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Global graduate employability research: A report to the Business20 Human Capital Taskforce (DRAFT).

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Global Graduate Employability Research (Draft)

A report to the Business20 Human Capital Taskforce

June 2014



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Please note that this report is currently in DRAFT version. This report summarises the results of approximately 700 survey responses submitted by students, graduates, employers, higher education teachers and career development professionals. This version has been peer-reviewed by five experts in the field of graduate employability. Three of these peer reviews were 'blind.' All peer review suggestions have been actioned in this version of the report.

The research team has identified eleven themes emerging from the survey data. These themes are currently being pursued through interviews and focus groups with students, graduates, employers, higher education teachers and career development professionals. A minimum of 40 interviews / focus groups will be reported in the next version of the report. The results, interpretations and recommendations may change through the next phase of the report on the basis of these interviews and focus groups. For this reason, this version of the report is to be considered as DRAFT.

The graduate employability themes being addressed through interviews / focus groups are:

- Employment through multi-national corporations with graduate development programs
- Competitive sport, athletes and employability
- Entrepreneurship (graduates in start-up businesses and graduates employed by entrepreneurs)
- Government as employer
- Private Higher Education and employability implications
- The role and contribution of higher education career development centres
- Indigenous employment and supports
- Transition from secondary and employability supports
- Employability for-profit business endeavors
- Generalist disciplines and employability
- Emerging careers (preparing students for careers that do not yet exist)

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What increases higher education graduates' employability?

“students must do more than study and complete their courses in order to be employable”

Overview

A research study designed to determine what strategies increase higher education graduates' employability. The research project was led by Associate Professor Shelley Kinash, Bond University and Associate Professor Linda Crane, Bond University with research partners; Kirsty Mitchell, Bond University; Matthew McLean, Bond University Alumnus; Dr Cecily Knight, James Cook University; and Professor David Dowling, University of Southern Queensland. The project also included representation from the Australian Council for Private Education and Training. Surveys (1500) were distributed to four stakeholder groups: students, graduates (alumni), higher education personnel and employers, addressing questions of the strategies used to secure employment. In total, 821 surveys (55% response rate) were returned online or on paper. Over 700 surveys (after removing duplicates and incomplete submissions) were returned from 14 different countries; 94% of respondents were Australian and 6% from other countries.

The research team believes that the survey responses submitted through this study contribute evidence to the proposition that students must do more than study and complete their courses in order to be employable upon graduation. Twelve graduate employability strategies were identified from previous publications and provided on the surveys as tick-box lists. The strategy of work experience, internships and placements was ticked to the highest frequency by students (74% of surveys), graduates (74%) and employers (87%). This indicates that a large proportion of students stated that they plan to participate in this strategy, graduates participated in this strategy and employers value this strategy. Only a minority of higher education personnel (educators and career development centre staff-persons) ticked this strategy, indicating that a minority of these respondents are not providing these employability strategies to students. Analysis of the survey responses appeared to indicate that students who are enrolled in generalist programs such as humanities may have their graduate employability needs met within-program through being directly taught graduate attributes such as critical thinking and communications. When degree programs do not directly teach graduate attributes, student

participation in a number and range of graduate employability strategies may be particularly important. Just under half of the employers completing the surveys indicated that they were open to hiring graduates of generalist programs such as humanities, life sciences, computer science and visual/performing arts. Survey responses appeared to indicate that higher education personnel and universities may want to consider providing further opportunities for students to engage with the workforce while still a student. Survey responses provided evidence that these strategies make the difference between those graduates who do and do not readily secure employment. From the survey responses, the team concluded that employability might be enhanced by employers' provision of opportunities for learning in the early stages of work. There appeared to be widespread support across the survey responses that graduate employability is heightened when students and graduates actively initiate and make the most of these strategies.



Quick Facts & Figures

- This research was led by Associate Professor Shelley Kinash, Bond University and Associate Professor Linda Crane, Bond University with research partners, Kirsty Mitchell, Bond University; Matthew McLean, Bond University Alumnus; Dr Cecily Knight, James Cook University; and Professor David Dowling, University of Southern Queensland.
- Over 700 valid surveys were completed by 4 stakeholder groups: students, graduates (alumni), higher education personnel and employers, from 14 different countries. The response rate was 55% and 1500 surveys were distributed.
- Forty-five percent of graduates (alumni) and 7% of students participating in this research had secured graduate employment at the time of survey completion.
- A list of twelve graduate employability strategies was provided on the surveys. Students were asked to tick strategies that they are currently using, or plan to use. Graduates indicated strategies that they used while students. Employers marked those which their organisation values when recruiting graduates. Higher education personnel marked those they provide for students. Seven of the strategies were ticked by 50% or more of one or more stakeholder group respondents. These seven, in order of frequency first by number of stakeholder groups and then by percentage of respondents were: work experience / internships / placements; engaging in extra-curricular activities; careers advice and employment skill development; part time employment; attending networking or industry information events; volunteering/community engagement; and professional association membership/engagement.
- Students and graduates indicated participating in an average of nearly 5/12 of these employability strategies and higher education personnel indicated providing/supporting a combination of 4/12 of them. This was calculated by counting the number of strategies ticked by each respondent and dividing by the total number of respondents in each stakeholder group.
- Work experience, internships and placements were selected on the surveys by 325/442 (74%) of students, 75/102 (74%) of graduates and 46/53 (87%) of employers.
- Analysis of results from the completed surveys suggests that universities can improve and enhance opportunities for students to engage in meaningful *work while learning* and employers can improve and enhance opportunities to *learn while in the early stages of work*.
- Through the surveys, employers were asked "what distinguishes a top-performing graduate from the average graduate in your organisation." Qualitative analysis of the 53 survey responses resulted in the following list of seven attributes and characteristics: skills, real-world experience, well-rounded perspectives, value alignment, social support, initiative and goal-orientation to learning.
- Evidence from the returned surveys appears to indicate that among respondents, career-specific and generalist degrees continue to thrive and produce employability outcomes. Forty-two percent of students were enrolled in, and 27% of graduates had completed, one of the four generalist degrees of: humanities, life sciences, computer science and/or visual/performing arts. Forty-five percent of employers indicated that they had or would hire graduates with these degrees.
- Surveys completed by graduates from non-generalist degrees who reported graduate employment had participated in more employability strategies (average of 6) than those who did not have employment (average of 4 strategies) whereas there was no difference for graduates from generalist degrees (average of 5 strategies).

What is Graduate Employability?



Knight and Yorke (2004) are the world-renowned authorities on graduate employability. They define employability as, “a set of achievements, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations” (p. 9). Taylor (1998) provided a compelling case study of the tangling of education and employment whereby a school board defined an employability profile as “the generic skills, attitudes and behaviours that employers look for” (p. 145) and then wrote the education curriculum accordingly. Extending their definition, Knight and Yorke (2004) wrote that employability can be, and in fact, needs to be, “understood as a concern with learning that has benefits for citizenship, continued learning and life in general” (p. 8). Holmes (2013) described the knowledge, skills and attributes definition as *graduate employability as possession* in that it can be acquired as a commodity, through personal effort and supports of others, much like a degree itself. Holmes contrasts this with an understanding of *graduate employability and social positioning* whereby there is recognition that there are classes, power imbalances, privileged populations and status-ranked occupations. These factors are stronger and more culturally persuasive and controlling than the personal determination and ability to achieve and overcome. The third framework is *graduate employability as processual*. This understanding does not frame employability as short-term, cause and effect or linear. Holmes explained that “one way of conceptualising the process by which someone moves in, through and on from higher education into their post-graduation employment and career is to view it

as an *identity project*” (p. 549). This evolving model of employability appears to be a more nuanced fit with long-term career trajectories. It raises troubling questions about the emphasis and pressure our society appears to be increasingly placing on youth to choose a viable, vocational career pathway early and to stay with it. There are increasingly less generalist degrees that leave career options open and less generalist years in structured professional degrees whereby students can enroll in diverse electives, test the waters and make informed decisions upon knowing what the curriculum really means.

