

**Contributing to a graduate-centered understanding of work readiness: A case study of final year undergraduate students' perceptions of their employability**

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## **Contributing to a graduate-centered understanding of work readiness: An exploratory study of Australian undergraduate students' perceptions of their employability**

### **Abstract**

The view that university graduates should be equipped with work-readiness skills has become increasingly normalised in university graduate capabilities designs. The framework of this study is established around an Australian university's graduate capabilities. This exploratory case study aims to contribute to a graduate-centered understanding of work-readiness. A qualitative methodology was used to map students' perceptions and evaluations of their skill development in criteria referenced graduate capabilities and construct a representation of skill development in graduate capabilities from entry to exit. The more problematic areas of skill development and competence in graduate capabilities were in the higher order skills of inquiry/research, creativity and problem solving and collaborative teamwork. Student respondents appeared to have most difficulty in relating the relevance of inquiry/research to work contexts. This study illustrates the need for university educators and curriculum designers to proactively intervene and develop effective learning activities for individual learners and to regularly monitor and review progression towards desired employability skills from entry to exit. Graduates risk criticism from employers if they leave university with underdeveloped skills on exit from university and for the purpose of transference to employability skills.

**Key words:** work readiness, graduate capabilities, graduate perceptions, competence and skill development, and employability skills

### **Introduction**

For the last two decades, there has been a growing convergence between education and the economy in terms of government and industry perceptions of the role and purpose of education and the renewal of human capital for the 'knowledge' economy (Baird 2010). This research project is designed as an exploratory study of business graduates' perceptions of work-readiness and the interconnectedness with university's espoused graduate capabilities. The study will explore students' perceptions of the entry level skills that may be applied across a number of different industry and occupational contexts. Clearly, another level of complexity and specificity will apply to various occupations. Terminology surrounding graduates being ready for the workforce are extensive. Work readiness skills are complex to define as stakeholders perceive and attribute value differently when referring to graduate capabilities and employability skills (Green, Hammer, and Star 2009, Hager and Holland 2006, Wye 2009, Bridgstock 2009). In the Wye (2009) study, graduates believed that they

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possessed the personal skills and attributes that employers were looking for such as communication and team work. Employers believed that critical analysis and thinking skills were more important. For instance the terms work-ready, work readiness, employability, work preparedness, workforce ready, and workplace ready are interchangeable and in this paper we use the terms work ready, work readiness and employability to mean the same. The research aims to identify whether graduates believe they will exit the program as work-ready and with the skills they believe are demanded in the workplace. We acknowledge that internship programs and other forms of practical experiences in the workplace are in place to assist students' preparation for employment (Jackson, Sibson, and Riebe 2013). We are not assessing instruction methods or curricula design (Oliver et al. 2011). Our objective is to map end-users' understandings of work readiness linked to competence in graduate capabilities on exit from university. In this case study end-users represent final year business graduate students at an Australian metropolitan university. It is important for academics and curriculum designers to better understand students' perspectives of work readiness because there is an assumption that academic skill sets are the same skill sets required in employment (Hager and Holland 2006). It is also assumed that graduates can seamlessly transfer and apply employability skills in any employment context and sector. However, work readiness skills form part of a range of abilities required by the employment market rather than a specific skill set for all work situations. This research study is conducted at a time when there is a great deal of skepticism by employer sectors and organisational bodies in Australia about the quality of graduate employability skills.

Explicit graduate capability skills represent a relatively recent articulation of the type of knowledge expected of contemporary graduate students when they transition into work. There is no one accepted definition of 'graduate capabilities'. Graduate capabilities are explained broadly as the attributes students will develop to help them become ready for a chosen sector of the workforce (Hager and Holland 2006). The Organisation for Economic Co-operation and Development (OECD) has consistently espoused the view that economic and social development will require and depend on the entrepreneurial capacities of universities and national economies to actively engage with current and anticipated changes resulting from restructured global capital markets and labour forces (Marringe and Foskett 2010). National economies will need greater numbers of skill ready graduates to address environmental, social, industrial, technological and economic challenges. How the tertiary sector responds to changing economic and employment contexts suggests there is a great deal of work ahead to achieve OECD global targets.

