)

Definition (Generic)

1. Making decisions using available information and in a business context; bringing a multidisciplinary approach to decision making and making decisions under pressure (Field, 2001).
2. Boud and Solomon (2001) defined executive effectiveness as “demonstrating decisiveness combined with sensitivity in making difficult judgements in response to complex situations” (p. 165).
3. Knight and Yorke (2004) highlighted two aspects: “choice of the best option from a range of alternatives” and coping with complexity - “the ability to handle ambiguous and complex situations” (p. 8).

Background information (Business)

1. Rausch *et al.* (2002) believed competence is required in making non-technical decisions such as: ensuring appropriate participation of stakeholders in decision making and planning; setting and organising the achievement of organisational goals; ensuring coordination and cooperation; fostering a climate of positive discipline and adherence to norms; recruitment and selection; and deciding on required areas of competence improvement. They maintained that management education should focus on the development of DM competencies to deal with these issues.

Background information (Generic)

1. Deemed as giving graduates the edge in recruitment (AGR, 2007).
2. Ranked the 10th most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).
3. In the UK, analysis and decision making was considered the 10th most important skill when recruiting graduates (CIHE, 2008).
4. A large gap was found in businesses' satisfaction levels and the importance attached to decision management in UK graduates (CIHE, 2008).
5. Decision making was one of the skills experiencing the most significant gap between required and satisfaction ratings amongst surveyed UK employers (IOD, 2007).

Additional contributing source: Hayes (2006).

Competency: Operating in organisational environment

Definition (Business)

1. The ability to fit in with corporate culture (Forde, 2000).

Definition (Generic)

1. Described as part of a set of skills in understanding and working with systems; Field (2002) believed a graduate should appreciate one's role in the organisational environment and "understand workplace relationships, dynamics and interdependencies... [and] values that align with enterprise values" (p. 39).
2. A willingness and ability to understand and model firm values and culture and having the right attitude (AIG, 2006b).

Background information (Generic)

1. The ability to adapt to the environment is cited as becoming increasingly important in the UK (Sharma, 2008).

Competency: Multi-tasking

Background information (Generic)

1. A survey of 154 employers in New Zealand revealed a reluctance in graduates to do mundane tasks; essential in SMEs which are commonplace in some regions. Notably, 56% of respondents were small businesses (New Zealand Herald, 2005).
2. Ranked the 6th most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).

2. Task requirements: higher level

Competency: Project management

Definition (Generic)

1. Attains cooperation; allocates resources effectively; monitors progress and recommends actions; ensures quality; and anticipates issues and actions required (Field, 2001).
2. Knowing how to manage projects into successful implementation (Scott & Yates, 2002).

Additional contributing source: BCA (2006)

Competency: Meeting management

Definition (Generic)

1. Effectively facilitating meetings (Field, 2001).
2. An ability to chair and participate constructively in meetings (Scott & Yates, 2002).

Additional contributing source: Drucker (2006).

Competency: Coaching

Definition (Generic)

1. Instructive feedback (Hayes, 2006).
2. Effectively coaches peers and clients (Field, 2001).
3. An ability to help others learn in the workplace (Scott & Yates, 2002).

3. Threshold competencies

Competency: Ethics and responsibility (ERP)

Definition (Business)

1. Magill and Herden (1998) emphasised the role of ethics as a set of basic values, including honesty and respect for diversity, which guide managerial behaviour.
2. To exhibit ethical and professional behaviour (Bell, 2004, as cited in Hurt, 2007).

Definition (Generic)

1. DETYA (1998) emphasised “high ethical standards in personal and professional life”.
2. Integrity (Field, 2001; NCVER, 2003).
3. “Demonstrates understanding of and commitment to professional values in practice, through the implementation of anti-discriminatory/anti-oppressive/anti-racist principles” (Boud & Solomon, 2001, p. 164).
4. Knight and Yorke (2004) defined ethical sensitivity as: “appreciates ethical aspects of employment and acts accordingly” and acting morally as “has a moral code and acts accordingly” (p.8).
5. “Ethics is more complex than codes or prescriptive theories, and increasingly is concerned with character, identity, virtues and related skills” (Robinson, 2005, p. 2).
6. Robinson (2005) outlined maintaining core values and ethical practice; maintaining integrity and not compromising a profession; and maintaining trust by not capitalising on potentially vulnerable clients as key aspects of ERP. Different facets of integrity are a balanced integration of the different parts of the person, consistency of character, and taking responsibility for values and practice. Ethical literacy is an “awareness of the ethical issues and the capacity to respond creatively to them” (p.5).
7. Casner-Lotto and Barrington (2006) defined responsibility as demonstrating integrity and ethical behaviour and acting responsibly “with the interests of the larger community in mind” (p.16).

Background information (Business)

1. Alsop (2006) acknowledged the widely perceived importance of integrating ethical content into business curricula, focusing on areas such as fair pricing, ethical challenges faced by modern day managers and misleading representation of information: “clearly universities have a critical role to play in preparing leaders to create an ethical and socially responsible climate in the world’s business enterprises” (p.12).
2. Sustainability is a key issue for management today and involves making human economic systems last longer, with less impact on ecological systems: “Worldwide, management education offers the means for the socialisation and training of future generations of leaders, administrators, managers, decision makers and policy framers to address these types of meta-issues ... clearly, values-driven management education holds tremendous potential to extend traditional paradigms and distributions of knowledge and power for the global human good” (Bilimoria, 2000, p. 163).

Background information (Generic)

1. Robinson (2005) believed ERP is increasingly important to new graduates as professions and businesses become aware of their social duties. He stated “the capacity to deal with ethical issues is critical to modern business” and that “awareness of ethical issues, and the capacity to deal with them, makes one more employable” (p.2).
2. Hughes (2004, as cited in Robinson, 2005) discussed the importance of students developing an ethical framework, allowing systematic ethical reflection, autonomy and decision making. Important elements of the framework are data gathering, value reflection, responsibility analysis, planning and implementation.
3. Integrity was considered the 3rd most important skill when recruiting UK graduates and was ranked as the 9th skill employers were most satisfied with in recent graduates (CIHE, 2008).
4. Honesty and integrity were ranked the most important employability skills in recent UK graduates and were identified by employers as attributes they were “particularly impressed” with in recent intakes, with 93% stating their graduates displayed them “always” or “often” (IOD, 2007).
5. Civic and community engagement is highlighted by LEAP, in light of our increasingly complex and volatile global world, as an essential learning outcome for all higher education students in the US. However, qualitative research amongst students revealed they “do not think that civic engagement is even a goal for their college studies” (Peter D. Hart Research Associates 2004, as cited in LEAP, 2007). Interestingly, in their employer focus groups, civic engagement was ranked the least important outcome of college education (Peter D. Hart Research Associates, 2006).

Additional contributing sources: Gabric and McFadden (2000), Barrie (2005), Hager and Holland (2006).

Competency: Written communication (WC)

Definition (Business)

1. Brownell and Chung (2001, masters) defined managerial speaking as: command of basic English,

writing style suitable for professional contexts, structuring information in a clear and effective manner, creating appropriate and effective messages and applying appropriate document design elements.

Definition (Generic)

1. Writing clearly; forming and articulating logical arguments; appropriately sequencing and presenting; comprehending information in a range of formats; ideas (Field, 2001).
2. The ability to use language, symbols, and text interactively (Rychen, 2002).
3. "Application of literacy, ability to produce clear, structured written work" (CBI, 2008b, p. 23).
4. "Write memos, letters and complex technical reports clearly and effectively" (Casner-Lotto & Barrington, 2006, p. 16).
5. Also incorporates the ability to read effectively, defined by Knight and Yorke (2004) as: "the recognition and retention of key points" (p. 8).

Background information (Generic)

1. From a lecturer's perspective, advances in the age of technology have caused a worrying decline in the graduate's written word; exacerbated by the everyday use of abbreviated English in texts and emails. This is apparent in undergraduates both in the UK and Australia with sentence structure and grammar the weakest areas.
2. GSA expects graduates to demonstrate (a) quality of thoughts and ideas in both argument and report tasks; (b) ability to structure and organise written material; and (c) ability to use quality language and expression Hambur *et al.* (2002).
3. Communication was rated the second most important soft skill for innovation yet the soft skill most lacking in Australian organisations (AIG, 2006a).
4. Deemed as giving graduates the edge in recruitment (AGR, 2007).
5. The "ability to communicate accurately, clearly and at a professional level" is cited as one of the top three skills repeatedly asked for by employers (Martyn, as cited in New Zealand Herald, 2005).
6. Ranked the 3rd most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
7. Ranked the 5th most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).
8. Featured as the top selection criteria for recruiting graduates by 54.2% of 271 employer respondents (GCA, 2007).
9. Good writing skills were considered vital by 71% of a survey of 233 UK employers yet communication skills were only ranked 16th as a skill which employers are most satisfied with in recent graduates (CIHE, 2008).
10. In a survey of 500 UK employers (IOD, 2007), oral communication was ranked the 3rd most important employability skill in recent graduates and basic literacy skills were ranked the second.
11. Over a quarter of US employers reported that new workforce entrants with a four-year college diploma were "deficient" in writing skills and written communication, yet both were deemed important by almost 90% of the employer sample. WC was also the 4th most highly ranked applied skill (Casner-Lotto & Barrington, 2006).
12. A 2007 UK employment trends survey (CBI, 2008b) found that over a ¼ of employers were dissatisfied with graduates' literacy skills.
13. A UK survey of 233 employers found a large gap in businesses' satisfaction levels and the importance attached to communication and good writing skills in graduates (CIHE 2008).
14. 56% of the Australian firms surveyed were concerned with the lack of writing skills of recent graduates (Sharma, 2008).

Additional contributing sources: DETYA (2000), Gabric and McFadden (2000), McLarty (2000), Boud and Solomon (2001), Soontiens and De La Harpe (2002), Pedagogy for Employment Group (2004), Barrie (2005), AIG (2006b), Drucker (2006), Hager and Holland (2006), Hayes (2006), BIHECC (2007).

Competency: Information management

Definition (Generic)

1. Information literacy, research and inquiry (Barrie, 2005).
2. The ability to use knowledge and information interactively (Rychen, 2002).
3. Capacity to identify, access and manage knowledge and information is essential for the knowledge economy (Hager & Holland, 2006).
4. Comprehending information in a range of formats; assessing the quality and relevance of information to decisions and analysing, evaluating, interpreting, extrapolating and differentiating data (Field, 2001).
5. "Research, discovery, and information retrieval skills and a general capacity to use information" (DETYA, 2000).
6. Information retrieval is defined as the "ability to access different sources" (Knight & Yorke, 2004, p. 8).

7. Statistical skills for quantitative analysis and the conversion of data into management (Hager & Holland, 2006).

Competency: Operating globally

Definition (Generic)

1. Described as global citizenship: “aspire to contribute to society in a full and meaningful way through their roles as members of local, national and global communities” (Barrie, 2004, p. 269).
2. “It is not a ‘thing’ that is bearing down on universities in a prescriptive and deterministic way... it is a discursive practice; that is, a way of thinking” (Boud & Solomon, 2001, p. 23).
3. Knight and Yorke (2004) cited global awareness, “in terms of both cultures and economics” and “possession of more than a single language” as important in graduates (p. 8).

Background information (Business)

1. Bigelow (1994) and Lane and Distefano (1996) (both cited in Laughton and Ottewill, 2000), identified a range of attributes specific to global business executives such as diplomacy, adaptability and culturally influenced decision making.