There are a number of stakeholders in the graduate employability system. Each set of stakeholders brings needs and expectations, tensions and misalignments with the other stakeholders. The examples inserted into Table 1 are instances in a range of factors in a complex system with multiple stakeholders.

Each of these dimensions raises questions about graduate employability and the role and place of each stakeholder. Graduate employability is not a simple equation of a higher education institution providing a student with what he or she needs in order to get a job upon graduation. Which programs and degrees does the institution offer? If there is a surplus of graduates in a particular industry, does the institution have an obligation to cap enrolments in that discipline or degree? Or does the government? What is the correct balance between teaching skills, knowledge, theory and graduate attributes? Does the curriculum address what is needed now, or is the primary responsibility to prepare the graduate for the future? Or to design, innovate and create the future? How do we prepare for jobs that will exist in five years when

TABLE 1: Stakeholder needs, expectation, tensions and misalignments in Graduate Employability

Stakeholder	Needs & Expectations	Tensions	Misalignments
Government	The development of human capital, competitive global economy, tax payers and an efficient higher education industry (including international education as export market).	Free will of students and graduates and higher education versus a proactive, planned human capital economy.	Balancing budgets between employment stimulus, the higher education industry and other industries and social welfare.
Students / Graduates	Education, development, risk-taking, fun, security, career potential.	Drive to enjoy youth, fun, friendship, adventure, freedom with pressure to set and achieve goals and prepare for career.	Interests and passions often do not align with practical perspective of parents.
Parents	Assurance of safety and security of sons/daughters, need to know that investment in education is worthwhile.	Respect for individuality and self-identity and personal vocation of son/daughter against life experience and practical, sensible knowledge of making a living.	Personal investment versus government investment in higher education. Who pays?
Employers	Productive employees who are a good fit with the organisation. Need to sustain profit and balance human resource investment against profits.	Safety, security and controlled growth against innovation, expansion and risk-taking. Reflected in hiring decisions.	Higher education as corporate trainer, independent industry or innovator for future planning.
Higher Education Personnel	Increasing recognition of business model and thereby the need for students and graduate employability outcome statistics.	Education as vocational ticket or for learning, culture, art and self-development. Skills for the current marketplace of research and innovation for the future.	Giving students what they want now or what they might need for the future.

we cannot even conceive of them today? What is the difference between vocational and higher education and do both have the same responsibility for assuring graduates as employable? Does the university teach both career specific, professional degrees and generalist degrees? Is there a place for liberal arts, culture and generalist knowledge?

There is a growing awareness across stakeholders of a shift in what it means to work and dawning realisation that all stakeholders need to have an increasingly diverse understanding of what it means to be employable. Smith (2010) articulated employability as an individualistic concept. There is fierce competition between individuals and each needs to ensure that he / she has the skills, knowledge, resilience, focus and tenacity to stay marketable and be the equivalent of a desired commodity. There is no social guarantee of employment for all and certainly not at a standard level. Smith (2010) described the current time as particularly problematic and *turbulent* in a "flexible, unpredictable economy" (p. 294). This context has changed the social definition of employability.

Often, achieving employability is enacted during the process of searching for a job; it can also be a matter of having a job or contract position, simultaneously engaging in activities to keep abreast of new skills, interactional competencies, social networking, and industry currents; obtain additional jobs; and brace oneself for future stretches of unemployment. These activities call attention to the way in which definitions of work must be broadened to incorporate multiple types of labour, as well as the powerful ways in which the organization of paid employment has come to dominate life and self outside economic institutions. (Smith, 2010, p. 294)

In addition to Smith's (2010) expansion of the notion of employability, another broadening notion is that of entrepreneurship, whereby an increasing number of graduates are not seeking traditional employers to hire them, but are starting-up their own businesses (Nabi, Holden, & Walmsley, 2010). Another contribution is the role of sport, in a multi-layered and multi-directional model, whereby it is an alternative to work and worklessness and can also reduce social exclusion and develop employability capacity for careers (Spaaij, Magee, & Jeanes, 2012).

Authorities on graduate employability warn of deep and complex problems. Knight and Yorke (2004) wrote that universities articulate employability in mission statements and public relations profiles, but seldom have authentic strategies and supports embedded throughout curriculum design and learning and teaching. Brown & Hesketh (2004) contributed a longitudinal study to the literature, following fifteen employers over a two-year period and including interviews with policy stakeholders and graduates. As a result, these authors call employability a *veneer*, arguing that it is a myth that society has moved to a knowledge economy, whereby the majority of the workforce is using brain power rather than muscle, and another myth that a university education is a guarantee to career success. Brown and Tannock (2009) explained that an assumption is made that there is a cause and effect relationship between *learning and earning* in that an implicit promise is made in the context of graduate employability that if a person completes a university degree, then he or she is guaranteed a successful, satisfying and

lucrative career. In part, this is blocked by the *graduate employability and social positioning* model presented earlier. Wilton (2011) wrote that his research "suggests that the entrenched proclivity for particular types of graduates in the labour market still appears to represent a considerable obstacle for the 'new' graduate labour supply, even where graduates report the development of the skills often demanded by employers" (p. 97). In other words, the promise of the knowledge economy does not mean that there are exciting, creative, stimulating jobs for all and the focus on employability does not mean that anyone who puts in effort can name and claim a career aspiration. There are inequities, stigma, prejudice and social positioning that are not readily overcome by personal effort, technology or resulting industry shifts.

The problems and barriers can serve to enlighten and empower rather than despair and neglect. Where there is hope is in a growing sense of employability awareness and commitment in higher education and emphasis on the student learning experience, which extends into support for employability. Universities are accepting a high-level inevitability and responsibility for their roles in graduate employability (Holmes, 2013; Jackson, 2013; Jones, Torezani & Luca, 2012; Towlson & Rush, 2013). This report is about how to support the outcome of diversified graduate employability. The perspectives of four stakeholder groups (students, graduates, higher education personnel, employers) were obtained through widely distributed surveys. The perspective of the four stakeholder groups was compared and contrasted. The main focus was on

the strategies toward graduate employability and the outcome was seven recommendations for improvements.

The primary strength of this research is that it focuses on positive and practical strategies to improve and enhance graduate employability from the perspective of four stakeholder groups, including the graduates. McKeown and Lindorff (2011) wrote that studies inviting graduate input on their employability are both important and rare. Their review indicated that the majority of studies focus on employer expectations, university approaches and government motivations around human capital. This study sought the graduate voice and interpreted feedback in relation to the input of other stakeholders. Jackson and Michelson's (2014) model of factors leading to graduate employment validated the key strategy and overall approach pursued in this research. They wrote, "the importance of different types of job search strategies is highlighted with both university-based and networking methods extremely important to initial job attainment" (p. 14). Through a literature review, this team identified the strategies for which there was empirical evidence in published literature for positive effect on graduate employability. These strategies include and extend above and beyond traditional career services such as workshops on resumé writing. The strategies pursued in this research are grounded on an overall commitment and approach among higher education institutions. Jackson and Michelson (2014) validated this environmental factor as supporting graduate employability. They wrote, "the strong influence of the items relating to intellectual climate and the role of networking and institution-based resources in attaining employment combine to illuminate the critical need for graduates to be aware of, and capitalise on, those around them" (p. 16). It is incumbent upon higher education institutions to heighten the supporting climate of graduate employability and it was the aim of this research project to identify and articulate the means of advancing successful outcomes.