According to the *Australian National GAP (Graduate Attributes Project)* there is not a universal template for determining exactly what and which type of ‘work readiness’ skills will be suitable for specific graduate careers (Barrie, Hughes, and Smith 2009). Whilst conceptual variations are evident, the prevalent assumption is that work readiness is related to the propensity of the student to know what skills they have developed and matched to the criteria for a desired job (Harvey 2001). There are signs of ‘belt tightening’ in large organisations and financial professional services (King 2011) which highlights the need for universities to satisfy policy objectives in terms of national policy agenda and requirements to produce graduates for the economic market. Whether universities are the places for developing work skills is a source of debate (Boud 2010, Baird 2010). In the Australian context, Meyers (2012) argues that universities have capitulated to market-oriented economic utilitarianism to the extent that universities are no longer academies of learning but subservient reproducers of state ideologies. However, the integration of coursework, practicum elements and criteria referenced graduate capabilities in university curricula suggests universities have proactively adapted to changing policy contexts to make claim that graduates acquire employability skills prior to entering work (Stensaker and Harvey 2010).

The literature provides the context of shifting alignments between higher education sectors and the economy and debates about graduate attributes, work readiness and employability. Overall, this study is based on the following research questions: 1. *What do final year graduate students understand about their work readiness and the university’s graduate capability skills?* 2. *How do graduate students estimate their competence in achieving these skills?* and 3. *What do students understand about the connection between work readiness and graduate capability skills and what employers want?*

The first part of this paper reviews contemporary literature on graduate capabilities; the second section outlines the qualitative methods; the third section provides the analysis and interpretation of empirical data; the fourth section presents discussion, followed by concluding comments. This study contributes to the literature by providing graduate-centered understandings of work readiness and students’ perceptions of the graduate capability skills they understand they will need in the workplace. Work readiness skills contribute to work performance so it is pertinent that universities design curriculum to ensure graduates better meet the needs of employers (Shah, Pell, and Brooks 2004). The findings of this case study represent the first stage of a research cycle that we anticipate will lead to an improvement in graduate students’ competence to achieve the kind of skills that may be valued by potential

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employers. A future study will track the participants as they enter the workforce. The evidence we gain from qualitative data will inform the next stage of research into teaching and learning methodologies and graduates' experiences as they enter the workforce and employers perspectives of what they are looking for from graduate employees.

## **Literature**

In recent times there has been a greater emphasis placed on the university sector to produce graduates who are work-ready with skills transferrable in the workplace. The integration of coursework, practicum elements and graduate capabilities in university curricula suggests that Australian universities have proactively adapted to changing policy contexts to ensure that graduates acquire employability skills prior to entering the workforce. Cranmer's (2006) study of international institutions' progress and government policy intentions found significant divergence between curricula and academic conceptualisations of work ready skills and the conceptualisation of employability. Whether universities are the correct places for developing work skills is a source of debate (Boud 2010, Baird 2010) When learners acquire new skill sets to competently perform desired tasks or activities, they are in effect attempting to bridge a gap between their skill sets and a desired level of competence critical in the workplace (Boud and Falchinkov 2007).

### **Graduate skills**

To achieve work readiness graduate learners are expected to acquire task competence and demonstrate proficiency at the exit stage of university education and entry stage of graduate employment (Guile and Griffiths 2001). From the graduates' perspective, desired employability skills of self-management, initiative, organisational and planning improved while they were working rather than when they were at university (Whelan et al. 2010). From employers' perspectives, while academic qualifications are critical to employment, they value individual, personal and social qualities and self-management skills (Graduate Careers Australia 2012). Australian employers most valued effective communication, flexibility and adaptability, commitment, willingness to listen and learn, organise and manage time efficiently and effectively along with good interpersonal skills and personal attitude (Whelan et al. 2010, Shah, Pell, and Brooks 2004). In effect, socialisation skills appeared to have higher value than formal academic skill development required in degrees. In terms of gaining employment, Australian post-graduate destination data infer a relatively positive level of satisfaction with graduate skills, hence, suggesting that levels of academic skills on exit from university can be accommodated even if some may be underdeveloped on entry to work

(Graduate Careers Australia 2012). Regardless of graduate employment statistics, the *Australian Industry Group (2012)* remains critical of the survey methodology used by *Graduate Careers Australia* as data are not collected from employers on gaps in technical knowledge and degrees of difference between graduate capabilities and core employability skills.