Background information (Generic)

1. Globalisation has transformed the occupational landscape for graduates, increasing the need to operate competently in an international and intercultural work environment, and for developing local problem assessment, interpretation and solving skills within a broad, international context. This requires curricula reflecting diverse perspectives, professional practices and cultures and developing the “skills and knowledge to perform competently (professionally and socially) in an international environment” (Whalley 1997, as cited in Edwards *et al.*, 2003, p. 188).
2. “The outcome of the internationalised curriculum is that graduates are able to solve problems in a range of locations in culturally sensitive ways” (Aulakh *et al.*, 1997, as cited in Edwards *et al.*, 2003, p. 187).
3. “After listening extensively to business leaders around the world, one of the challenges that came across consistently was the lack of cross-cultural skill sets in the workforce and a lack of resources for building and maintaining effective global teams” (Business for Diplomatic Action, 2008, para. 1).
4. International experience, particularly in a work environment, is identified in an Australian survey as becoming increasingly important in graduate recruitment (Sharma, 2008).
5. International companies consider graduates who have professional work experience overseas more employable (CIHE, 2008).
6. Foreign language skills were identified as only the 23rd out of 24 transferable skills deemed important in graduates in a survey of Irish employers (Curry *et al.*, 2003).
7. Foreign language skills were among the employability skills employers witnessed least frequently in recent graduates (IOD, 2007).
8. Foreign language capabilities or work/study experience abroad was only vitally important to a very small portion of UK companies surveyed; considered more to be ‘nice to have’ capabilities used to differentiate candidates in final stages of selection (CBI, 2008b).
9. A US survey found that knowledge of foreign languages will become more important in the next five years, more than any other basic skill, according to over 60% (63.3%) of the employer respondents (Casner-Lotto & Barrington, 2006).

Competency: Intellectual ability

Definition (Generic)

1. Scott and Yates (2002) argued intellectual capability encompasses understanding there is never a “boxed set of steps” for solving workplace problems or carrying out a project; ability to identify from a mass of detail the core issue in any situation; ability to use previous experience to comprehend a current situation which takes an unexpected turn; ability to diagnose what is really causing a problem and then to test this out in action; ability to trace out and assess the consequences of alternative courses of action; ability to readjust a plan of action in the light of what happens as it is implemented; ability to see how apparently unconnected activities are linked and make up an overall picture; ability to set and justify priorities and an ability to recognise patterns in a complex situation.
2. DETYA (2000): “Intellectual openness and curiosity, and an appreciation of the interconnectedness and areas of uncertainty, in current human knowledge” (p. 12).
3. Practical intelligence (Teichler, 2000, as cited in Knight & Yorke, 2004).
4. Scholarship is defined by Barrie (2004) as “leaders in the production of new knowledge and understanding through inquiry, critique and synthesis. They will be able to apply their knowledge to solve consequential problems and communicate their knowledge confidently and effectively” (p. 269).
5. Intellectual flexibility “demonstrates an open-mindedness of alternatives. This involves demonstrating the ability to analyse issues in terms of dilemmas and/or to analyse situations in terms of continuous change” (Boud & Solomon, 2001, p. 165).

Background information (Business)

1. As far back as 1959, Gordon and Howell (as cited in Porter & McKibbin, 1988) stated that “undergraduate schools of business clearly have a responsibility for general (or liberal) as well as for professional education... The Business School that permits its students to graduate with even less than 40% of their work in non-business courses ... is not experimenting in an attempt to implement better the desirable educational goals. It is simply offering a poor grade of education which inadequately prepares the student either for life or for a responsible business career” (p. 49).
2. The Australian Institute of Management (Boston Consulting Group, 1995) argued that a “high quality general education in the liberal arts tradition” (p. 35) would be most appropriate for educating graduates the field of management.

Background information (Generic)

1. UK Institute of Directors (The Sunday Times, 2003, as cited in Knight & Yorke, 2004) stated “the view of our members is that, providing that a course is intellectually demanding, it will turn out people with potentially employable skills... Classics and medieval history turn out people with super brains and the employer can be satisfied that someone has stretched themselves” (p. 196).
2. Traditionally this has been measured, in conjunction with disciplinary skills, by graduate degree classification. AGR (2007), from a survey of 200 UK employers, stated this is no longer perceived as indicative of a candidate’s ability; due to differences between institutions and grade inflation; but useful for initially identifying candidates for recruitment. Carl Gilleard, the chief executive of the Association of Graduate Recruiters, said employers were “becoming more accepting of 2:2 degrees, realising that the days of academic criteria ‘as the be-all and end-all are long gone’” (Lightfoot, 2007, p. 14).
3. Sound academic achievement was ranked the 5th most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
4. Intellectual ability was considered the 4th most important skill when recruiting graduates by 81% of a survey of 233 UK employers. It was also ranked 5th as a skill which employers are most satisfied with in recent graduates (CIHE, 2008).
5. Academic qualifications were identified as the 5th most important graduate selection criteria amongst Australian employers (GCA, 2007).
6. 60% of UK employers considered a good degree qualification as important (CIHE, 2008).

Competency: Lifelong learning

Definition (Business)

1. Actively seeking additional knowledge (Bell, 2004, as cited in Hurt, 2007).

Definition (Generic)

1. Managing one’s own learning in the context of business needs; using networks (people and technology) to support one’s own learning; willingness to take advantage of learning opportunities; support others in their learning and contribute to the learning environment (Field, 2001).
2. “Continuous professional learning ... demonstrates commitment to and capacity for reflection on practice, leading to progressive deepening of professional understanding” (Boud & Solomon, 2001, p. 164). They state this involves being willing and able to learn from others, recognising that professional judgments are always open to question, engaging in self-evaluation and recognising one’s own strengths and weaknesses.
3. “Commitment to ongoing learning to meet the needs of employment and life” (Knight & Yorke, 2004, p. 8).
4. “Be able to continuously acquire new knowledge and skills; monitor one’s own learning needs; be able to learn from one’s mistakes” (Casner-Lotto & Barrington, 2006, p. 16).
5. Knight and Yorke (2004) discussed malleable self-theory which they defined as the “belief that attributes (e.g., intelligence) are not fixed and can be developed” (p. 8).

Background information (Business)

1. Porter and McKibbin (1988, p. 217) insightfully wrote: “in today’s world, and most definitely in the world of tomorrow, a person’s management education cannot stop with the completion of a formal bachelor’s or master’s degree program in business or any other relevant subject”. They identified different stages in a manager’s career: entry level, first supervisory assignment, manager of a particular functional unit, general manager (i.e. set of functional units) and executive level; each level requiring the development of different skills and knowledge.
2. Magill and Herden (1998) described an undergraduate degree as one step in a process of lifelong learning. It should not only develop a broad foundation and specific abilities but also the ability and desire for further learning” (p. 573).
3. Bilimoria (2000) argued that a prime mission of management education is commitment to lifelong learning where participants are inspired to “cultivate to lifelong commitment to one’s own continual development” (p. 164).

4. Hogg (2004) emphasised the importance of lifelong learning not only for corporate employees but also for academic professionals on business programs: “learning for life has become the mantra for all professionals in the 21st century because nothing stays the same and those who don’t remain current will be left behind” (p. 4).
5. It is generally accepted that lifelong learning qualities need to be combined with organisational support tools such as close supervision, mentoring and appropriate resources (Nicholson, 2006).
6. The willingness and ability to learn (AIG, 2006b; Pedagogy for Employment Group, 2004).

Background information (Generic)

1. Generic attributes are also inextricably linked with lifelong learning as the mastering of each skill at a given level will foster further learning and a cycle of refining and building on attributes in different kinds of life situations (Candy *et al.*, 1994; Hager *et al.*, 2002).
2. Ranked the 8th most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003)
3. Hinchliffe (2006) discusses an interesting link between employability and lifelong learning. As graduates are unlikely to meet the rising expectations of employers, they should be recognising the need to learn these attributes - and have the capacity to do so - to enhance their employability levels; this must in turn be recognised by graduate recruiters who need to look outside the competency tick box.
4. Receptiveness to training was ranked first as an attribute most appreciated by employers (Chartered Management Institute [CMI], 2002) and also recognised by McLarty (2000).

Additional contributing sources: Forde (2000), Teichler (2000, as cited in Knight & Yorke, 2004), Scott and Yates (2002), Barrie (2004), BIHECC (2007).

Competency: Disciplinary expertise (DE)

Definition (Business)

1. Technical skills incorporate: industry and technical knowledge, product knowledge, understanding clients needs, numeracy, IT systems and technical and practical knowledge (FSSC, 2007).

Definition (Generic)

1. Scott and Yates (2002) argued that DE encompasses: a high level of current and relevant technical expertise; understanding of risk management and litigation; understanding of organisational operations and integration of knowledge from many disciplines.
2. DEETYA (2000): “Technical competence and an understanding of the broad conceptual and theoretical elements of his or her fields of specialisation” (p. 12).
3. “Effective grasp of a wide range of professional knowledge, demonstrates an understanding of the relationship between various types of professional knowledge, and an ability to apply this understanding effectively through practice”. Also includes: “knowledge and critical evaluation of professional methods, policy, procedures, general theory, research findings, legislation” and “ability to relate specific details to other contexts and to general principles” (Boud & Solomon, 2001, p. 165).
4. Technical ability and product and sectoral knowledge (McLarty, 2000).
5. “Applying subject understanding: use of disciplinary understanding from the HE programme” (Knight & Yorke, 2004, p. 8).

Background information (Business)

1. Hysong (2008) reviewed the varying opinions on whether technical skills are required for effective managerial performance.

Background information (Generic)

1. “Knowledge, as distinct from ‘know how’, had only a minimal place in workplace discourses. However, since knowledge had become connected to the productivity and performance of employees and of the organisation, ‘knowledge’ has developed a currency in workplace practices and language” (Gee *et al.*, 1996, as cited in Boud & Solomon, 2001, p. 24).
2. A survey of over 500 Australian employers found that, in some areas, technical skills are becoming more firm specific. This is due to specialisation of production processes and means very frequent updating of skills as technology changes (AIG, 2006b).
3. Technical skills were identified as the 2nd most important selection criteria amongst graduate Australian employers (GCA, 2007).
4. 60% of UK employers considered a good degree qualification as important (CIHE, 2008).
5. Half of the 600 UK employer respondents reported that 10% or less of their graduate jobs required a specific degree. However, a ¼ of the respondents said that 50% or more of their graduate roles did so; giving confused results (CBI, 2008a).

Additional contributing sources: DETYA (2000), Bell (2004, as cited in Hurt, 2007).

Competency: Business acumen

Definition (Generic)

1. Having a commercial orientation (Field, 2001).
2. Commercial competence and market awareness (McLarty, 2000).
3. "Commercial awareness: operating with an understanding of business issues and priorities" (Knight & Yorke, 2004, p. 8).
4. "Basic understanding of the key drivers for business success and the need to provide customer satisfaction" (CBI, 2008b, p. 23).

Background information (Generic)

1. "Lack of understanding of business practice" was cited by Australian employers as one of three major graduate deficiencies (DETYA, 2000, p. viii).
2. Almost ½ of UK employers are dissatisfied with graduates' business awareness (CBI, 2008b).
3. A UK survey found the largest satisfaction gap in graduates was in commercial awareness (CIHE, 2008).
4. Business acumen was among the employability skills employers witnessed least frequently in recent graduates and was also the skill experiencing the most significant gap between required and satisfaction ratings (IOD, 2007).

Competency: Work experience

Background information (Business)

1. "An important issue is the level of work related competence students have developed prior to graduation based on their upbringing and their work experience" (Berman & Ritchie, 2006, p. 205).
2. A survey of over 150 New Zealand employers revealed that employers want graduates who have experienced the world of work and can hit the ground running: "according to employers, work experience provided a better understanding of workplace realities such as staff politics, interpersonal communication, pressure of deadlines, the critical role of clients and importance of time management" (New Zealand Herald, 2005). This provides support for integrating meaningful work experience into business degrees.