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Graduate Employability Strategies

Introduction

What strategies increase higher education graduates' employability? This research has been designed to answer this question. Employability, in the context of higher education, means that institutions and employers have supported the knowledge, skills and attributes that will lead to career success for graduates (Yorke & Knight, 2006). Research clearly indicates that students must do more than study and complete their courses in order to be employable upon graduation; additional employability strategies are necessary in order to secure suitable work (Nagarajan & Edwards, 2014; Rae, 2007; Yorke, 2010). There are four stakeholders in the employability process; **higher education personnel** and **employers** make strategies available, and **students** and **graduates** (alumni) actively initiate and make the most of these strategies (Harvey & Shahjahan, 2013; Walkington, 2014).

Graduate Employability Strategies

Published research provides evidence that twelve different types of strategies increased graduate employability. In alphabetic order, these are:

Capstone / Final semester project

Capstone courses and similar final semester projects seek to ensure the integrity of students' learning by providing an opportunity to bring together the accumulated knowledge and experience of students (Bailey, van Acker & Fyffe, 2013 & 2012; Kift, Butler, Field, McNamara, Brown & Treloar, 2013). Recent attention has concentrated on providing frameworks and practical approaches to integrating capstones into curricula within disciplines including arts (Fuston & Lee, 2014), law and business (Bailey, et al., 2013; Kift et al., 2013) and across disciplines (Lee, 2014). Collectively these studies provide insights into



successful approaches providing a platform for further inter-disciplinary approaches.

Careers advice and employment skill development

Career management is an important aspect of employability addressing an individual's strategies for building a sustainable work profile (Bridgstock, 2009). Careers advice through university-based centres contributes to student's development of employability strategies by providing a range of services to develop skills, such as interviewing, preparation of CVs and resumés, engaging in networking opportunities and self-reflection (Kuijpers & Scheerens, 2006).

Significant research on the intersection of careers advice and employment skill development is well established in the literature. Bradshaw (2014) described a joint initiative between academic staff in a mathematics department and the university careers centre to enhance employment related strategies into the curriculum. Both Bridgstock (2009) and Harvey and Shahjahan (2013) explored the relationship of graduate outcomes, career management services and employability. The authors provided and reinforced insights for using curriculum-based approaches to focus students on career management and employment outcomes.

Engaging in extra-curricular activities

Extra-curricular community engagement enhances graduate employability by combining experiential learning, course work and community service (Parker, Myers, Higgins, Oddsson, Price, & Gould, 2009; Poropat, 2011; Watson, 2011). The nature of activities that can be included when considering the effectiveness of extra-curricular activities on employability is wide, including for example, community based service learning (Parker et al., 2009), citizenship development (Poropat, 2011) and



promotion of employability through issuing an award based on extra-curricular involvement (Watson, 2011).

International Exchange

International exchange programs are widely thought to facilitate the acquisition of expertise and experience in a global context and thereby promote employability (Crossman & Clarke, 2010). Despite this intent, there are contrasting stakeholder perspectives on the role and function of exchanges. Students, for example, have described seeing such exchanges as an opportunity for a break from serious study (Forsey, Broomhall, & Davis, 2011). Academics, on the other hand, perceive international exchanges as opportunity for broadened cultural understanding and internationalization of the curriculum. Notwithstanding this discrepant viewpoint, when designed appropriately, international exchanges can encourage student mobility for a globalised workplace, and develop graduate attributes of intercultural adaptability, global competency and employability related soft skills (Crossman and Clarke, 2010).

Mentoring

Mentoring is a form of social learning that can scaffold the transition from university to the world of work in that it is a highly engaged, employer involved strategy (Scholarios, et.al., 2008). Industry mentors help students understand and learn about the realities of a workplace and the intended profession (Smith-Ruig, 2013). Mentoring as a strategy to address employability has its roots in business discipline faculties where it has long been a part of practice in conjunction with work-integrated learning activities (Smith-Ruig, 2013).

Attending networking or industry information events

Similar to the use of mentoring, networking can facilitate successful transitions between the learning environment of higher education and work through providing opportunities for students and graduates to interact directly with employers (Watanabe, 2004). One approach has been to set up a formal community of practice, whether virtual, face-to-face or blended, comprising students, alumni and industry practitioners, for interaction and continuous learning through shared knowledge (Jing, Patel, & Chalk, 2011). A particular focus of this study was to involve the alumni in activities with current students to maximize the impact and ability to relate employability to the program of study (Jing, Patel, & Chalk, 2011).

Part-time employment

It is widely acknowledged that students' participation in part-time employment whilst studying is becoming more prevalent (Smith, 2009). Combining work with learning full-time can provide opportunities for students to move into full-time careers in the same industry. Similar to other work experiences, placements and internships, the student is able to develop industry skills as well as soft skills such as team-building and professionalism (Smith, 2009). Whilst the approach of students to their part-time employment is sometimes described as being poorly planned in relation to future employability (Smith, 2009) it is possible to promote and incorporate employment as part of employability strategies thus maximising its effectiveness (Muldoon, 2009).

Developing graduate profiles, portfolios, and records of achievement

Graduate portfolios, profiles and records of achievement represent a collection of student work evidencing professional and life skills. One of the benefits

of using portfolios in the context of employability is that they function as both process and evidence of outcomes, or what Oliver and Whelan (2011) described as adoptability and learning analytics. The process of developing a portfolio supports students to recognise and articulate their graduate identity and employability profile. Portfolios highlight the learning outcomes relevant to employment skills and demonstrate an applicant's competency. von Kinsky and Oliver (2012) reported that just over half of the students they surveyed perceived improved employability outcomes as a benefit of portfolio adoption. For universities, portfolios provide evaluative data informing how to improve graduate employability supports (Oliver & Whelan, 2011). Research on the use of portfolios, profiles and records of achievement in relation to employability has focused on their effectiveness in addressing particular skill sets such as communication skills (Mills, Baguley, Coleman, & Meehan, 2009) or within discipline areas such as teacher education (Lewis & Gerbic, 2012) or engineering and law (Faulkner, Aziz, Way, & Smith, 2013).

Professional association membership/engagement

Involving important stakeholders such as employers in the education process is promoted internationally as an effective strategy to address employability in countries such as Italy (Romenti, Invernizzi, & Biraghi, 2012) and the United Kingdom (Bennett & Kane, 2009; Roodhouse, 2009). Shardlow, Scholar, Munro, and McLaughlin (2012) studied employer engagement in the social work discipline across ten countries including New Zealand, Australia, Canada, Denmark, Finland, Norway, South Africa, Sweden, UK and USA. Employers may be engaged in the graduate recruitment process by participating in the university's careers events, being involved in funding or offering work placements, course design or contributing to assessment and teaching activities (Friend, 2010; Stanbury, Williams, & Rees, 2009). There is increasing recognition of the importance of professional association memberships and membership invitations extended to students (Fleming, et.al, 2011; Thomas, Inniss-Richter, Mata, & Cottrell, 2013).

Social media / networks

Online social networking is a part of daily life for today's graduates. Harnessing the emergence of online social networking provides a new approach to career management that has been reported as being under-utilised (Benson, Morgan, Filippaios, 2014). This strategy suggests that graduates entering the world of work can

improve their employability by being equipped with the extra skill set of targeting their existing social networking skills for career development and so using their personal digital literacy (Benson, Morgan, Filippaios, 2014; Rust & Froud, 2011). The targeted social network that appears to be the primary online vehicle for employability networking is LinkedIn (Joyce, 2013; Parez, Silva, Harvey, & Bosco, 2013).

Volunteering/community engagement

Engaging with volunteering opportunities, whether international or domestic, can be a personally transformative experience (Rothwell, 2013). It is suggested that volunteering is strongly linked to a values based approach and enhances an individual's leadership and teamwork skills, including resilience, courage and recognising one's impact on others and so augments the suite of employability skills that may have been more explicitly honed through other activities (Rothwell, 2013; Parker et al., 2009; Watson, 2011).