### **Employability**

Employability extends beyond the skills to carry out of job. Employability is about a job applicant having a professional identity and the educational qualifications to gain employment. It is also determined by factors that influence the labour market (i.e. demographics and sociocultural) and the opportunities provided by employers to attract job applicants (Rothwell, & Arnold, 2007). In this study we focus on work readiness because the participants are final year university students and some may not yet have an established professional profile. Employability is more complex than measures of graduate capabilities results (Bridgstock 2009). More than half of new graduates under 25 years with bachelor degrees in the US were either unemployed or underemployed (Weissen 2012). Graduates need to know how to negotiate labour markets and begin to build their own career-strategies so that they can adapt to fluctuating labour-market contexts and conditions. Bridgstock (2009) argues that there is little evidence in the literature of any systemic investigation of the links between the costs and effectiveness and ‘career management competence and long-term graduate employability’ (p. 40). While the desired policy outcome is greater convergence between graduate and employability skills and employment, there is a lack of consensus on what graduate attributes or ‘graduateness’ should be and look like. Another problem is the serious underestimation by governments, industry and higher education institutions about the amount of time needed for policy goals to be implemented when aligning all stakeholders’ interests. Conceptual confusion about employability skills or graduate attributes is one criticism. The implications of reduced government funding in Australian higher education has had a ‘knock on’ effect in terms of impacts on reductions in university courses impacting on reduced institutional human resources and capital. It takes time to develop human resources and capacities, redevelop curricula and build institutional capacity so that there can be greater engagement with broader economic structures and stakeholders (Green, Hammer, and Star 2009).

### **Graduate student perspectives**

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Wye (2009) postulates there is little synergy in terms of graduate skills and what students believe they need. Graduate students find it difficult to secure employment because they are not cognisant of the skills that organisations want. This gap is gradually being filled and it is expected by 2020 that workforce communities have greater input into the reviewing and moderating academic standards (Boud and Middleton 2003). There is a common assumption that graduate capabilities, such as writing, speaking inquiry/research, critical thinking, creative problem solving and team work, correlate with employability skills and that they will apply to every work situation (Hager and Holland 2006). As the economic situation in America has shown, having a degree itself may not guarantee employment. With the US and the UK facing similar economic challenges, the employment future for new graduates is not encouraging (Shierholz, Sabadish, and Wething 2012). Harvey (2001) indicates, the 'new' realities that characterise relationships between the academy, society and the economy may lead to conjecture and anxieties that a university education is solely for the achievement of economic-vocational objectives. The international policy agenda promoted by the OECD has consistently espoused the view that economic and social development will require and depend on the entrepreneurial capacities of universities and national economies to actively engage with social and economic changes resulting from the restructuring of global capital markets and labour forces (Marringe and Foskett 2010). National economies will need greater numbers of graduates so that individual nations can meet future and current environmental, social and economic challenges. Graduate capabilities for work readiness provide an opportunity to regenerate new methodologies of teaching and learning and the redesign of course content and curricula (Hager and Holland 2006).

Graduate students' perceptions of their own skill development appear to be sparse in much of the literature. Theorising graduate skill development from an educational perspective may reveal a more nuanced understanding of the acquisition of graduate capabilities within a university context and students' perceived work readiness. There is a need to understand what graduate learners perceive of their acquisition and development of graduate capabilities and employability skills while undertaking preparation in university programs. An implicit gap in knowledge is likely to exist without knowing how graduate learners learn to acquire competence in graduate capabilities designed to enhance their work readiness skills, whether in the local context or in the broader domains of the internationalisation of graduate employability skills (Myers 2012).