Background information (Generic)

1. Whilst much research supports the link between work experience and employability, Blackwell *et al.* (2001, as cited in Pedagogy in Employability Group, 2004) suggested that quality work experience will have the following features: stakeholders understanding and appreciating the intentions of working; incorporation of induction, reflection and consideration of outcomes; accreditation; formative assessment; collation of a work-based portfolio and students reporting back on their learning.
2. Callender and Wilkinson (2003, as cited in Little *et al.*, 2005) found 58% of full-time first degree UK students were working part-time during their studies. In comparison, 83% of those studying part-time in the UK are in employment, with 58% on a full-time basis (Woodley, 2004, as cited in Little *et al.*, 2005).
3. Work based learning is strongly advocated as a means to enhancing employability (Moreland, 2005). The process should incorporate reflection and directly address the different facets of the USEM model of employability (Yorke & Knight, 2004). This is achieved by developing understanding of the world of work; developing skilful practices at work; learning about one's capabilities and interests at work (efficacy) and learning how to manage oneself at work (meta-cognition). By developing their understanding of the work environment, and their role within it, graduates will be empowered to effectively enter the workplace. This model, however, advocates the incorporation of a structured WBL program into undergraduate curricula, not merely a student undertaking part-time work during their studies.
4. Key findings of the Work Experience Group (2002, as cited in Dacre Pool & Sewell, 2007), investigating work experience opportunities in UK higher education, confirmed that employers value students who have undertaken work experience and are able to reflect on it and articulate and apply what they have learned.
5. "A trend we have seen is the increasing value employers are placing on work experience, be it paid or unpaid. There appears to be a growing number of summer internship jobs as employers find this a better indicator of future performance - a buy before you try approach" (New Zealand Herald, 2005).
6. Cited as one of the top three skills repeatedly asked for by employers (Martyn, 2005, as cited in New Zealand Herald, 2005).
7. CBI (2008b) found that of 735 UK employers, 62% said that relevant work experience was valuable and it was ranked the 2nd, behind employability skills, as the most important factor in recruiting graduates.
8. CBI (2007) research found that work experience can prove valuable in developing graduate employability skills and commercial awareness.
9. At 46% of UK employers, work experience was identified as the 4th most important factor when recruiting graduates for work placements (NCWE, 2003).

10. CollegeGrad (2008) found that at 17% of a survey of 500 US employers, the students' internship/experience was ranked 3rd most important when hiring new college graduates.
11. A UK survey of 233 employers found a large gap in businesses' satisfaction levels and the importance attached to work experience in graduates (CIHE, 2008).

Additional contributing source: McLarty (2000).

Competency: Numeracy

Definition (Generic)

1. "Ability to use numbers at an appropriate level of accuracy" (Knight & Yorke, 2004, p. 8).
2. "Manipulation of numbers, general mathematical awareness and its application in practical contexts" (CBI, 2008b, p. 23).

Background information (Generic)

1. Cited as one of the most important graduate selection criteria in the UK (Goodfellow, 2008).
2. Numeracy skills are considered vital at 68% of a survey of 233 UK employers (CIHE, 2008).
3. In a survey of 500 members by the UK Institute of Directors (IOD, 2007), numeracy was ranked the 6th most important employability skill in recent graduates.

Additional contributing source: Pedagogy for Employment Group (2004)

Competency: Professionalism/work ethic

Definition (Business)

1. The FSSC (2007) believed that attitude and commitment incorporate: doing more than expected; self-motivation and self-direction; coping with stress/pressure; moving on from criticisms and setbacks; working effectively with others in a team and flexibility and cooperation.

Definition (Generic)

1. Demonstrate personal accountability and effective work habits such as punctuality, working productively with others, and time and workload management (Casner-Lotto & Barrington, 2006).
2. "Ability to work in an efficient and structured manner" (Knight & Yorke, 2004, p. 8).
3. "Readiness to accept responsibility, flexibility, time management [and] readiness to improve own performance" (CBI, 2008b, p. 23).
4. Personal presentation (NCVER, 2003).
5. Incorporates conscientiousness which was acknowledged by Gabric and McFadden (2000) as being important in graduates.

Background (Generic)

1. 93.8% of 400 US employers cited professionalism/work ethic as being "very important" in 4 year college graduates and was ranked the 3rd most important applied skill (Casner-Lotto & Barrington, 2006).
2. Having the "right attitude" is one of the top three skills repeatedly asked for by employers (Martin, 2005, as cited in New Zealand Herald, 2005).
3. Poor attitude/lack of work ethic/approach to work was identified as being the least desirable characteristic in graduates by 2/3 of Australian employers (GCA, 2008).
4. Over ¾ of UK employers surveyed considered recent graduates to "always" or "often" demonstrate a positive attitude, punctuality and a good work ethic (IOD, 2007).
5. US employers identified a strong work ethic as the 2nd most important characteristic they look for in new graduates (Di Meglio, 2008).
6. US business leaders discussed their difficulties in finding graduates showing "commitment and dedication to their job" in a series of qualitative focus group discussions. They expressed concern with graduates' unrealistic expectations and their lack of strong work ethic. Some believed this could be overcome by employing those who have work experience or completed internships (Peter D. Hart Research Associates, 2006, p. 4).
7. Passion/knowledge of industry/drive/commitment/attitude was identified as the third most important graduate selection criteria amongst Australian employers (GCA, 2007).
8. A UK survey revealed that having a good work ethic was ranked the most important employability skill in recent graduates (IOD, 2007).
9. Having "energy and enthusiasm" was the 8th most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).

Additional contributing sources: Gabric and McFadden (2000), McLarty (2000), AIG (2006b).

Competency: Accountability

Definition (Business)

1. Accepting responsibility and accountability (Magill & Herden, 1998).

Definition (Generic)

1. Assumption of responsibility and for making decisions (Pedagogy for Employability Group, 2004).

Competency: Life experience

Background information (Generic)

1. Kelly (2002, as cited in Knight & Yorke, 2004, p. 29) highlighted the findings of a UK Financial Times and AGR survey in which completion of a gap year and achieving a degree studied away from home were amongst the top 10 desires of employers.
2. The Pedagogy for Employability Group (2004) recognised the potential gains from life experience and Dacre Pool and Sewell (2007) emphasised the need to inform students how to capitalise on this to enhance their employability.
3. "Any graduate with additional life experience... is considered to have added value. It shows they have developed some skills which can be useful for the role we are recruiting either directly or transferably" (CIHE, 2008, p. 11).
4. Whilst gap years are becoming increasingly common, it is important that graduates have direction during this period and are able to relay the developed skills and attributes to potential employers (Green, 2008). In a review of employer opinion, a major UK graduate recruiter says potential recruits must be able to prove their experiences demonstrate "resourcefulness, drive, responsibility and inquisitiveness" (p. 8).
5. Enterprise, one of the largest graduate employers in the US, looks for characteristics beyond academia and soft skills such as participation in student organisations, athletics or community services. They support the proposition of "dual transcripts" where an official university document is produced for both academic achievements and those in the area of soft skills development and life experiences (Di Meglio, 2008).

4. Distinguishing competencies

Competency: Oral Communication (OC)

Definition (Business)

1. Ability to give effective presentations (Soontiens & De La Harpe, 2002).
2. Presentational speaking: creating and developing a presentation appropriate to the audience, structuring and developing information clearly and effectively and delivering ideas with impact (Brownell & Chung, 2001; masters).

Definition (Generic)

1. Speaks, listens and empathises with others (Field, 2001).
2. "Demonstrates ability to communicate effectively in complex professional contexts ... communicating in a form and manner which is clear, sensitive and appropriately varied in style and medium according to particular audiences and purposes" (Boud & Solomon, 2001, p. 165).
3. Giving presentations encompasses the following skills: appropriately adjusting to different client contexts and seniority level of audience; explaining and justifying and pitching ideas to clients (Field, 2001).
4. Excellent telephone skills, especially in light of the rise of call centres and virtual offices (Field, 2001).
5. Knight and Yorke (2004) highlighted oral presentations: "clear and confident presentation of information to a group" (p. 8) and the ability to explain clearly, both orally and in written format.
6. "Oral literacy, including listening and questioning" (CBI, 2008b, p.23).
7. "Articulate thoughts, ideas clearly and effectively; have public speaking skills" (Casner-Lotto & Barrington, 2006, p. 16).
8. Field (2002) highlighted listening skills which are required to receive feedback and for understanding the position and requirements of others.
9. Knight and Yorke (2004) defined listening skills as: "focussed attention in which key points are recognised" (p. 8).

Background information (Generic)

1. Diversity in interpretation of meaning is illustrated by Sharp and Sparrow (2002) in a table of contrasting definitions by 12 international universities.
2. From employer surveys, OC is identified as core assessment criteria in work based learning programs for university students (Boud & Solomon, 2001).
3. Increasingly important because of the shift from manufacturing to service sector; flatter organisational structures frequently requiring graduates to manage less skilled employees and utilise

effective persuasion, motivation and persuasion skills; and a move towards matrix team structures, home working and virtual offices (Hager & Holland, 2006).

4. Commonly cited by employers as a graduate skill deficiency (DETYA, 2000).
5. Communication was rated the second most important and the most lacking soft skill for innovation by Australian employers (AIG, 2006a).
6. Deemed as giving graduates the edge in recruitment (AGR, 2007).
7. Ranked the second most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
8. Ranked the most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).
9. Featured as the top selection criteria for recruiting graduates in Australia in 2007 and 2008 (GCA, 2007, 2008).
10. Communication is cited as one of the most important graduate selection criteria in the UK (Goodfellow, 2008).
11. 86% of a sample of 233 UK employers considered good communication skills to be important yet many were unsatisfied with graduates' abilities in expressing themselves (CIHE, 2008).
12. At 67% of a sample of 100 UK employers, oral and written communication were the most important factor when recruiting graduates for work placements (NCWE, 2003)
13. 95.4% of 400 US employers cited oral communication as being "very important" in 4 year college graduates, the most highly ranked applied skill (Casner-Lotto & Barrington, 2006).
14. Of 271 Australian employers, communication skills were rated second highest as being good/excellent in recruited graduates (GCA, 2007).
15. US employers stated communication skills were the top characteristics they looked for in new graduates, according to a survey conducted by the National Association of Colleges & Employers (Di Meglio, 2008).
16. In qualitative focus group discussions with business leaders, participants were particularly concerned with written and oral communication skills; believing they have declined since previous generations. Some believed this was due to an increased reliance on technology for communication but recognition was given to poor skill development in earlier education years (Peter D. Hart Research Associates, 2006).

Additional contributing sources: DETYA (1998), Gabric and McFadden (2000), McLarty (2000), Scott and Yates (2002), Pedagogy for Employment Group (2004), Barrie (2005), AIG (2006b), BCA (2006), Drucker (2006), Hayes (2006), BIHECC (2007).

Competency: Team-working

Definition (Business)

1. Brownell and Chung (2001, masters) defined group process skill as: contributing to complete group tasks and the development of a supportive group climate.
2. Halfhill and Nielsen (2007) identified teamwork competencies as the ability to resolve conflict, collaborative problem-solving skills, good communication, ability to set goals and manage performance, plan and task coordination; meeting management and being able to give and receive feedback effectively.

Definition (Generic)

1. The ability to work "constructively with others on a task" (Knight & Yorke, 2004, p. 8).
2. "Respecting others, co-operating, negotiating/persuading, contributing to discussions" (CBI, 2008b, p. 23).
3. "Build collaborative relationships with colleagues and customers; be able to work with diverse teams, negotiate and manage conflicts" (Casner-Lotto & Barrington, 2006, p. 16).

Background information (Business)

1. High on the business school agenda as frequently cited as one of the most favoured skills in graduates. Forerunners in employability programmes are laying great emphasis on simulated team environments.
2. Identified as a graduate skill deficiency: curriculum design must require students to "seriously engage in and be responsible for producing program assignments in such a way that demands them to use the skills of working with and through colleagues" (Brotheridge & Long, 2006, p. 839).

Background information (Generic)

1. Recognised as one of the most synergistic of graduate skills; highly related to and aids the development of problem solving, interpersonal, communication and ethical decision making skills.
2. Ranked the 4th most important soft skill for innovation by Australian employers (AIG, 2006a)
3. Being a team-player was ranked the 7th most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
4. Ranked the 2nd most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).

5. Team working skills were considered the 2nd most important skill when recruiting graduates, at 85% of 233 UK employer sample (CIHE, 2008).
6. Team working skills were ranked the 10th most important employability skill of 28 in recent graduates and 85% of employers stated that recent graduates demonstrated the ability to team work “always” or “often” (IOD, 2007).
7. 94.4% of 400 US employers cited team work and collaboration as being “very important” in 4 year college graduates, ranking it the 2nd most important applied skill. Applied skills were defined as those deemed necessary to use and apply basic knowledge in the workplace. Three quarters of the sample also believed this would become increasingly important in the workplace over the next 5 years. (Casner-Lotto & Barrington, 2006).
8. Ranked the 7th most important skill in recent graduates by UK employers (CIHE, 2008).
9. US employers identified team work skills as the 3rd most important characteristic they look for in new graduates (Di Meglio, 2008).
10. US business leaders, in a series of qualitative focus group discussions, stressed the importance of teamwork skills and their lack of development in recent graduates (Peter D. Hart Research Associates, 2006).