Work experience / internships / placements

Work experience, internships and placements are programs designed to provide students with formal, supported practical opportunities in the workplace. Such formal experiences develop both students' technical skill-based capacities and their graduate attributes such as an employee identity (Gracia, 2010). Well-managed practical opportunities help graduates manage the transition from study to work (Stiwne & Jungert, 2010). Internships are positively perceived by employers as they provide opportunities for industry to contribute to training and the implicit curriculum as well as provide an informal probationary experience for prospective employees (Gault, Leach, & Duey, 2010). Continued work is required to ensure that this strategy becomes a key factor in advancing graduate employability. Wilton (2012), for example, wrote "more needs to be understood about the characteristics of a 'good' work placement, which provides not only the opportunity to develop the skills and personal attributes desirable to employers, but also the means by which such competencies can be demonstrated in an increasingly competitive labour market" (p. 619). In order for work experiences, internships and placements to achieve their full potential, higher education personnel and employers have responsibilities in regard to quality improvement, and students and graduates require support to realise, identify and articulate their resulting employability profiles.

Research Method

This report presents survey research on twelve graduate employability strategies from the perspective of students, graduates, higher education personnel and employers.

The previously unanswered question that was addressed by the research reported here is what combination of strategies increases employability in the field of study from the perspective and experiences of graduates (alumni), students, employers and higher education personnel. The research used a survey approach. The twelve graduate employability strategies were provided in checklist form to the four stakeholder groups. Additional questions were also asked, such as about the nature of the degree studied. The full surveys and accompanying explanatory statement are provided as appendices to this report.

The surveys were provided online and made functional for computers, tablets and smartphones. The surveys were also available on paper. In total, through seven recruitment strategies described below, 1500 surveys were addressed to or handed to specific individuals. This does not include the numbers of surveys that were posted on social media and distributed through mass distribution processes rather than individually addressed. A total of 821 responses were received. This is a response rate of 55%. There were substantially more online than paper surveys submitted (70% online). Of the submitted surveys, 705 were declared valid (86%). The 116 invalid responses were surveys with missing fields and/or repeated submissions from the same respondents. The following approaches were used to recruit survey responses.

1. Booths were set-up at two career fairs through the Australian Association of Graduate Employers (Melbourne and Hobart).
2. Networks were engaged and individually addressed emails were sent to members of the National Association of Graduate Careers Advisory Services and



"At root, employability is about the relationship between higher education and employment"

(Harvey, 1999, p. 13).

the Council of Australian Directors of Academic Development.

3. Research partners from three Australian universities (Bond University, James Cook University, and University of Southern Queensland) distributed the surveys at their institutions.
4. Visits were made to 11 universities including: Australian College of Theology, Charles Sturt University, Deakin University, Griffith University, James Cook University, University of Canberra, University of Divinity, University of Sydney, University of Tasmania, University of Technology Sydney, and University of Western Sydney.
5. Representatives from the Australian Council for Private Education and Training (ACPET) called for survey completion from private higher education providers.
6. Social media was activated, primarily using LinkedIn, Facebook and Twitter.
7. Near the end of the survey period, team members presented the preliminary results of the research at four international conferences (Asian Conference on Technology in the Classroom in Osaka Japan; Ireland International Conference on Education in Dublin, Ireland; IREG Observatory Conference on Employability and Academic Rankings in London, England; Science, Technology, Engineering and Math (STEM) Conference in Edinburgh Scotland) and two Australian national forums (The Future of Learning Conference in Sydney; The Kaleidoscope of Quality Forum in Sydney). International and Australian delegates attending these conferences were invited to complete the surveys. Invitations were presented live at the conferences and through individually addressed follow-up emails post-conference.

The survey responses were categorised on spreadsheet. Descriptive and inferential quantitative analysis was conducted using Statistical Package for the Social Sciences (SPSS). Thematic qualitative analysis was conducted using NVivo.

While this research design has strengths in that it includes multiple perspectives and contexts and achieved a relatively high response rate due to an enthusiastic and triangulated recruitment approach, like all studies it also has limitations. First, while the response rate was commendable, some of the stakeholder groups remained relatively small, achieving

"Your career starts at University. Start doing extra-curricular activities, get industry relevant work experience and maintain a higher than average score in your coursework."

- Graduate insight



the requisite size for valid statistical measures of significance, but at minimum confidence intervals. The number of graduates and higher education personnel are just over the 100 count. The small size of the employer group should be particularly noted, at just over 50. The discrepant group sizes also limited the statistical measures that could be applied. The next three limitations are consistent with those identified by Jackson and Michelson (2014) from their graduate employability research. The second factor is that the survey approach means that there was reliance on self-report data. This is both a strength and limitation, in that the voice of the students and graduates was sought and is now published. However, confirmation that self-report was a problematic issue is found in at least one research result in that graduates may have actually participated in a capstone unit without realising and thereby reporting the experience. The third factor was that this was a cross-sectional rather than longitudinal study and surveys from students and graduates were accepted without accounting for or controlling their semester of study or time period since graduation. Jackson and Michelson (2014) wrote, "there are documented concerns for evaluating job attainment using data gathered within a short time period ... since graduation" (p. 8). The fourth limitation was what these authors described as a "big-picture approach" (p. 8). In keeping with other design elements, inclusion of multiple perspectives and diverse experiences is a strength, but it is also a limitation in that it complicates the ability to clearly identify causal factors in graduate employability. In short, there are too many uncontrolled factors. Jackson and Michelson (2014) identified, for example, degree of study, socioeconomic status and parents' education, as validated factors in employability outcomes. When including a diverse set of respondents, particularly when not conducted as a random sample, these factors cannot be isolated, controlled and measured. The final limitation once again springboards from Jackson and Michelson's (2014) research which identified causal factors in employability outcomes of PhD graduates. While

the focus of this study was on two interrelated factors identified as significant by these authors' and many others' published research (employability strategies and higher education climate of support), the research design of this study did not include other factors that have been found to be significant. Examples include institution type and part or full time status. In summary, this research makes a contribution to the body of graduate employability literature and thereby knowledge and application. The research team identified key gaps in the literature and designed the study to address those gaps. However, the research results should be interpreted with caution, keeping in mind the identified limitations.

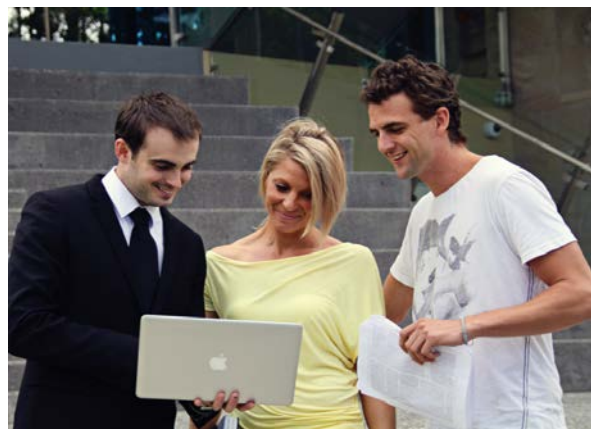




TABLE 2: Overall Number of Valid Surveys Completed

Stakeholder	Number of Valid Surveys Completed	Percentage of Total Surveys Completed by each Stakeholder Group	Response Numbers & Rates	Percentage Domestic	Percentage International
Students	442	63%	800 / 58%	99%	1%
Graduates	102	14%	350 / 39%	91%	9%
Higher Education	108	15%	250 / 59%	87%	13%
Employers	53	8%	100 / 73%	66%	34%
Total	705	100%	1500 / 55%	94%	6%