### **Employer perceptions**

Graduate students need to better relate to Australian employers' perceptions of graduate attributes, innovation, creativity and independent thinking (Shah, Pell, and Brooks 2004). Employers value effective communication, flexibility and adaptability, commitment, willingness to listen and learn, organise and manage time efficiently and effectively along with good interpersonal and personal attitudes and skills to work with people, learning to accept different perspectives. Interpersonal and communication skills were also at the top of employers' expectations of graduate employability skills and in key selection criteria (Graduate Careers Australia 2012). The OECD has prioritised entrepreneurship as the desired pedagogical remedy that could possibly advance enterprise, initiative, self-awareness, self-direction and problem-solving (Marringe and Foskett 2010). Broadly, these are the key skill assets for engaging with the global economy and for adapting to rapidly changing market conditions and employment types. How individual nation states respond to the globalised agenda of student mobility and the internationalisation of higher education suggests there is a great deal of work to do to achieve these global aspirations. On entry into university students need to be aware of global and employers' expectations and hence this awareness should be turned into action.

Graduate survey and destinations research suggest that employers are not only looking for academic qualifications but 'invisible' skill sets valued in specific employment sectors that may not be obvious to those outside those industries (Graduate Careers Australia 2012). Although the rates of Australian graduates finding employment are relatively high (75% and above), there is another dimension of 'employability' that employers reportedly are dissatisfied with. British media have labeled UK graduates as 'gormless' in response to the Lowden, Hall, Elliott and Lewin's (2011) report into employers' perceptions of new graduates skills and abilities. They suggest employers want greater evidence and demonstration of 'emotional' intelligence. This form of intelligence is a highly valued asset in work situations and more important than normative IQ measures. They might be seen as 'soft skills' but what employers and industry value are self-awareness, self-regulation, motivation, empathy and social competencies (Goleman 1999) The themes emerging from Lowden, Hall, Elliott and Lewin's (2011) report reiterated the skill sets and attributes that Australian employers identified with additional proviso about the inflated egotistical views in new graduates' perceptions that their degree guaranteed an entry ticket to employment. Some employers saw graduates as immature and lacking awareness about the appropriateness of the use of social media at work and more importantly, a lack of a dedicated work ethic.

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Employers want pragmatic and practical skills development to be incorporated into academic courses and curricula or 'real life' learning so there is a closer alignment between graduate and desired employability skills.

## **Method**

The objective this study is to explore students' perceptions of work readiness and a university's espoused graduate capabilities. In an undergraduate program lecturers invited final semester students to participate in the study. Students then volunteered to be participants. We acknowledge that the sample may be representative of Business School students but may not be representative of a wider student body. We also acknowledge that volunteering may have impacted on the study due to the fact there may be students with strong views that either support or not support the views represented in this study.

Final year students from a Business School at an Australian university were invited to participate in the project. Thirty-five business students undertaking their final subject agreed to participate. Their average age was twenty-two years. The participants included domestic and international students. There were twenty five domestic students and ten students from China, India, France and Japan. An equal gender balance would have been ideal but this was conditional on the number of participants in the research sample. University ethics approval was obtained before proceeding with the data collection.

Prior to the commencement of focus group sessions and semi-structured interviews, participants were reminded that the objective was to collect data on their understandings of work readiness and graduate capabilities and an estimation of skill capacities that could assist them in the transition from university to work. We argue that surveys or quantified measures might limit how students would respond when revealing their opinions about the topics under investigation. Therefore, focus group and semi-structured interviews were considered to be more appropriate for the context (Bryman 2012). The focus group sessions were organised immediately following as students indicated this time was less destructive to their schedules. Lectures. Participants were asked to provide their preference for an interview venue. Most students elected to be interviewed in a private room in the University Library. Interviews were conducted at a mutually agreed location for each participant on the university campus. Interviews were audio-recorded and recordings were transcribed into written scripts for the purpose of data analysis. To ensure privacy and confidentiality of respondents' identities, pseudonyms were assigned.

The themed questions underpinning the investigation were:

1. *What do final year graduate students' understand about their work readiness and the university's graduate capability skills?*
2. *How do graduate students estimate their competence in achieving these skills?*
3. *What do students understand about the interconnectedness between work readiness and graduate capability skills and what employers want?*

For data analysis and reporting, participants' responses were selected and categorised by according to skills embedded in the generic graduate capability design. These were writing, speaking, inquiry/research, critical thinking, creative problem solving and team work. The employability skills selected were done so because the university advertises these skills as graduate attributes. The process of thematic analysis outlined by Webber (1985) will be applied to the data. Two coders will code the transcripts of the interviews and focus group until saturation insuring the reliability of the coding framework. If there is any disagreement between the two, a third will be employed to finalise the coding.