Additional contributing sources: DETYA (2000), Dunne and Rawlins (2000), Gabric and McFadden (2000), McLarty (2000), Field (2002), Scott and Yates (2002), Soontiens and De La Harpe (2002), Pedagogy for Employment Group (2004), AIG (2006b), BCA (2006), Hager and Holland (2006), BIHECC (2007).

Competency: Organisational skills

Definition (Generic)

1. Plans, schedules and maintains realistic timelines; remains goal focused; sets and maintains priorities (Field, 2001).
2. Being able to organise work and manage time effectively (Scott & Yates, 2002).
3. Organisation and planning (McLarty, 2000).
4. Planning, coordinating and organising ability (Pedagogy for Employability Group, 2004).
5. Knight and Yorke (2004, p. 8) defined prioritising as the ability to rank tasks according to priority. They define planning as “setting of achievable goals and structuring action”.

Background information (Generic)

1. Time management is cited as one of the skills UK employers are looking for (AGR, 2007).
2. The differences between completing tasks in the workplace and at university are highlighted by Hodges of Unitec (New Zealand Herald, 2005): “in a workplace you need to be talking to other people, discussing issues and working together. Leaving things to the last minute can cause huge problems”.
3. Planning and organising was considered the 6th most important skill when recruiting graduates by three quarters of a survey of 233 UK employers. A large gap in businesses’ satisfaction levels and the importance attached to organisational skills in graduates was found to exist (CIHE, 2008).
4. Punctuality was ranked the 8th most important employability skill in recent graduates in a UK employer survey and the ability to meet deadlines the 9th. Findings also revealed that meeting deadlines was an area experiencing a significant gap between required and satisfaction ratings by businesses (IOD, 2007).
5. Time management was ranked the 4th and planning the 9th most important transferable skills in a survey of Irish employers. Of the 24 transferable skills, both were identified as a skill which employers were not satisfied with in recent graduates (Curry *et al.*, 2003).

Additional contributing sources: Drucker (2006), CMI (2002), DETYA (2000), Gabric and McFadden (2000), Hayes (2006), Pedagogy for Employment Group (2004).

Competency: Interpersonal skills (IS)

Definition (Business)

1. “Communication, conflict resolution, and the ability to give and receive feedback effectively, as well as more complex attributes such as emotional intelligence” (Halfhill & Nielsen, 2007, p. 65).
2. Grouped as “business and interpersonal skills”, these were deemed the most important in managers, sales, customer service and administrative positions in the UK Financial Services Sector (FSSC, 2007). This skill set incorporated: management of staff and customer relationships; project and people organisation; business language, communication and literacy; ability to communicate clearly across levels; finding and communicating alternatives; ability to resolve issues and use initiative; calm, empathetic treatment of customer and clarity in impacting information. The broadness of this skill set makes the extraction of meaningful conclusions from survey findings difficult.

Definition (Generic)

1. The ability to relate well to others and to cooperate (Rychen, 2002).

2. Fostering cooperation and collaboration; building and maintaining rapport; consultative style and the ability to resolve conflict (Field, 2001).
3. Scott and Yates (2002) classed this skill set as “emotional intelligence - interpersonal”, incorporating: the ability to empathise with and work productively with people from a wide range of backgrounds; willingness to listen to different points of view before coming to a decision; ability to develop and use networks of colleagues to help solve workplace problems; understand group composition, dynamics and organisational influence; ability to work with senior staff without being intimidated; ability to give constructive feedback without assigning personal blame; ability to motivate others and the ability to develop and contribute positively to team-based projects.
4. Social ability (McLarty, 2000).

Background information (Business)

1. Identified as a key area for improvement in business graduates in the UK (FSSC, 2007).

Background information (Generic)

1. Identified as a key deficiency in modern graduates (BIHECC, 2007; DETYA, 2000).
2. GSA assessed, in general contexts, graduates’ ability to (a) identify and interpret roles and relationships; (b) interpret feelings, attitudes, motives, values, personality, behaviour; (c) identify and apply effective teamwork, leadership, negotiation, interpersonal communication and listening skills; and (d) identify, apply and evaluate approaches for optimising individual and team performances, accounting for cultural diversity (Hambur *et al.*, 2002).
3. Encompasses conflict management (Hayes, 2006; Rychen, 2002; BCA, 2006; Gabric & McFadden, 2000).
4. “Resolving conflict: both intra-personally and with others” (Knight & Yorke, 2004, p. 8).
5. Ranked the most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
6. Featured as the top selection criteria for recruiting graduates in over half of 271 employer respondents in both 2007 and 2008 (GCA, 2007, 2008).
7. US employers identified interpersonal skills as the fifth most important characteristic they look for in new graduates (Di Meglio, 2008).
8. Customer service was ranked the 3rd most important transferable skill in a survey of Irish employers (Curry *et al.*, 2003).

Additional contributing sources: Alsop (2002), Milne (2001).

Competency: Continuous improvement management

Definition (Generic)

1. Identifies opportunities for improvement and the ability to give effective feedback (Field, 2001).
2. Attention directing and focus on opportunity (Hayes, 2006).

Additional contributing sources: Drucker (2006)

Competency: Meta-cognition

Definition (Generic)

1. “Encompassing self-awareness regarding the student’s learning, and the capacity to reflect on, in and for action”. Its elements are “learning how to learn”; reflection and a capacity for self-regulation. (Yorke & Knight, 2004, p. 5-6).
2. Its elements are described as “possession of general strategies for learning, thinking and problem-solving... capacity to differentiate between tasks, recognising that variation in difficulty is likely to require different cognitive strategies ... awareness of how one tackles tasks and learns” (Yorke, 2004).

Background information (Generic)

1. Yorke and Knight (2004) argued that meta-cognition is increasingly being recognised in learning and development research.
2. Dacre Pool and Sewell (2007) recognised the importance of providing graduates with the opportunities to reflect on and evaluate their learning experiences. They argued that encouraging and enabling them to do so will encourage them to consider what else is required to develop their employability.

Competency: Cultural and diversity management

Definition (Generic)

1. Diversity is defined as to “learn from and work collaboratively with individuals representing diverse cultures, races, ages, gender, religions, lifestyles, and viewpoints” (Casner-Lotto & Barrington, 2006, p. 16).

Background information (Business)

1. Laughton and Ottewill (2000) stated that, “in Europe, management is increasingly becoming a cultural activity rather than a technical one ... [with] implications on motivating and leading human resources, industrial relations practices, communication, decision making and many other organisational necessities” (p. 378). They argued that undergraduate business programs are essentially ethnocentric in their approach to education, basing curricula on assumptions such as market economies, profit orientation and human resource management from a Western perspective.

Background information (Generic)

1. Cultural values and concepts vary according to region, as will the attributes expected, conceived and valued in university graduates: “would the individualistic, autonomous, critical, self-directed learner prized in Australian cultures, be equally valued in an Eastern culture?” Barrie (1997, p. 47).
2. The draft eighth Mayer competency of cultural understanding, the widely acknowledged Hofstede cultural dimensions (Deresky, 2008) and the vast increase in cultural awareness programmes, are all evidence of the infiltration of culture into every level of required business competencies.
3. Cultural alignment and values fit was identified as the 4th most important key selection criteria for recruiting graduates (GCA, 2007).
4. 67.1% of US employers believed that diversity would become increasingly important in the workplace over the next 5 years (Casner-Lotto & Barrington, 2006).
5. Ranked the 10th skill which UK employers are most satisfied with in recent graduates (CIHE, 2008).

Additional contributing sources: Forde (2000) , Gabric and McFadden (2000), Teichler (2000, as cited in Knight & Yorke, 2004), Field (2002).

Competency: Autonomy

Definition (Generic)

1. Personal and intellectual autonomy (Barrie, 2005).
2. The ability to defend and assert one’s rights, interests, responsibilities and needs; ability to form and conduct life plans and personal projects and the ability to act within the larger context (Rychen, 2002).
3. “Capacity for self-directed activity” (DETYA, 1998).
4. Independence, defined as the “ability to work without supervision” (Knight & Yorke, 2004, p. 8).

Additional contributing sources: Gabric and McFadden (2000), Pedagogy for Employment Group (2004).

Competency: Critical thinking (CT)

Definition (Business)

1. Distinguishing relevant facts from irrelevant facts, analysing the strengths and weaknesses of an argument, defending one perspective among others and expressing a well-reasoned point of view (Hurt, 2007).
2. Phillips and Bond (2004) identified the different conceptions of CT as generic skill, embedded skill, skill for lifelong learning and a skill for critical being.
3. Thinking rationally, logically and coherently (Bell, 2004, as cited in Hurt, 2007).

Definition (Generic)

1. “Students’ abilities to identify issues and assumptions, recognise important relationships, make correct inferences, evaluate evidence or authority, and deduce conclusions” (Tsui, 2002, as cited in Tapper, 2004, p. 201).
2. “Grasping the meaning of statements; judging ambiguities, assumptions or contradictions in reasoning; identifying necessary conclusions; assessing the adequacy of definitions; assessing the acceptability of alleged authorities” (Ennis, 1962, as cited in Moore, 2004, p. 5). Ennis is a forerunner in the generalist perspective, advocating the development of CT skills in separation from disciplinary content (Moore, 2004).
3. “The appropriate use of reflective scepticism within the problem area under consideration” (McPeck, 1981, as cited in Moore, 2004, p. 5). McPeck resisted the generalist trend and argued CT could not be separated from the disciplinary domain (Moore, 2004).
4. Logical and analytical reasoning (Hager & Holland, 2006).
5. “The capacity for critical, conceptual and reflective thinking in all aspects of intellectual and practical activity”. Also described as logical and orderly thinking. (DETYA, 2000, p. 12).
6. Critical analysis is the “ability to ‘deconstruct’ a problem or situation” (Knight & Yorke, 2004, p. 8).
7. To “exercise sound reasoning and analytical thinking” (Casner-Lotto & Barrington, 2006, p. 16).
8. Field (2002) highlighted the synergistic value of thinking skills: “Thinking skills relate to decision-making (e.g., predicting and extrapolating, weighing up risk, evaluating alternatives and applying evaluation criteria), innovation (e.g., identifying opportunities not obvious to others, translating ideas into action, generating a range of options, initiating innovative solutions), and problem-solving

(e.g., testing assumptions, taking the context of data and circumstances into account)” (p. 27). She also identified the many facets to thinking: capacity to see the big picture whilst only dealing with detail; asking the right questions to solve situations and the ability to think across different disciplines.

9. Strategic, lateral and creative thinking (Hayes, 2006).
10. Commonly associated themes in graduate literature are questioning, evaluation, analysis, reflection, inference and judgment.

Background information (Business)

1. Argue it is one of the most important goals of higher education programs and recognise the overwhelming mass of literature on CT containing conflicting definitions (Phillips & Bond, 2004).
2. It is commonly assumed that universities “develop a critical attitude in their students” (Barnett, 1992, as cited in Phillips & Bond, 2004, p. 277). However, Bond (2000, as cited in Phillips & Bond, 2004), in a study of Australian university students, found that “less than half of the sample of final year undergraduates appeared to experience learning in ways that included characteristics of critical thinking” (p. 278).
3. Braun (2004) recognised contributions by business curricula to achieving the national education goal of enhanced critical thinking but advocated this should be expanded upon to effectively prepare “business executives who can handle the information volumes and fast-paced decision-making environments of the workplace” (p. 235).
4. “Business schools should really be teaching critical thinking more than anything else” (“Q&A”, 1996, as cited in Braun, 2004, p. 232).
5. Identified worldwide as a graduate skill deficiency (Braun, 2004; Phillips & Bond, 2004).
6. Despite the business community demanding graduates “who can think... who have the critical thinking skills to succeed in the corporate world” (Malekzadeh, 1998); he found business undergraduates “could not research, analyse data, critically evaluate the results and present their findings in well-argued papers or well crafted oral presentations” (p. 591). This was improved in one business school through curricula changes, educating students in business research, creating assessments which demanded reasoning, evaluation, synthesis and persuasion skills and the art of writing well-written, well-argued and persuasive papers.