In interpreting the numbers on this table, it should be noted that the column presenting the number of surveys completed includes only the valid surveys (with all duplication and surveys with missing data deleted). This presentation decision was made so that the Results discussed on the following pages can be interpreted based on included data only. The column presenting response numbers & rates is based on all surveys completed, as it was not possible to extrapolate to only the valid surveys. The numbers in the % of total surveys completed by each stakeholder group are to be interpreted according to the following example; Sixty-three percent of the total surveys were completed by students. The relative responses received by the four respondent groups were consistent with the research team's hypothesis. By far, the greatest number of surveys was returned by students. The student response rate was high at 58%. Students were relatively easy to reach, through career fairs and university visits. They were also reasonably keen to complete the surveys when told that their feedback would be analysed and reported back to the government. Graduates were more difficult to recruit, as they are dispersed rather than on-campus. The most effective venues to reach them were career fairs and individual contact through the research team member who is a university alumnus. The response rate was lower than that of the students (by 19 percentage points). This is likely because at the career fairs they were more likely to refuse to take the time to complete surveys as they were intent on visiting the employer booths. The higher education response rate of 59% was fairly high for personnel from higher education, as most contacts were made to colleagues and at conference presentations about graduate employability. Only 8% of the completed valid surveys were submitted by employers. The response rate was high at 73%, indicating that the challenge was not in convincing employers to complete, but in having access to employers to invite. The most effective means of recruiting employers was through personal visits to booths at career fairs and also personal contact through the team member who is a Manager of a Career Development Centre.

Surveys were completed by respondents in fourteen different countries. See Table 3: Number of Valid Surveys Submitted by Country

Among the **employer** surveys, 68% indicated that they were private, 19% non-profit, 9% government and 4% other. The *other* category included large multi-national corporations.

Among the **higher education personnel** surveys, 67% were completed by respondents from public institutions and 32% from private institutions. (The remaining 1% did not indicate).

TABLE 3: Number of Valid Surveys Submitted by Country

Country of Respondents	Students	Graduates	Higher Education Personnel	Employers
Australia	438	93	94	35
Brunei Darussalam				1
Canada		2	2	1
China			1	
Germany	1	1		
Iran	1			
Ireland			2	
Italy			1	1
New Zealand				1
Singapore		1		5
United Arab Emirates		1		1
United Kingdom	2	2	6	5
United Republic of Tanzania		1		
United States of America		1	2	3

TABLE 4: Number of Valid Surveys Submitted by Institution

Institution of Respondents	Students	Graduates	Higher Education Personnel
James Cook University	46	25	24
Bond University	100	16	22
Queensland University of Technology	8	6	0
Deakin University	6	5	1
Griffith University	28	3	1
University of Melbourne	10	4	1
Charles Sturt University	3	2	0
Flinders University	0	2	0
La Trobe University	8	2	0
RMIT University	6	2	0
University of Sydney	7	2	1
University of Technology Sydney	15	1	4
Charles Darwin University	0	0	4
University of Western Sydney	19	0	2
Victoria University	10	0	1
University of Southern Queensland	103	1	1
University of Tasmania	38	6	1
University of Adelaide	0	1	2
Macquarie University	0	1	3
Monash University	6	1	2
University of Ballarat	3	1	0
Australian Catholic University	2	1	3
Cairnmillar Institute	2	0	0
Swinburne University of Technology	2	1	1
Central Queensland University	2	0	0
International College of Management, Sydney	0	0	2
Additional institutions (1 participant each)*	18	19	33

*Australian National University, Birmingham City University, Canberra Institute of Technology, Cardiff University, Centro di Riferimento Oncologico-Aviano, Pordenone, Charles Darwin University, Cleveland State University, Columbia University, New York City, Curtin University, Edith Cowan University, Federation University Australia, Ferdowsi University of Mashhad, Mannafields Christian School, Montessori World Educational Institute, Newcastle University, Northern Melbourne Institute of TAFE, Oxford Brookes University, Raffles College of Design & Commerce, Randwick TAFE, Singapore Management University, Southern School of Natural Therapies, Swinburne University of Technology, Tabor College, The Pennsylvania State University, Think Education, Thompson Rivers University, Trinity College, University of Adelaide, University of Bremen, University of Calgary & University of Alberta, University of Greenwich, University of Hohenheim, Germany, University of Hull, University of Newcastle, University of Notre Dame, University of Nottingham, University of Pretoria, University of Queensland, University of South Australia, University of Strathclyde, University of the Sunshine Coast, University of Western Australia, University of Western Sydney, University of Wollongong, Various Community Colleges, Victoria University of Wellington



Results

Graduate Employability Strategies

Results

The list of twelve strategies described earlier in the report was provided on each of the four stakeholder survey versions. The instructions on the survey asked respondents to tick strategies in response to the following questions.

Students – What strategies are you using to improve your graduate employability?

Graduates – What strategies did you use to improve your employability?

Higher Education Personnel – Which of the following employability strategies do you provide for students?

Employers – Which of the following strategies undertaken by students does your organisation value when recruiting graduates?

See the Appendix for full versions of the four surveys. The following were the average number of strategies ticked across the stakeholder groups and overall.

TABLE 5: Average number of strategies by stakeholder groups

Stakeholder Group	Average Number of Strategies Ticked	Standard Deviation (indication of variation)
Students	4.8	2.7
Graduates	4.9	2.7
Higher education personnel	4.2	2.5
Employers	3	1.9
Overall	4.2	2.5

The strategies indicated by each stakeholder group are as follows. The percentages indicate the most prevalent responses from each stakeholder group. For example, a percentage of 74% in the field for *students – work experience* can be interpreted to mean that 74% of students indicated that they are currently participating in or plan to complete a work experience. Empty fields on the table below indicate that these strategies were not ticked by the majority of respondents in each stakeholder group.

TABLE 6: Employability strategies indicated by stakeholder groups

Strategies	Students	Graduates	Higher Education Personnel	Employers
Capstone / Final semester project				
Careers advice and employment skills development	59%		64%	
Engaging in extra-curricular activities			65%	60%
International exchange				
Mentoring				
Attending networking or industry information events		52%	51%	
Part-time employment	53%	53%		
Developing graduate portfolios, profiles & records of achievement				
Professional association membership/engagement			54%	
Social media/networks				
Volunteering/community engagement		50%		53%
Work experience/ internships/placements	74%	74%		87%

Of the twelve employability strategies listed on the surveys, seven were selected by 50% or more of respondents in one or more of the stakeholder groups

TABLE 7: Strategies selected by the majority of respondents by stakeholder groups

Strategy	Majority of respondents selected strategy	Minority of respondents selected strategy
Work experience / internships / placements	students, graduates and employers	higher education personnel
Careers advice and employment skills development	students and higher education personnel	graduates and employers
Engaging in extra-curricular activities	higher education personnel and employers	graduates and students
Attending networking or industry information events	graduates and higher education personnel	students and employers
Part time employment	students and graduates	higher education personnel and employers
Volunteering / community engagement	graduates and employers	higher education personnel and students
Professional association memberships / engagement	higher education personnel	students, graduates and employers

Strategies that led to Employment for Students

The researchers ran a Mann-Whitney U test to see if there any differences between strategies employed by **students** who found employment and students who did not find employment. Mann-Whitney U test is a non-parametric test for independent samples. This statistical measure was chosen because the data is categorical (yes/no) and the numbers are skewed (employed = 34, unemployed = 408). The results indicated that the two groups differed significantly in terms of '**mentoring**'. Among the students who responded to the survey, those who indicated having already secured graduate employment used mentoring more. In other words, only one of the twelve

graduate employability strategies was found to be related to employment outcomes for students.

Students who had found employment used the strategy of mentoring significantly more than the students who did not find employment ($U = 5712, p = .048$).

Note: while there is a significant difference, it just made the significance level at .048.

Strategies that led to Employment for Graduates

The researchers also ran a Mann-Whitney U test to see if there any differences between strategies selected by responding graduates who indicated having secured or not secured graduate employment. The results indicated that the two groups differed significantly in terms of '**extra-curricular activities**' and '**membership in professional**

associations'. Among the graduates responding to the survey, a significantly higher percentage of those who reported that they had already secured graduate employment selected the strategies of *extra-curricular activities* and *professional association memberships* than those graduates who reported that they had not yet secured employment. Graduates who had found employment used the strategy of participation in extra-curricular activities significantly more than the graduates who did not find employment ($U = 862, p = .001$). Graduates who had found employment used the strategy of joining professional associations significantly more than the graduates who did not find employment ($U = 1040, p = .046$). **Note:** while there is a significant difference, it just made the significance level at .046.

Strategies that led to Employment for Surveyed Students and Graduates Combined

The researchers then combined the groups of **students and graduates** and ran Mann-Whitney U tests to see if there are any differences between strategies employed by students and graduates together, comparing the responses of those who had and had not found graduate employment. There were significant differences between the groups on the strategies of '**career advice**', '**professional associations**', and '**international exchanges**'. A higher proportion (statistically significant) of those respondents who indicated that they **had not found employment** selected the strategy of *career advice*. In addition, a statistically significant higher proportion of those respondents

who **had not found employment** selected the strategy of *international exchange* as compared to those respondents who had found employment. Conversely, those respondents who **had found employment** selected the strategy of *professional associations* to a significantly higher proportion than those respondents who had not.

See Table 6: Statistically significant relationships in strategy selection between respondents who have and have not secured graduate employment.

Cultural Analysis

Among survey respondents, there were 34 Australian and 18 international employers. A Mann-Whitney U test was conducted to see if there were any statistically significant differences between strategies endorsed by the surveyed

Australian and international employers. There was a significant difference between surveyed Australian and international employers regarding the strategy of international exchange. International employers endorsed the strategy more than did the Australian employers ($U = 206, p = .008$).



TABLE 8: Statistically significant relationships in strategy selection between respondents who have and have not secured graduate employment

Strategy	Selected by respondents who HAVE secured employment	Selected by respondents who HAVE NOT secured employment	Statistical Significance
Career advice		X	$U = 14896, p = .001$
Professional associations	X		$U = 16144, p = .019$
International exchanges		X	$U = 16824, p = .039$



Qualitative Results:

Success Stories from Higher Education Personnel and Employers

Success Stories from Higher Education Personnel

The higher education personnel version of the survey provided a space for respondents (both higher education personnel and career development centre personnel) to enter graduate employability success stories. The text submitted by all respondents was thematically analysed using NVivo version 10, a software program for qualitative data analysis. There was a common theme among success stories submitted by surveyed higher education personnel. Most of them described students engaging with industry while enrolled in university studies. Rather than waiting until graduation to connect with employers, students described in these success stories took up opportunities to build employability skills and develop relationships. Upon graduation, they already had practical skills and experiences on their CVs as well as employer references from the years they spent at university. Specific examples of these employer engagement opportunities included internships, practical projects that were industry relevant and consultation opportunities with employers.

Success Stories from Employers

The employer version of the survey also provided a space for respondents to enter graduate employability success stories. The common theme was the same as that for higher education personnel. It is important that students engage with industry and employers while still in university. Like the higher education personnel, the employers also provided the example of internships. Whereas surveyed higher education personnel addressed the importance of *work while learning*, surveyed employers highlighted the importance of *learning during the early stages of work*.

Employers emphasised the importance of participation in employer-provided formal graduate development programs. On the same theme, they emphasised that university graduates should expect to begin in junior positions and pursue advancement and promotion over time and with experience.

Generalist versus Career Specific Degrees

Some degree programs have a relatively direct and specific relationship between discipline of study and career pathway. For example, engineering students usually graduate to become engineers and accounting students usually secure graduate employment as accountants. Other degrees result in a diversity of occupations. Graduate employability is particularly complex and less certain in the context of generalist, non-vocational degrees in humanities and visual / performing arts (Barrow, Behr, Deacy, McHardy, & Tempest, 2010), life sciences (Gazzard, 2011) and computer science (Keller, Parker, & Chan, 2011). On the one-hand, such generalist degrees usually include an emphasis on the development of graduate attributes such as communication and problem solving. In other words, given opportunities, students can be encouraged to put their 'humanities' skills to use, and thereby increase employability (Day, 2007). On the other hand, there are less established career pathways and unclear associations with what learners will be upon graduation. Employers may be unsure about the capabilities and positioning of applicants from generalist degrees (Gannaway, 2010). Furthermore graduates from generalist degrees may not know how to best market themselves, or realise their market advantages (Cumming, 2010; Tymon, 2013).

Four generalist disciplines were listed in the surveys.

The reason these four were specifically identified is that graduate employability rates from these disciplines is consistently problematic as reported through analysis of the Graduate Careers Australian Graduate Destination Survey. The Graduate Destinations 2012 report on the outcomes of recent graduates of Bachelor degrees indicated that more than one in three respondents in these disciplines “were the most likely to have been seeking full-time employment at the time of [survey]” (Guthrie & Edge, 2012, p. 14).

- Humanities
- Life Sciences
- Computer Science
- Visual / Performing Arts

In addition, there was a box labeled as OTHER with a request to specify. Table 9 shows the top ten responses specified for OTHER DISCIPLINES by percentage of responses within each stakeholder group. For example, the *student – psychology* response indicates that 26% of the student respondents wrote-in psychology as discipline of study.

The *graduates – business* response indicates that 8% of the surveyed graduates wrote-in business as the discipline of the degree from which they had graduated. The *employers – accounting* response indicates that 6% of the surveyed employers wrote-in accounting as a relevant degree from which they would recruit graduates. Notably, all disciplines were indicated by a relatively small percentage of respondents and particularly within the employer stakeholder group. This might be interpreted that within this research, there was discipline diversity and no high outliers for study and/or recruitment.

TABLE 9: Discipline of study by stakeholder groups

Disciplines	Students	Graduates	Employers
Accounting	21%	5%	6%
Business		8%	
Construction			4%
Consulting			4%
Education	23%		4%
Law	15%	7%	
Nursing	19%		
Psychology	26%		
Social Sciences		5%	
Sport and Recreation			4%

Results – Disciplines

(Continued)

One hundred and eighty-seven (42%) of **student** respondents ticked one of the generalist disciplines.

Three percent of the students enrolled in one of the four generalist disciplines listed on the previous page had secured relevant graduate employment while still a student, whereas 11% of the students in other disciplines had secured employment. This result is statistically significant $\chi^2 (1) = 8.12, p = .002$

Twenty-eight (27%) of surveyed **graduates** ticked one of the generalist disciplines.

Sixty-four percent of graduates from one of the four generalist disciplines

listed above indicated that they had secured relevant graduate employment at the time of survey completion, and 44% of the students in other disciplines had secured employment. This result is statistically significant $\chi^2 (1) = 3.29, p = .034$

Employers were asked to tick the disciplines from which they have or are likely to employ graduates.

Twenty-four (45%) of employers ticked one to four of the generalist disciplines.

Higher Education Personnel were asked to tick the discipline or disciplines that best describes their field.

Sixty-one (56%) of higher education personnel ticked one to four of the generalist disciplines.

The following tables depict the relationships between type of degree, employment status and graduate employability strategies.