Background information (Generic)

1. Ranked 3rd of 25 skills and competencies deemed important by Australian employers (DETYA, 2000).
2. The Graduate Skills Assessment (GSA) focused on reasoning in every day contexts and identified the following facets to CT: (a) comprehension (identifying explicit and implicit meaning); (b) analysis and inference (identifying claims, definitions, points of view, ambiguity, missing information); and (c) synthesis and evaluation (judging the credibility of evidence, conclusions and arguments) (Hambur *et al.*, 2002).
3. Analytical and conceptual thinking were ranked the 10th most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).
4. Critical reasoning and analytical skills/problem solving/lateral thinking/technical skills were identified as the 2nd top selection criteria for recruiting graduates at 40.6% of 271 Australian employer respondents (GCA, 2007).
5. 92.1% of 400 US employers cited critical thinking and problem solving as being “very important” in 4 year college graduates and it was ranked the 5th most important applied skill, a skill deemed necessary to use and apply basic knowledge in the workplace. Over ¾ of the sample believed CT would become more important over the next 5 years (Casner-Lotto & Barrington, 2006).

Competency: Leadership skills

Definition (Generic)

1. Providing vision, setting goals, accountability, driving change, motivating and supporting others and monitoring performance (Field, 2001).
2. “Leverage the strengths of others to achieve common goals; use interpersonal skills to coach and develop others” (Casner-Lotto & Barrington 2006, p. 16).
3. Ability to manage and motivate others (AIG, 2006b; Pedagogy for Employment Group, 2004).

Background information (Business)

1. Dulewicz and Higgs (2005, senior management) studied and discussed the competence areas of successful leaders.
2. Brownell and Chung (2001, masters) argued that competency based education provides the “most effective means for delivering on the promise of preparing graduate business students to become leaders in a truly global market place” (p. 143).

Background information (Generic)

1. Deemed as giving graduates the edge in recruitment (AGR, 2007).

2. Of 24 transferable skills, leadership was identified by Irish employers as one of the skills they were least satisfied with in recent graduates (Curry *et al.*, 2003).
3. The onus placed on leadership appears to vary with organisation size as 49% of larger companies considered it important when recruiting new graduates and only 19% of smaller firms (CIHE, 2008).
4. Almost a ¼ of employer respondents reported four-year college-educated work entrants as “deficient” in leadership skills although the skill area is considered very important by a significant majority of employer respondents (Casner-Lotto & Barrington, 2006).
5. Leadership was among the employability skills employers witnessed least frequently in recent graduates was also identified as a skill experiencing one of the most significant gaps between required and satisfaction ratings (IOD, 2007).
6. In the AGR 2008 survey, 46% of the 200 firms surveyed predicted deficits in the leadership skills of recent graduates (Sharma, 2008).

Additional contributing sources: Gabric and McFadden (2000), McLarty (2000).

Competency: Initiative

Definition (Generic)

1. “Ability to take action unprompted” (Knight & Yorke, 2004, p. 8)

Background (Generic)

1. Ranked the 7th most important employability skill in recent UK graduates (IOD, 2007).
2. US employers found initiative to be the 4th most important characteristic they look for in new graduates (Di Meglio, 2008).
3. Flatter organisational structures require graduates to frequently “take responsibility, show initiative and think things through ahead of time” (Field, 2001, p. 28).
4. Being self-motivated and a self-starter was ranked the sixth most important skill sought after in graduates in a survey of 350 New Zealand employers (VIC Careers, 2006).

Competency: Adaptability & change management

Definition (Generic)

1. Be open to new ideas; showing ingenuity in solving problems and addressing challenges; openness to new situations and possibilities; the capacity to learn and change; being flexible and taking on board feedback (Field, 2001).

Background information (Business)

1. Managing change is cited as a key goal of management education: “develop forward-thinking leaders who value, are comfortable with, and actively engage in diversity and change” (Bilimoria, 2000, p. 164).
2. Turner and Crawford (1998, as cited in Rogers, 2004) distinguished between the capabilities required to manage a current business, namely marketing and selling, and those required to manage change, such as engagement and development.

Background information (Generic)

1. The ability to deal with change is cited as becoming increasingly important in Australian graduate recruitment (Sharma, 2008).
2. “Adapting to change” was rated the 3rd most important soft skill for innovation by Australian employers. Nearly half of the Australian firms surveyed indicated they lacked skill in adapting to change (AIG, 2006a).
3. Knight and Yorke (2004) defined adaptability as the “ability to respond positively to changing circumstances and new challenges” (p. 8).
4. A flexible/adaptable, “can-do” attitude was ranked the 4th most important skill sought after in New Zealand graduates (VIC Careers, 2006).

Additional contributing sources: Gabric and McFadden (2000), McLarty (2000), Teichler (2000, as cited in Knight & Yorke, 2004), CMI (2002), NCVET (2003), Pedagogy for Employment Group (2004).

Competency: Emotional intelligence (EI)

Definition (Business)

1. “Mastering the skills of self-awareness, social awareness, self-management and relationship management” and where these facets of intelligence can be translated into “on-the-job capabilities for management and leadership” (Johnston & Watson, 2004, p. 54).
2. “A type of social intelligence that involves the ability to monitor one’s own and others’ emotions, to discriminate among them, and to use the information to guide one’s thinking and actions” (Mayer & Salovey, 1993, as cited in Tucker *et al.*, 2000, p. 331).
3. Rozell *et al.* (2002) argued there are five aspects of EI (building on work and review of others): self-

awareness, self-regulation, self-motivation, social awareness (empathy) and social skills.

Definition (Generic)

1. Stubbs *et al.* (2008) defined EI as “an individual having an awareness of and an ability to regulate their emotions” (p. 56) and present findings on emotional intelligence in an easy to understand tabular format showing four clusters: self-awareness, self-management, social awareness and relationship management; with each cluster encompassing a range of intra-related competencies.
2. Scott and Yates (2002) believed EI encompasses being willing to face and learn from errors and listen openly to feedback; understanding personal strengths and limitations; being confident to take calculated risks and take on new projects; being able to remain calm under pressure or when things go wrong; having the ability to defer judgement and not to jump in too quickly to resolve a problem; a willingness to persevere when things are not working out as anticipated; wanting to produce as good a job as possible; being willing to take responsibility for projects, including how they turn out; having an ability to make a hard decision; a willingness to pitch in and undertake menial tasks when needed and having a sense of humour and being able to keep work in perspective.
3. Boud and Solomon (2001) described this as affective awareness which “demonstrates sensitivity to and understanding of the emotional complexity of particular situations. This involves combining sensitivity with effective management of emotional responses in the course of professional relationships” (p. 165).
4. “Sensitivity to others’ emotions and the effects that they can have” (Knight & Yorke, 2004, p. 8).
5. Goleman (1998, as cited in Johnston & Watson, 2004) devised an emotional competence framework comprising of four clusters: self-awareness (emotional self-awareness, accurate self-assessment and self confidence); self-management (self-control, trustworthiness, conscientiousness, adaptability, achievement, drive and initiative); social awareness (empathy, service orientation and organizational awareness) and relationship management (developing others, influence, communication, conflict management, leadership, change catalyst and building bonds). The first two clusters form the personal competence umbrella and the latter two the social competence element.

Background information (Business)

1. Goleman (1998, as cited in Johnston & Watson, 2004) promoted EI “as a requisite for all future managers” (p. 54) and advocated that 90% of differences in the profile of senior executives can be attributed to EI rather than cognitive abilities.

Background information (Generic)

1. EI featured as the top 7th key selection criteria for recruiting graduates in a 2007 Australian survey (GCA, 2007).
2. Increased group working and operating in dynamic and continuously changing environment increases the need for EI in today’s knowledge economy.
3. Jamali *et al.* (2008) summarised the work of researchers in the field: “people with high levels of EI experience more career success (Weisinger, 1998; Dulewicz & Higgs, 2000), feel less job insecurity (Jordan *et al.*, 2002), lead more effectively (Higgs & Rowland, 2002; Prati *et al.*, 2003), are more effective in team leadership/team performance (Rice, 1999), are more adaptable to stressful events (Nikolaou & Tsaousis, 2002) and exhibit better coping strategies (Bar-On *et al.*, 2000)” (p. 349).
4. The existence of gender differences in the development of EI competencies are under scrutiny with empirical evidence divided in those support of (Jamali *et al.*, 2008) and against (Hopkins & Bilimoria, 2008).
5. Moynagh and Worsley (2005, as cited in Dacre Pool & Sewell, 2007) suggested the future knowledge-based economy would mean more jobs focusing on customer service and human interaction and therefore EI will become an increasingly important attribute in graduates.
6. EI is cited as one of the skills UK employers are looking for (AGR, 2007).

Competency: Political skill

Definition (Business)

1. “The ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one’s personal and/or organizational objectives” (Ahearn *et al.*, 2004, as cited in Ferris *et al.*, 2005, p. 127). They advocate four dimensions: social astuteness, interpersonal influence, networking ability and apparent sincerity; arguing that political skill is unrelated to mental ability but is positively related to self-monitoring, political savvy and EI.

Definition (Generic)

1. Effective negotiation (Hayes, 2006).
2. Knight and Yorke (2004) proffered definitions for key elements of political skill. They argued political sensitivity is where an individual “appreciates how organisations actually work and acts accordingly”; influencing as “convincing others of the validity of one’s point of view”; negotiating as “discussion to achieve mutually satisfactory resolution of contentious issues” and a final element is “arguing for

and/or justifying a point of view or a course of action” (p. 8).

Background (Generic)

1. Of 24 transferable skills, negotiation was identified by Irish employers as the skill they were least satisfied with in recent graduates (Curry *et al.*, 2003).
2. Influencing and negotiation skills were some of the skills experiencing the most significant gap between required and satisfaction ratings of surveyed UK employers (IOD, 2007).

Competency: Self-efficacy (SE)

Definition (Business)

1. Self-efficacy: An accurate understanding of one’s own identity and personal capabilities (Bailey *et al.*, 2007).

Definition (Generic)

1. Sense of well being, balance of work and life and self-confidence (Field, 2001).
2. Confidence (Gabric & McFadden, 2000; McLarty, 2000).
3. Self-belief (Knight & Yorke, 2004).
4. Positive self-esteem (BIHECC, 2007).
5. Aspects are: self-awareness, defined as “awareness of own strengths and weaknesses, aims and values”; self-confidence: “confidence in dealing with the challenges that employment and life throw up” and reflection: “the disposition to reflect evaluatively on the performance of oneself and others” (Knight & Yorke, 2004, p. 8).

Background information (Generic)

1. Brennan and Shah (2003, as cited in Pedagogy for Employability Group, 2004) believed that raising confidence, self-esteem and aspirations might be more important than skill development in enhancing employability.
2. Confidence was considered the 5th most important skill when recruiting graduates by 80% of a survey of 233 UK employers. A large gap was found in businesses’ satisfaction levels and the importance attached to confidence and self-development in graduates (CIHE, 2008).
3. Of 400 US employers, $\frac{3}{4}$ identified making appropriate choices concerning health and wellness, e.g. nutrition, exercise, stress reduction; and work-life effectiveness as an emerging content area that will be “most critical” for future graduates. 71.5% believed exercising personal responsibility, such as balancing a cheque book, budgeting skills and retirement planning were also critical (Casner-Lotto & Barrington, 2006).

Additional contributing sources: Teichler (2000, as cited in Knight & Yorke, 2004), NCVER (2003).

Competency: Reliability

Background (Generic)

1. Reliability was ranked the 4th most important employability skill in recent graduates with 85% of employers stating that recent graduates demonstrated reliability ‘always’ or ‘often’ (IOD, 2007).
2. Ranked 2nd as an attribute most appreciated by employers (CMI, 2002).

Additional contributing sources: McLarty (2000), NCVER (2003).