TABLE 10 - Percentages of students and graduates from generalist and non-generalist degrees who have / have not secured employment

Stakeholder Group	Generalist Degree		Non-Generalist Degree	
	Secured Employment	Have Not Secured Employment	Secured Employment	Have Not Secured Employment
Students	6 (3%)	181	28 (11%)	227
	Significant difference, $\chi^2 (1) = 163.77, p < .001$		Significant difference, $\chi^2 (1) = 155.30, p < .001$	
Graduates	18 (47%)	20	28 (48%)	30
	Significant difference, $\chi^2 (1) = 163.77, p < .001$		Significant difference, $\chi^2 (1) = 155.30, p < .001$	

Among the 187 surveyed students who indicated that they were studying a generalist degree, 6 (3%) had secured employment, while 181 (97%) had not secured employment. This difference in the number of students from generalist degrees who had and had not secured employment was significantly different as indicated by a chi-square test, $\chi^2 (1) = 163.77$, $p < .001$. Among the 255 surveyed students who indicated that they were studying a non-generalist degree, 28 (11%) had secured employment, while 227 (89%) had not secured employment. This difference in the number of students from non-generalist degrees who had and had not secured employment was significantly different as indicated by a chi-square test, $\chi^2 (1) = 155.30$, $p < .001$. A statistically significant difference between those who were and were not employed was found in both groups of participating students enrolled in generalist and non-generalist degrees. While it was not statistically significant, there were 8 percentage points between employed students in non-generalist versus generalist degrees. These results follow the trends established in the literature, that students from non-generalist degrees have a higher probability of securing employment following graduation (Graduate Destinations, 2012).

Whereas there was a statistically significant difference between responding students who had and had not secured graduate employment among both those who were enrolled in generalist and non-generalist degrees, there was no significant difference in responding graduates. Amongst the graduates who had completed generalist degrees, 18 (47%) had secured employment and 20 (52%) had not secured employment. Amongst the surveyed graduates who had completed non-generalist degrees, 28 (43%) had secured employment and 36 (56%) had not. The limited variability between the generalist and non-generalist graduates appears to correlate with the literature, supporting the hypothesis that post-graduation, students from both populations have a similar probability of securing employment, due to two factors. The first is that non-generalist positions are both highly competitive and are limited in availability (Silver, 2012). Second, despite generalist students entering into a much larger pool of potential employment opportunities, they are challenged on account of the lesser understood capacity to translate their current skill set for employers. In other words, graduates are challenged to coherently conceptualise, articulate and demonstrate their ability to perform in a generalised position (Gannaway, 2010).

TABLE 11 - Average number of employability strategies used by students and graduates from generalist and non-generalist degrees

Stakeholder Group	Generalist Degree		Non-Generalist Degree	
	Secured Employment	Have Not Secured Employment	Secured Employment	Have Not Secured Employment
Avg. No. of Graduate Employability Strategies Ticked by STUDENTS	4	5	4	5
Avg. No. of Graduate Employability Strategies Ticked by GRADUATES	5	5	6	4
			Significant difference, $t(62) = 2.05$, $p = .043$	

In the survey responses received in this research, there was little variation between the number of strategies ticked by students and by graduates, of generalist and non-generalist degrees and among those who had and had not secured employment at the time of completing the survey. Averaging the number of employability strategies by each of these conditions, there is only one instance where there is statistically significant difference. Graduates from non-generalist degrees who had secured employment ticked a higher number of strategies (6) than graduates from non-generalist degrees who had not secured employment (4). This result supports the hypothesis, that the employability challenge from non-generalist degrees is specifically matched vacancies and that what might enhance the graduates' employability outcomes is active participation in multiple and diverse strategies (Bridgestock, 2009; Muldon, 2009).

What Distinguishes a Top-Performing Graduate?

Notably, graduate employability is not restricted to securing employment. It also encompasses longevity, success and lifelong learning during one's career. Employers were therefore asked to comment on what distinguishes a top-performing graduate from an average employee. Seven themes emerged.

1. **Skills** – both work-specific (hard) and transferable (soft).
2. **Real-world experience** – through engaging with industry and employers throughout university, and staying informed about current events and global issues, graduates have developed outward looking perspectives, appreciation for context and realistic notions and expectations of the workforce.
3. **Well-rounded** – in addition to study, successful graduates had pursued sports and/or hobbies as well as community engagement.
4. **Value alignment** – employees are a good fit with the organisation, sharing values such as a customer service orientation.
5. **Social support** – employees are resilient and able to handle work-related stress when they have healthy family relationships and friendships.
6. **Initiative** – motivation and enthusiasm are important in that employees are then able to self-initiate tasks and find intrinsic reward in work.
7. **Goal-oriented to learn** – employees make the most of opportunities to develop and do not have unrealistic expectations of immediate high-level positions.



DISCUSSION

A review of the literature revealed reports of twelve strategies that were demonstrated to have had positive outcomes in enhancing graduate outcomes.

Seven of these graduate employability strategies were supported by the respondents to this survey. Ordered, first by the number of stakeholder groups who indicated a majority response to the strategy and then by the percentage of responses, these seven strategies are:

1) Work experience / Internships / Placements; 2) careers advice and employment skill development; 3) engaging in extra-curricular activities; 4) part time employment; 5) attending networking or industry information events; 6) volunteering / community engagement; 7) professional association membership/ engagement.

Surveyed students and graduates indicated participating in an average of nearly five of these employability strategies and higher education personnel indicated providing/supporting a combination of four of them. Students and graduates exceeding higher education professionals by an average of one strategy overall is probably appropriate because in order to reap the rewards of the strategies, it is necessary for students and graduates to be the initiators. One of the distinguishing characteristics named by employers between top graduate employees is initiation. Students and

graduates demonstrate their motivation and learn self-initiation through starting with employability strategies. Notably, the average number of strategies employer-indicated as making an employability difference was lower than the other three stakeholder groups at three. Follow-up conversations and analysis of comments on surveys reveals that it does not matter which and how many strategies students and graduates engage in, as long as these strategies result in desirable characteristics and attributes. Work experience, internships and placements as a strategy set was the most prevalent across three stakeholder groups. Among students, 74% indicated that they were using or planned to use this strategy. Likewise, 74% of graduates

ticked this strategy, indicating that they had participated in this strategy. By a large margin, this strategy set was ticked by employers (87%) as valued when recruiting graduates. Notably, only two other strategies were ticked by the majority of employers (extra-curricular activities at 60% and volunteering at 53%).

While the majority of surveyed students and graduates indicated using the employability strategy set of work experience, internships and placements, and the majority of employers indicated valuing this strategy set, a minority of higher education personnel ticked this set of strategies. On the higher education version, the survey question was worded, "which of the following employability strategies do you provide for students." Notably, the question asked which strategies were provided as opposed to which

...employability might be strengthened if higher education enhances opportunities for students to engage in meaningful work while learning and employers enhance opportunities to learn while in the early stages of work.

strategies are valued. Review of the literature indicates that higher education providers perceive value in students undertaking work experience, internships and placements (Bridgestock, 2009; Cumming, 2010). The challenge is that these strategies are expensive and demanding on human resources (Lau, Hsu, Acosta, & Hsu, 2014). The disparity between what the students, graduates and employers responding to these surveys seemingly value and what the responding higher education personnel are providing, seems to indicate that targeted resourcing of higher education might be dedicated in the area of work experience, internships and placements.

Not all work experiences are equal. Fifty-three percent of surveyed students and the same percentage of graduates indicated that they had participated in part-time work while at university. Neither the majority of higher education personnel nor employers participating in this research ticked the strategy of part-time work. While it is necessary for some students to work while at university in order to afford tuition and living expenses, this research suggests that students be encouraged to carefully calibrate against time to

participate in employability strategies. Follow-up with stakeholders and analysis of the survey comments revealed that part-time employment is rarely aligned with the graduates' future careers and takes away from time available to participate in strategies that authentically develop career experience, such as internships and mentoring from employers. The difference between graduates participating in this research who had and had not secured employment by the time they completed the survey was that the employed graduates had participated in extra-curricular activities and had taken-out membership in professional associations. In other words, they were engaged in work-relevant activity and strengthening their CVs while still in university. Likewise, combining the students and graduates into one group, results seemed to indicate that professional association memberships are an efficacious strategy, in that there was a statistical relationship between this strategy and having secured employment. It should be noted that despite this statistical relationship, professional association membership was not ticked as valued by the majority of surveyed employers;

further work is therefore needed to explore this relationship.