Competency: Stress tolerance

Definition (Generic)

1. “Ability to retain effectiveness under pressure” (Knight & Yorke, 2004, p. 8).

Additional contributing sources: NCVER (2003), Pedagogy for Employment Group (2004).

Competency: Attention to detail

Definition (Generic)

1. Skills and attitudes supporting attention to detail (Field, 2001).

Additional contributing source: Pedagogy for Employability Group (2004)

Competency: Entrepreneurship

Definition (Generic)

1. “The process of uncovering and developing an opportunity to create value through innovation” (National Commission on Entrepreneurship [NCE], 2003, as cited in Moreland, 2004, p. 5). The NCE also suggests that entrepreneurs have some of the following characteristics: vision, adaptability, persuasiveness, confidence, competitiveness, risk-taking, honesty, perseverance, discipline, organisation and understanding.

2. Having an entrepreneurial spirit (Field, 2001).
3. Initiative and enterprise (BIHECC, 2007).

Background information (Generic)

1. In a review of the importance of entrepreneurship, Moreland (2004) concluded that sole trader status is the dominant type of organisation in the UK, thus a major outcome of Higher Education is to prepare graduates for self-employment.
2. Moreland (2004) saw entrepreneurship as multi-faceted, encompassing: identifying opportunities for innovation and change, creating valuable goods and services, ability to develop the capacity for success and being committed to the particular project. He recognises that entrepreneurship is not entirely dependent on higher education as family, social experiences and work experience also play a significant role.
3. BCA (2006) acknowledged the importance of developing entrepreneurship skills in the workforce and improving the culture of entrepreneurship in Australia. Their research showed a “significant lack of entrepreneurship skills among Australians” (p. 15).
4. In a survey of 400 US employers, 70.5% believed that using entrepreneurial skills to enhance workplace productivity and career options as an emerging content area that will be ‘most critical’ for future graduates (Casner-Lotto & Barrington, 2006).

Competency: Creativity

Definition (Generic)

1. “Ability to be original or inventive and to apply lateral thinking” (Knight & Yorke, 2004, p. 8).
2. “Demonstrate originality and inventiveness in work; communicate new ideas to others; integrate knowledge across different disciplines” (Casner-Lotto & Barrington, 2006, p. 16)

Background information (Business)

1. “Australian business management ... lacks the skills, knowledge and confidence to work commercially creatively and innovatively. To change this mindset, senior corporate executives need to put marketplace demands on tertiary institutions to provide formal courses in Creativity and Innovation. Only under industry pressure will universities be motivated to act to make creativity a recognized program of study and practice” (Kerle, 2006, p. 5).
2. “US corporations now see business degrees as second in importance to arts degrees. 61% of McKinsey’s new hires are MFA (Master of Fine Arts) as opposed to MBA. MBAs in America are seen as secondary degrees that provide excellent number crunchers and financial modellers—but countries such as India can provide those in abundance at \$US800 per month. Two facts: One: All top-ten business universities in the US include formal courses in studies of applied creativity and innovation. Two: It is harder to get into the graduate program at the UCLA Department of Art than into Harvard Business School” (Kerle, 2006, p. 3)

Background information (Generic)

1. In a New Zealand employer survey, Martyn (2005, as cited in New Zealand Herald, 2005) found that employers felt graduates frequently wanted to be told everything and were unwilling to look outside the square.
2. Almost $\frac{3}{4}$ of US employers believed creativity and innovation would become increasingly important in the workplace over the next 5 years (Casner-Lotto & Barrington, 2006).
3. Dacre Pool and Sewell (2007) acknowledged that enterprising graduates, deemed as possessing imaginative, creative and adaptive skills, will add value to enterprises. They distinguish these from entrepreneurial skills which are essential for setting up one’s own profitable business but may not necessarily be required by all businesses.
4. Nicholson (2006) believed it would become increasingly important in the years to come.
5. Chan (2006) reviewed the benefits of creativity, such as enhanced happiness and self-esteem, which ultimately fuel our productivity. She examined the need to nurture and develop it among students and claims: “creativity is no longer a luxury we can’t afford; it is a necessity we can’t afford to be without” (p. 20).
6. “Your ability to act on your imagination is going to be so decisive in driving your future and the standard of living of your country. So the school, the state, the country that empowers, nurtures, enables imagination among its students and citizens, that’s who’s going to be the winner.” (Partnership for 21st Century Skills, 2008, p. 7).
7. Hager and Holland (2006) believed imagination was an important attribute in graduates. They stated that innovative or creative behaviour is limited due to restricted mastery at a technical level (Hager & Holland, 2006).
8. Identified by employers as the most important skill in graduates and deficient in modern graduates (DETYA, 2000).

Additional contributing sources: Teichler (2000, as cited in Knight & Yorke, 2004); Gabric and McFadden (2000); McLarty (2000); Pedagogy for Employment Group (2004).

Within the distinguishing competencies set, it is possible to identify attributes which would be expected more in graduates moving into management level than in their first job. Prominent examples are continuous improvement management, leadership skills, adaptability, and change management and political skill. The trend of undergraduates working in increasingly responsible and relevant part-time positions during their studies may quicken the pace graduates effectively adopt these higher order competencies. Economic recession, however, threatens the availability of jobs which add value to undergraduates' experience and may well slow the numbers accelerating on to management level competencies. The consideration of mature first degree graduates and postgraduates, in terms of their initial competency proficiency levels following university and transition rates to management competencies, is an interesting one and increasingly relevant as economic contraction prompts rising enrolments in both categories.

Discussion

This international synopsis of the requirements of modern graduates gives a unique insight into firstly, the different meanings assigned to the full range of industry relevant skills identified by employers; secondly, their relative importance; and finally, the perceived gap between the required and actual graduate performance in each area. The profile is not exhaustive yet provides a solid foundation for a meaningful and informed examination of industry-required competencies in modern graduates. It also provides an excellent reference for scholars, governments, HEIs and businesses to ascertain current, international thinking on the evolving requirements of today's graduates. There is a greater volume of UK employer surveys aimed at identifying required graduate competencies and a rapid succession of recent government papers focusing on the importance and practice of graduate skill development, the momentum of which is matched in neither Australia nor the United States.

Conceptual ambiguity

For the majority of cited employer surveys, participants are left to derive their own meaning of termed skills and homogeneity across respondents is simply assumed. Little consideration is given to the heterogeneous nature of individuals and organisations in terms of size, strategic positioning, culture and structure, and the subsequent influence on adopted conceptual and functional skill definitions. Survey findings on identifying industry-relevant skills, their relative importance and the extent of possession in modern graduates, are frequently used to mould higher education policy on generic skill development. The data clearly depicts a large variation in assigned definitions, validating concerns for the strength of survey findings and the aptness of consequential graduate employability programmes.

Focusing on the UK surveys, findings indicate different ratings across the skills deemed most important in graduates (IOD, 2007; CBI, 2008b; CIHE, 2008). Is this due to actual variations in skill requirements in different corporate environments or differences in personal perception of what each skill actually means? Often respondents are comparing and rating skills based on their own interpretation of the assigned skill term. This problem may be particularly rife for competency areas which are similar and overlap in meaning and functional role in the workplace. An example is self-efficacy which, from the proffered definitions, appears a subset of emotional intelligence. Similarly, definitions of self-efficacy incorporate personal reflection yet this is the overriding feature of meta-cognition, warranting a meticulous examination of the differences between each mentioned competency area. Such overlap can skew findings on relative importance and performance levels for both skill categories as respondents interchange skill terms and their assigned meanings.

Without clarifying skill definitions, survey findings hold far less value than initially perceived. If all participants are "singing from the same hymn sheet", we will be able to draw valid and reliable conclusions, not only on the conceptual and operational definitions of skills but also on their rated importance, performance levels and any variations in these caused by organisational type and geography. Homogeneity in definitions can be achieved through the identification of associated workplace behaviours for each competency. This ensures each competency is broken down, and thus compared, at the same level and its meaning clearly understood by employers, academia and government alike. It more easily facilitates a valid empirical examination of the relative importance of different competencies, an assessment of current graduate performance levels and significantly more progress in the study of the transfer of competencies from higher education to the workplace.

A prominent example of a competency attracting a range of defined behaviours by employers is oral communication, comprising public speaking skills, the ability to give and receive feedback, listening skills, telephone skills and the ability to communicate in a clear and sensitive manner, the latter two being threshold competency components. Business ethics is another interesting example and one which is evolving at a rapid rate as blame for the global economic crisis is harnessed to executive greed. As business ethics

commonly forms an entire unit on business undergraduate programmes and addresses the composition of basic values and their associated behaviours, it is understandable that this competency is subject to different interpretations.

A further example is emotional intelligence which comprises both personal and social elements and is likely to have shared behaviours with team-working and interpersonal skills, possibly creating a separate competency based on behaviours associated with effectively maintaining social relationships in the workplace.

Whilst the data illuminates the issue of conceptual ambiguity, it also highlights the importance of viewing skills collectively (Curry *et al.*, 2003; VIC Careers, 2006). Certain skills require competency in others, creating a web of synergistic interrelationships, key examples being critical thinking, decision management and problem solving. It therefore makes sense that employers seek combinations of skills in graduates which may vary according to organisational and job role environment, referred to as “constellations” by Male (2005).

It is important that we understand the interrelationships between competencies, or more specifically their associated behaviours. The problem lies in whether recruiters, whose graduate profiles are often based on precedence rather than on what is proven effective, are devising person specifications which are unrealistic and bordering on the impossible. This situation is exacerbated as the global recession takes hold and an imbalance in the supply and demand of recent graduates in many developed countries encourages employers to raise their expectations even higher.

Empirical investigation of the importance placed by employers on certain behaviours, across different business disciplines, may identify interrelationships between certain behaviours and revise our thinking on the formation of traditional competency clusters for business graduates. These clusters, however, may not necessarily match what is present in graduates, possibly through no fault of the business undergraduate programme from which they graduated. It may be that mastery of certain behaviours is unlikely to fit with excellence in others, as dictated by generated employer profiles. Empirical assessments of the relative importance and current graduate proficiency levels of workplace behaviours may inform our understanding of interrelationships between behaviours, and the possible mismatch between what is required and the likelihood of that which can be provided (E. Chapman, personal communication, June 17, 2009).

Key findings

Only tentative conclusions on the relative importance and extent of skill gaps within and across developed countries can be drawn due to the ambiguity of skill definitions in referenced surveys. However, a number of observations can be made which serve to inform future survey design in competency profiling and other empirical studies on employability.

Intellectual ability is still highly regarded by graduate employers yet many now acknowledge that degree classification is no longer the principal indicator of graduate intelligence. The data highlights the growing importance of other indicators of capability and employability. “Applied skills”, all those used to action basic skills such as reading, writing and numeracy, dominate employer requirements and are consistently ranked more important across empirical studies worldwide.

Critical thinking overlaps significantly with problem solving and decision management, each requiring analysis and deep thinking. Critical thinking and problem solving are sometimes merged in survey design (Casner-Lotto & Barrington, 2006) although, notably, are treated separately in the Australian Graduate Skill Assessments and Course Experience Questionnaires. Competency profiling should assimilate UK employer opinion on the importance of critical thinking as findings reveal less emphasis on this skill than international counterparts. The review of literature also reveals a possible imbalance in the importance of critical thinking amongst academia and industry. A future empirical study should test the hypothesis that this competency is assigned more weight by HEIs than businesses.

Oral and written communication skills, multifaceted in their nature, are consistently ranked as some of the most important in graduates and are suffering wide gaps in required and actual performance levels across many countries. Interpersonal skills, also deemed important yet deficient worldwide, incorporate a number of competency areas yet have very few documented definitions in employability literature. The interpretation here is that this is an umbrella term for a collection of attributes featured throughout the data and empirical investigations treating it as a singular competency are of little value. There is also considerable repetition in the composition of team working skills, yet differentiated as being operational in a team environment rather than in an individual capacity. Whilst the importance of team work is recognised unanimously worldwide, there is significantly less discussion and empirical evidence of satisfaction levels than other competencies.

The professionalism and work ethic skill set is also complex and incorporates enthusiasm and reliability. It is

important that each attribute within this competency area is evaluated by employers to determine their true operational meaning and value in the workplace as a good work ethic is acknowledged by employers worldwide as highly important. Empirical evidence of the importance of work experience is also overwhelming. Whilst some effort has been made to define what constitutes relevant work experience (Pedagogy in Employability Group, 2004; Yorke & Knight, 2004), the boundaries between and relative value of part-time positions, vacation work, internships and job placements remain unclear. Notably, there is a distinct overlap between the work ethic and organisational skills competencies, with time management a common feature of both sets of definitions given by employers. Interestingly, the importance and underdevelopment of organisational skills is acknowledged in Ireland and the UK but not elsewhere.

The giving and receiving of feedback and conflict management appears in multiple competency areas. Rather than extract these to form independent competencies in the results, they have remained embedded but warrant independent evaluation in future survey design. International language skills have been included under the competency area of "operating globally". Despite the opening of international borders and evolution of the global economy, language skills still remain relatively unimportant in comparison to other employability skills although this is predicted to change (Casner-Lotto & Barrington, 2006). This, however, is probably due to the nature of the sample with the majority of respondents adopting English as their first language, the most common 'currency' in international communication. There is surprisingly little research on the importance and current state of cultural and diversity management in graduates in the UK, especially given its drive for globalisation and ability to compete with other emerging knowledge economies.

There is some overlap between disciplinary expertise and the ability to operate in the organisational environment as some acknowledge that both are required for effective performance and technical skills are becoming increasingly organisation specific. As many definitions focus solely on disciplinary background, often defined by degree major, these should be presented separately to employers for discussion. Similarly, flexibility, adaptability and change management, merged together in the results presented due to considerable overlap, should be presented separately for empirical investigation: the ability to be flexible and adapt to change and also having the capacity to effectively instigate and manage change.

Coaching and project management may both be deemed subsets of leadership skills but as organisations grow flatter and graduates take on supervisory roles faster, they have been isolated for future survey design. There is little mention of leadership skills by Australian employers, identifying an area for further investigation. Regarding basic skills, numeracy is considered especially important in the UK, reading skills are only cited once and have thus been included under written communication but should be isolated in future surveys to assess their relative importance. There were some additional competencies mentioned by a small number of sources, with no definition or context given. Firstly, humour was acknowledged as being important in graduates by Hayes (2006), Field (2002), NCVET (2003), and Gabric and McFadden (2000). Common sense was cited by NCVET (2003) and maturity and perception by McLarty (2000).

Other key findings are that problem solving does not feature highly in either importance or deficiency levels in the UK or US and decision management is considered important in both Australia and the UK, with a skill gap identified in the latter. Whilst the importance of emotional intelligence is now acknowledged worldwide, there is little empirical research on undergraduate performance in this area, particularly in comparison to business postgraduates. Empirical evidence of graduate requirements for lifelong learning skills is lacking across developed countries. A closer examination of its understood meaning, its relative importance and a comparison of both with academia would be interesting. Knight and Yorke's (2004) malleable self-theory, advocating that one's attributes are not fixed and can evolve purposefully, has been incorporated under lifelong learning and should be presented in isolation in future employer survey instruments.

Creativity has been separated from entrepreneurship as it is recognised that a graduate may be creative and innovative in the workplace yet may not necessarily have developed entrepreneurial skills. Creativity, initiative and entrepreneurship are all skill areas acknowledged by employers worldwide as being important in graduates yet assessment of skill gaps in this area are limited and would serve to inform HEI practice.

Whilst the importance of managing information is discussed in graduate employability literature, it does not feature greatly in survey findings on industry-relevant competencies and the extent of deficiencies. This has been kept distinct from IT skills, which are deemed important worldwide with high levels of satisfaction reported amongst graduate employers. Finally, business acumen is overwhelmingly claimed to be deficient in graduates although there is no indicator of this in US surveys.

Conclusion

The results provide an interesting overview of graduate skill gaps in developed countries and serves to highlight how the interpretation and use of cited survey findings should be treated carefully in light of variations in understanding of different competencies. Whilst effective competency profiling will benefit

governments, businesses and HEIs worldwide in their quest to bridge graduate skill gaps, a systematic approach overcoming the problems of traditional management competency profiling is required (Jackson, 2009b).

To effectively enhance employability and the immediacy of adding value to enterprises, not only must businesses articulate what they need and want from graduates, it is also important that graduates are aware of what they are learning and its use in the workplace. The recall, association and application of knowledge and skills acquired in higher education is maximised if graduates are clear on the purpose of their developed competencies and how to apply them in a range of complex situations (Lim & Johnson, 2002; Cornford, 2005).

The Pedagogy for Employability Group (2004) believed that graduate employability could be enhanced through fostering lifelong learning, the development of a range of employability-related competencies and increased confidence and capacity in “reflecting on and articulating these capabilities and attributes in a range of recruitment situations” (p. 9). HEIs can and should contribute greatly to the nurturing and development of each of these facets. The responsibility does not, however, remain solely with them. Social, family and work experiences also play a role and once graduates have entered the workplace, and it is essential for employers to create a supportive culture and environment which fosters the emergence and continued development of these aspects of employability.

Enhanced graduate employability benefits all stakeholders: governments from a greater economic return on public investment; industry through added value, innovation and enhanced competitiveness; HEIs through improved industry engagement and enhanced corporate profile; and graduates through an easier transition into the workplace, broader career progression opportunities and the satisfaction of personal development. It is time for all beneficiaries to join together on the road to effectively profiling competencies and reap the benefits of superior graduate employability.

References

- Alsop, R. (2002, September 9). The top business schools (a special report) - playing well with others. *Wall Street Journal* (Eastern Edition), R11, R14.
- Alsop, R. J. (2006). Business ethics education in business schools: A commentary. *Journal of Management Education*, 30, 11-14. doi:10.1177/1052562905280834
- Association of Graduate Recruiters (2007). *AGR graduate recruitment survey 2007 - Summer review*. London: Author.
- Australia Industry Group (2006a). *National CEO Survey - Skilling for innovation*. North Sydney, Australia: Author.
- Australia Industry Group (2006b). *World class skills for world class industries: Employers' perspectives on skilling in Australia*. North Sydney, Australia: Author.
- Australian Chamber of Commerce and Industry (2002). Employability skills -An employer perspective. Getting what employers want out of the too hard basket. *ACCI Review No. 88*, 1-6.
- Bailey, J., Oliver, D., & Townsend, K. (2007). Transition to practitioner: Redesigning a third year course for undergraduate business students. *Journal of Management and Organisation*, 13, 65-80.
- Barrie, S. (1997, July). *Internationally transferable skills? The generic attributes of Australian Graduates*. Paper presented at the Higher Education Research & Development Society of Australasia Conference, Adelaide, Australia.
- Barrie, S. C. (2004). A research-based approach to generic graduate attributes policy. *Higher Education Research and Development*, 23, 261-275. doi:10.1080/0729436042000235391
- Barrie, S. (2005). Rethinking generic graduate attributes. *HERDSA News*, 27(1), 1, 3-6.
- Berman, J., & Ritchie, L. (2006). Competencies of undergraduate business students. *Journal of Education for Business*, 81, 205-209. doi:10.3200/JOEB.81.4.205-209
- Bilimoria, D. (2000). Redoing management education's missions and methods. *Journal of Management Education*, 24, 161-166. doi:10.1177/105256290002400203
- Boston Consulting Group (1995). *Enterprising nation: Renewing Australia's managers to meet the challenges of the Asia-Pacific century. The Australian manager of the 21st century*. Research by the Boston Consulting Group for Industry Task Force on Leadership and Management Skills. Canberra: Australian Government Publishing Service.
- Boston Area Advanced Technological Education Connections (2007). *BATEC information technology workforce skills study*. Kent, WA: The Saflund Institute.
- Boud, D., & Solomon, N. (2001). *Work-based learning: A new higher education?* Buckingham, England: SRHE & Open University Press.
- Boyatzis, R. E. (2008). Competencies in the 21st century. *Journal of Management Development*, 27, 5-12. doi:10.1108/02621710810840730
- Braid, M. (2007, February 25). Why today's graduates don't make the grade. *The Sunday Times*, Appointments, p. 15.
- Braun, N. M. (2004). Critical thinking in the business curriculum. *Journal of Education for Business*, 79, 232-236.
- Brotheridge, C. M., & Long, S. (2006). The “real-world” challenges of managers: Implications for management education. *Journal of Management Development*, 26, 832-842. doi:10.1108/02621710710819320
- Brownell, J., & Chung, B. G. (2001). The management development program: A competency-based model for preparing hospitality leaders. *Journal of Management Education*, 25, 124-145. doi:10.1177/105256290102500203
- Business Council of Australia (2006). *Changing paradigms: Rethinking innovation policies, practices and programs*. Melbourne: Author.
- Business, Industry and Higher Education Collaboration Council (2007). *Graduate employability skills*. Canberra, Australia: Author.
- Business for Diplomatic Action (2008, September 18). *Business for Diplomatic Action & Thunderbird team to offer program on global corporate diplomacy*. Retrieved on 2 February 2, 2009, from http://www.businessfordiplomaticaction.org/news/press_release.php?id=6114