Overall analysis of the responses to surveys from the four stakeholder groups (students, graduates, higher education personnel, employers) led the research team to the summary propositions that employability might be strengthened if higher education enhances opportunities for students to engage in meaningful *work while learning* and employers enhance opportunities to *learn while in the early stages of work*. An emerging theme among the comments across stakeholder groups was that higher education institutions have primary responsibility for determining the curriculum and supporting opportunities for students to enhance employability while still students. There was some sentiment that employers could play a more active role in contributing to university study. Maxwell, Scott, Macfarlane and Williamson (2010) wrote about two ways employers can play a heightened role in graduate employability. "One, employers can work in partnership with universities on the bespoke core and component skills they seek from the main postgraduate programmes from which they directly recruit; and, two, they can assume their share of responsibility for the development of these skills" (p.

9). A predominant theme in this research was that employers play an important role in employability through enhancing opportunities for early career graduates to learn in the workplace through such activities as providing workshops, supporting further education opportunities and coordinating formal mentorships. The significant difference for surveyed students who secured graduate employment while still at the university was mentoring. This means that they have developed a relationship with industry professionals who are guiding components such as project work while at university to ensure that it is workforce relevant.

Five of the strategies were not ticked by the majority of any of the stakeholder groups. In alphabetical order by the survey wording, these are: capstone / final semester project; developing graduate portfolios, profiles and records of achievement; international exchange; mentoring and; social media / networks. The absence of capstone / final semester project among the strategies indicated on the surveys was surprising, given the perceived efficacy of this approach in education journals (Fernald & Goldstein, 2013; Olsen, Weber & Trimble, 2002; Van Acker, Bailey, Wilson &

French, 2014). Capstones are usually units completed in the final semester of the degree because they combine all or most of the knowledge, skills and attributes taught throughout; students are usually supported to complete a large project applying their learning across a degree. The research team consulted a capstone expert who is engaged in a national fellowship on this topic. Lee (2014) stated that while capstones are gaining in popularity and use across higher education, they are a relatively recent educational approach. Students, employers and many personnel from higher education are not yet familiar with the concept. Further to the terminology challenge, Lee advises that some graduates may have completed capstones without knowing it. Further research might be warranted to see if this approach is identified as an efficacious employability strategy by stakeholders in the future.

The significant difference for surveyed students who secured graduate employment while still at the university was mentoring... they have developed a relationship with industry professionals

Another set of strategies that was unselected by the majority of survey respondents was developing graduate portfolios, profiles and records of achievement. While some authors in the career development literature predicted that these strategies would become key tools and techniques in job application and recruitment because they are more amenable to detail and work samples (Lewis & Gerbic, 2012), these approaches have not replaced traditional application forms and resumés (Reis & Villaume, 2002). The main limiting factor appears to be efficiency. Portfolios demand more time than resumés for students and graduates to produce, higher education personnel to support and, perhaps the primary limitation, for employers to view and sort (Bridgestock, 2009).

International exchange was another strategy ticked by a minority of those surveyed across stakeholder groups. Notably, it was found that those students and graduates who had completed international exchanges and sought careers advice from their universities were less likely to have secured employment. These activities are not inherently harmful and can

improve employability when conducted with both study and work combined. International exchanges are held in high-esteem by global employers but more generally these strategies are not highly rated by employers. Survey responses indicated that universities can guide and support students to treat international exchange opportunities like internships, learning the local industry customs and cultures.

Some survey respondents suggested that careers advice can lead students astray if offered by universities in isolation from employers. This finding is consistent with results of prior published research. One study concluded that there is a respondent bias in that the graduates who tend to partake in the services of career support companies are those with the highest employability challenges. In other words, it is not that the career development services are ineffective, but that there is a wide gap between the initial employability of the incoming clients and the needs and expectations of the marketplace (Try, 2005). When careers advice becomes mentoring by universities engaging with employers, this strategy becomes a strong determinant of employability (Bridgestock, 2009; Jones, Torezani & Luca, 2012; Taylor & Hooley, 2014).

Universities and employers must work together to combine the benefits and supports toward learning and working before and upon graduates commencing careers. Once employed, top-performing graduates demonstrate seven attributes and characteristics: skills, real-world experience, well-rounded perspectives, value alignment, social support, initiative and goal-orientation to learning. These characteristics and attributes are outcomes of a variety of supported employability strategies.

Despite the relatively new phenomenon of social media, employers have enthusiastically adopted this strategy into their recruitment process and higher education students are one of the most prevalent user groups (Joyce, 2013; Kirkwood, Gutgold & Manley, 2011; Parez, Silva, Harvey & Bosco, 2013). A surprising result in this study was that the strategy of social media/networking was not selected by the majority of the four surveyed stakeholder groups. It is hypothesised that the explanatory factor is terminology rather than the strategy itself. Searches of the published literature using the search terms of "career, employability, social media

and networking” consistently return papers about a single, dominant, professional social networking tool: LinkedIn. It is predicted that if future employability surveys specify LinkedIn rather than the more general descriptive terms, the strategy will be ticked by students, graduates and employers, as well as the majority of higher education personnel working within career development centres.

Career-specific and generalist degrees continue to thrive and produce employability outcomes. Forty-two percent of students were enrolled in and 27% of graduates had completed one of the four generalist degrees of: humanities, life sciences, computer science and/or visual/performing arts. Forty-five percent of employers indicated that they had or would hire graduates with these degrees. Employed graduates from non-generalist degrees had participated in more employability strategies (average of 6) than employed graduates from non-generalist degrees (average of 4 strategies). The explanatory factor may be that the ‘curriculum’ of generalist degrees usually includes problem-solving, critical thinking and communication skills such as technical writing and public speaking. Career-specific degrees often do not include these units of study potentially requiring students to utilise additional strategies. Alternatively it is possible that non-generalist degrees raised the profile of employability strategies such that motivated students were more likely to engage. It is thereby important that universities support all

graduates to develop the necessary attributes, within or extra to their degrees and that further work addresses these potential differences.

Numerous opportunities and directions for further research into improving and enhancing graduate employability arose from this survey-based study. One of these directions is to follow-up with a subset of survey respondents for in-depth discovery. The team identified twelve compelling themes from the survey responses warranting further inquiry. These themes are: graduate employment in multi-national corporations; competitive sporting; entrepreneurship; government as employer; private colleges; the role and function of career development; higher education relationship with professional employability businesses; indigenous graduates; emerging careers (those that did not exist five years ago); generalist degrees; and international employers. One hour one-to-one interviews and focus groups are being conducted with multiple stakeholders (from among students, graduates, higher education personnel and employers) within each of the themes. Twelve in-depth case studies will result and will be published in a subsequent report.



Recommendations

Based on the results of graduate employability surveys of students, graduates, higher education personnel and employers, the research team recommends that...

1. ... further resources are considered to support universities' provision of work experience, internships and placements.
2. ... higher education personnel consider ways to strengthen international exchanges as authentic learning experiences allowing students to engage with employers and employment in other cultures.
3. ... employers and higher education personnel consider extending partnerships and collaboration so that careers advice and employment skill development is strengthened as industry-relevant and involving workplace and professional development mentors.
4. ... focus remains on both learning and work, whereby higher education personnel support students to *work while learning* and employers support new employees to *learn while at work*.
5. ... higher education systems continue to support a diverse range of degree options including career-specific pathways such as education and accounting, and generalist degrees such as humanities, life sciences, computer science and visual / performing arts.
6. ... employability is defined to include a full range of opportunities such as single employer, multiple employer, consultation, volunteering and entrepreneurship.
7. ... campaigns are considered to raise the awareness of students and graduates regarding how to make the most of employability strategies including, but not limited to: the importance of starting early; the significance of extracurricular activity; the understanding that non-career-related part-time work may not enhance employability and; the relevance of career-related volunteering as an effective means of bridging education into employment



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