- Candy, P. C., Crebert, G., & O'Leary, J. (1994). *Developing lifelong learners through undergraduate education*. Canberra, Australia: AGPS.
- Casner-Lotto, J., & Barrington, L. (2006). *Are they really ready to work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st Century U.S. workforce*. USA: The Conference Board, Inc., and the Partnership for 21st Skills, Corporate Voices for Working Families, and the Society for Human Resource Management.
- Chan, J. (2006). The necessity of creativity. *BHERT News*, 23, 18-20.
- Chartered Management Institute (2002). *Graduate key skills and employability*. London: London College of Printing.
- Cockerill, T., Hunt, J., & Schroder, H. (1995). Managerial competencies: Fact or fiction? *Business Strategy Review*, 6(3), 1-12. doi:10.1111/j.1467-8616.1995.tb00095.x
- CollegeGrad(2008). *Press release: Survey results detail what top entry level employers want most*. Retrieved August 26, 2009, from <http://www.collegegrad.com/press/what-employers-want-2008.shtml>
- Confederation of British Industry (2007). *Shaping up for the future: The business vision for education and skills*. London: Author.
- Confederation of British Industry (2008a). *Stepping higher: Workforce development through employer-higher education partnership*. London: Author.
- Confederation of British Industry (2008b). *Taking stock - CBI education and skills survey 2008*. London: Author.
- Cornford, I. (2005). Challenging current policies and policy makers' thinking on generic skills. *Journal of Vocational Education and Training*, 57, 25-45. doi:10.1080/13636820500200273
- Council for Industry and Higher Education (2008). *Graduate employability: What do employers think and want?* (W. Archer & J. Davison, Eds). London: Author.
- Curry, P., Sherry, R., & Tunney, O. (2003). *What transferable skills do employers look for in third-level graduates? Results of employer survey summary report*. Dublin: University of Dublin Trinity College.
- Dacre Pool, L., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49, 277-289. doi:10.1108/00400910710754435
- Department of Education, Science and Training (2002). *Employability skills for the future*. Canberra, Australia: Author.
- Department of Education, Training and Youth Affairs (1998). *Learning for life: Review of higher education financing and policy*. Canberra, Australia: AGPS.
- Department of Education, Training and Youth Affairs (2000). *Employer satisfaction with graduate skills: Research report*. Canberra, Australia: Author.
- Department for Innovation, Universities and Skills (2007). *World class skills: Implementing the Leitch review of skills in England*. London: HMSO.
- Deresky, H. (2008). *International management: Managing across borders and cultures. Texts and cases*. Upper Saddle River, NJ: Pearson Education International.
- Di Meglio, F. (2008, February 21). A transcript for soft skills. *BusinessWeek*. Retrieved December 3, 2008, from http://www.businessweek.com/bschools/content/feb2008/bs20080221_706663.htm?campaign_id=rss_null
- Drucker, P. F. (2006). *Classic Drucker: Wisdom from Peter Drucker from the pages of Harvard Business Review*. Boston, MA: HBS Publishing.
- Dulewicz, V., & Higgs, M. (2005). Assessing leadership styles and organisational context. *Journal of Managerial Psychology*, 20, 105-123. doi:10.1108/02683940510579759
- Dunne, E., & Rawlins, M. (2000). Bridging the gap between industry and higher education: Training academics to promote student teamwork. *Innovations in Education & Training International*, 37, 361-371. doi: 10.1080/135580000750052973
- Edwards, R., Crosling, G., Petrovic-Lazarovic, S., & O'Neill, P. (2003). Internationalisation of business education: Meaning and implementation. *Higher Education Research & Development*, 22, 183-192. doi:10.1080/07294360304116
- Ferguson, T. (2007, June 7). "Poor" graduate skills turn off recruiters. Retrieved November 21, 2008, from <http://management.silicon.com/careers/0,39024671,39167405,00.htm>
- Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J., Douglas, C., & Frink, D. D. (2005). Development and validation of the political skill inventory. *Journal of Management*, 31, 126-152. doi:10.1177/0149206304271386
- Field, L. (2002). *Industry speaks! Skill requirements of leading Australian workplaces*. Canberra, Australia: DEST.
- Forde, P. (2000). *Employer expectations for business graduate communication and thinking: An investigation conducted in Singapore and Perth*. Unpublished doctoral dissertation, Curtin University, Perth, Australia.
- Financial Services Skills Council (2006). *Graduate skills and recruitment in the city*. London: Author.
- Financial Services Skills Council (2007). *The skills bill: Analysis of skills needs in UK financial services*. London: Author.
- Gabric, D., & McFadden, K. L. (2000). Student and employer perceptions of desirable entry-level operations management skills. *Mid-American Journal of Business*, 16, 51-59.
- Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4, 75-91.
- Goodfellow, C. (2008, September 3). Graduate recruitment. *The Recruiter*. Retrieved on May 3, 2009, from <http://www.recruiter.co.uk/analysis/graduate-recruitment/337979.article>
- Graduate Careers Australia (2007). *Snapshot: Graduate Outlook 2007. A summary of the Graduate Outlook Survey*. Parkville, Australia: Author.
- Graduate Careers Australia (2008). *Snapshot: Graduate Outlook 2008*. Parkville, Australia: Author.
- Grant, G. (2003, July 17). Top employers attack Scotland's can't spell, can't write graduates. *Daily Mail*, SC1, p. 32.
- Green, M. (2007, July 16). City companies look for high skills. Businesses are competing for graduates with high-level skills. *Financial Times*, p. 5.
- Green, M. (2008, October 14). Make sure you do something useful. *Financial Times*, p. 8.
- Hager, P., Holland, S., & Beckett, D. (2002). *Enhancing the learning and employability of graduates: The role of generic skills*. B-HERT Position Paper No. 9. Melbourne, Australia: BHERT.
- Hager, P., & Holland, S. (2006). *Graduate attributes, learning and employability*. Dordrecht, Netherlands: Springer.
- Halfhill, T. R., & Nielsen, T. M. (2007). Quantifying the "softer side" of management education: An example using teamwork competencies. *Journal of Management Education*, 31, 64-80. doi:10.1177/1052562906287777
- Hambur, S., Rowe, K., Tu Luc, L., & Australian Council for Educational Research (2002). *Graduate skills assessment. Stage one validity study*. Canberra, Australia: DEST.
- Hayes, K. (2006). Get fundamental management skills right first. *Training and Development in Australia*, February, 17-18.

- Hinchliffe, G. (2006). Graduate employability and lifelong learning: A need for realism? In P. J. Hager & S. Holland (Eds), *Graduate attributes, learning and employability* (pp. 91-104). Dordrecht, Netherlands: Springer.
- Hogg, R. G. (2004). The changing education needs of the professions. *BHERT News*, 20, 3-4.
- Hopkins, M. M., & Bilimoria, D. (2008). Social and emotional competencies predicting success for male and female executives. *Journal of Management Development*, 27, 13-35. doi:10.1108/02621710810840749
- Hurt, B. (2007). Teaching what matters: A new conception of accounting education. *Journal of Education for Business*, 82, 295-299.
- Hysong, S. J. (2008). The role of technical skill in perceptions of managerial performance. *Journal of Management Development*, 27, 275-290. doi:10.1108/02621710810858605
- Institute of Directors (2007). *Institute of Directors skills briefing - December 2007: Graduates' employability skills*. London: Author.
- Jackson, D. (2009a). Undergraduate management education: Its place, purpose and efforts to bridge the skills gap. *Journal of Management & Organization*, 15, 206-223.
- Jackson, D. (2009b). Profiling industry-relevant management graduate competencies: The need for a fresh approach. *International Journal of Management Education*, 8(1), 85-98. doi:10.3794/ijme.81.281
- Jamali, D., Sidani, Y., & Abu-Zaki, D. (2008). Emotional intelligence and management development implications: Insights from the Lebanese context. *Journal of Management Development*, 27, 348-360. doi:10.1108/02621710810858641
- Johnston, B., & Watson, A. (2004). Participation, reflection and integration for business and lifelong learning: Pedagogical challenges of the integrative studies programme at the University of Strathclyde Business School. *Journal of Workplace Learning*, 16, 53-62. doi:10.1108/13665620410521512
- Kerle, R. (2006). Creativity and business. *BHERT News*, 23, 3-5.
- Knight, P., & Yorke, M. (2004). *Learning, curriculum and employability in higher education*. London: RoutledgeFalmer.
- Larkin, D. (2006). Sustainability of the minerals sector in Australia, skills needed in a global industry. *BHERT News*, 23, 20-22.
- Laughton, D. & Ottewill, R. (2000). Developing cross cultural capability in undergraduate business education: Implications for the student experience. *Education + Training*, 42, 378-386. DOI:10.1108/00400910010378467
- Liberal Education and America's Promise (2007). *College learning for the new global century*. Washington, DC: Association of American Colleges and Universities.
- Lightfoot, L. (2007, July 10). Firms turn to personality tests to find best graduates. *The Daily Telegraph*, p. 14.
- Lim, D. H., & Johnson, S. D. (2002). Trainee perceptions of factors that influence learning transfer. *International Journal of Training and Development*, 6, 36-48. doi:10.1111/1468-2419.00148
- Little, B. & ESECT colleagues (2005). *Part-time students and employability*. Learning and Employability Series 2. York, England: Higher Education Academy.
- Magill, S. L., & Herden, R. P. (1998). Using educational outcomes and student portfolios to steer management education. *Journal of Management Education*, 22, 567-589. doi:10.1177/105256299802200502
- Male, S. (2005). *Development and validation of an instrument to assess the generic competencies of engineering graduates*. Unpublished manuscript, University of Western Australia.
- Malekzadeh, A. R. (1998). Diversity, integration, globalization, and critical thinking in the upper division. *Journal of Management Education* 22, 590-603. doi:10.1177/105256299802200503
- McLarty, R. (2000). Evaluating graduate skills in SMEs: The value chain impact. *Journal of Management Development*, 19, 615-628. doi:10.1108/02621710010373287
- Milne, J. (2001). From spreadsheets to spotlight. *Canadian Manager*, 26(4), 5.
- Moore, T. (2004). The critical thinking debate: How general are general thinking skills? *Higher Education Research & Development*, 23, 3-18. doi:10.1080/0729436032000168469
- Moreland, N. (2004). *Entrepreneurship and higher education: An employability perspective*. Learning and Employability Series 1. York, England: Higher Education Academy.
- Moreland, N. (2005). *Work-related learning in higher education*. Learning and Employability Series 2. York, England: Higher Education Academy.
- National Center on Education and the Economy (2007). *Tough choices or tough times: The report of the new Commission on the Skills of the American Workforce*. Executive summary. Washington: Author.
- National Centre for Vocational Education Research (2003). *Defining generic skills: At a glance*. Adelaide, Australia: NCVET.
- National Council of Work Experience (2003). *Work experience survey results*. London: Author.
- New Zealand Herald (2005, October 24). *Employers: Grads lack nous*, p. 24.
- Nicholson, J. (2006). 2020 vision: Manager of 21st Century. *BHERT News*, 23, 2-3.
- Partnership for 21st Century Skills (2008). *21st Century skills, education & competitiveness: A resource and policy guide*. Tucson, AZ: Author.
- Pedagogy for Employability Group (2004). *Pedagogy for employability*. Learning and Employability Series 1. York, England: Higher Education Academy.
- Peter D. Hart Research Associates (2006). *Report of findings: Based on focus groups among business executives*. Washington, DC: AAC&U.
- Phillips, V., & Bond, C. (2004). Undergraduates' experience of critical thinking. *Higher Education Research & Development*, 23, 277-294. doi:10.1080/0729436042000235409
- Porter, L. W., & McKibbin, L. E. (1988). *Management education and development: Drift or thrust into the 21st Century?* New York: McGraw Hill Book Company.
- Rausch, E., Sherman, H., & Washbush, J. B. (2002). Defining and assessing competencies for competency-based, outcome-focused management development. *Journal of Management Development*, 21, 184-200. doi:10.1108/02621710210420264
- Robinson, S. (2005). *Ethics and employability*. Learning and Employability Series 2. York, England: Higher Education Academy.
- Rogers, M. (2004). Capabilities for sustainable business success. *Australian Journal of Management*, 29(1), 21-26.
- Rozell, E. J., Pettijohn, C. E., & Parker, R. S. (2002). An empirical evaluation of emotional intelligence: The impact on management development. *Journal of Management Development*, 21, 272-289. doi:10.1108/02621710210430272
- Rychen, D. (2002, October). *Key competencies for the knowledge society: A contribution from the OECD Project Definition and Selection of Competencies (DeSeCo)*. Education - Lifelong Learning and the Knowledge Economy Conference, Stuttgart, Germany.
- Schmidt, P. (2008). As Wall Street shudders, business schools rethink curricula. *Chronicle of Higher Education*, 55(6), A11-A12.

- Scott, G., & Yates, K. W. (2002). Using successful graduates to improve the quality of undergraduate engineering programmes. *European Journal of Engineering*, 27, 363-378. doi:10.1080/03043790210166666
- Sharma, Y. (2008, July 12). Be creative, deal with change to cut the ice globally. *South China Morning Post*, p. 1.
- Sharp, S., & Sparrow, H. (2002, February). Developing frameworks to embed graduate attributes in tertiary courses. *Focusing on the student: Proceedings of the 11th Annual Teaching Learning Forum, Edith Cowan University, Perth, Australia*. Retrieved May 11, 2009, from <http://lsn.curtin.edu.au/tlf/tlf2002/sharp.html>
- Soontiens, W., & De La Harpe, B. (2002). Professional skill development in Australian universities: Is there a bias? *Quality Conversations. Proceedings of the 25th HERDSA Annual Conference, Perth, Western Australia, 7-10 July 2002* (pp. 599-608).
- Spencer, L., & Spencer, S. (1993). *Competence at work*. New York: John Wiley & Sons Inc.
- Stubbs Koman, E., & Wolff, S. B. (2008). Emotional intelligence competencies in the team and team leader: A multi-level examination of the impact of emotional intelligence on team performance. *Journal of Management Development*, 27, 55-75. doi:10.1108/02621710810840767
- Tapper, J. (2004). Student perceptions of how critical thinking is embedded in a degree program. *Higher Education Research and Development*, 23, 199-222.
- Tucker, M. L., Sojka, J. Z., Barone, F. J., & McCarthy, A. M. (2000). Training tomorrow's leaders: Enhancing the emotional intelligence of business graduates. *Journal of Education for Business*, 75, 331-337.
- VIC Careers (2006). *Employment skills survey: December 2006*. New Zealand: Victoria University of Wellington.
- Yorke, M. (2004, October). *Enhancing employability through the undergraduate curriculum*. Bologna follow-up seminar on employability, Bled, Slovenia. Retrieved April 9, 2009, from http://web.uni-marburg.de/eurostudies/studienreform/eaie_cd/ACE_CoE_CD_2005/Bologna/Bol_semin/Bled/041022_Yorke.pdf
- Yorke, M., & Knight, P. T. (2004). *Embedding employability into the curriculum*. Learning and Employability Series 1. York, England: Higher Education Academy.