## **Findings**

This section represents a synthesis of focus group and semi-structured interview data with participant students. Four focus group sessions were carried out with eight participants in the first three and eleven in the last session. Twelve students agreed to attend semi-structured interviews. At the beginning of the focus group sessions and semi-structured interviews the participants were advised we were seeking to explore students' perceptions about their work readiness and assimilation into the workplace. At the outset of each session the researchers asked students' what graduate capabilities were and, following initial responses, explained the university graduate capabilities as: writing; speaking inquiry/research; critical thinking; creative problem solving; and teamwork. Discussion in focus groups and interview questions began broadly about work readiness and students' perceptions of how well prepared they are for the workplace.

### ***Focus Groups and Semi-structured Interviews***

In this section we present data that was representative of the views of most students who attended each of the focus group sessions and similar views across the semi-structured interviews. Data not included was outside of the scope of presenting representative data.

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The initial reaction of students in Focus Group 1 indicated some confusion about what work readiness means and how graduate capabilities are related. There was a group 'sigh of relief' when Tom asked the researchers *'What do you mean.....work readiness?.....and graduate capabilities?....I'm nervous about work....I don't know what employers want!'*. A similar reaction was also observed in Focus Group 2 when Sarah noted *'we might be meant to know this stuff [graduate capabilities] but I don't - maybe because no one has ever bothered to explain what graduate capabilities are'*. Sally then added *'I think I've seen something about them (graduate capabilities) but....really can't remember....I'm sure they relate to work but don't really connect the two'*.

In Focus Groups 3 and 4 there were similar reactions and comments. Once graduate capability elements were clarified, participants acknowledged they understood what graduate outcomes represent. There was general agreement among the four focus groups that students *'feel somewhat prepared for work but not fully....I'm not confident'* (Diane) and *'I don't know if I'm ready for work....we don't know what graduate capabilities are all about'* – (David). Discussion transitioned into each of the graduate capabilities and how each might be linked to work readiness. The following sections synthesise the themes that emerged from the focus groups and interviews.

### **Writing**

Participants were encouraged to discuss what they had learned about writing and if they believed the writing skills taught at university would be valued in the workplace. Anna reported that *'with all the subjects my writing has improved.....I'm cool.....I think I could write at work'*. Jess added *'that's because we write so many assignments and build our skills gradually'*. Karla added *'clean, concise written documentation is very important at uni and work'* and Adam contributed *'because we have been exposed to so many styles here [university].....literature reviews, reflective writing and reports....we won't be shocked if we're asked to write a report at work'*. When reflecting on their first year experiences:

*'Writing is hard in first year - (Sam, Renee and Peta)*

*'I couldn't get my message across in first year...and the grammar and punctuation were tough' - (Rebecca)*

There was a general agreement that writing skills developed and improved over the course of a degree program. There were some suggestions to improve the ways academic writing is taught:

*'To build our confidence there should be one subject in first year that's all about writing and referencing' - (Jane)*

*'We need help in first year with research skills' – (James)*

*'It would be good if we could hand in drafts of our work.....at least in first year' – (Addison)*

*'The problem is we don't have a clue about what employers want....if we could work with what they want from first year we might have a chance' (Ruby)*

The findings were similar in the interviews. Maria explained *'every year we've learnt new kinds of writing like literature reviews and reports...it's been hard learning new styles....but especially the reports will be good in the work place'*. The students contemplated what they found difficult from when they first attended university:

*'What I found difficult was getting my head around writing about someone else's opinion' - (Michael)*

*'My writing wasn't that good when I first came to uni.....now it's a lot better' – (David)*

*'If you could write well in first year...like I think we can now...in our last year....how good would that be? – (Melissa)*

In each of the interviews participants were asked to offer suggestions to improve their learning. Georgia suggested *'lecturers could bring more industry people in to talk to us about things like writing and what's important'* and Aaron proposed *'more work type case studies...one small problem....I still don't have any idea what employers want'* could possibly enhance writing skills. Michael explained *'writing for work will be challenge so we have to get used to it at uni'* and David revealed he *'hating writing but I know it will make my future job easier'*. Lydia summed up the sentiments of the twelve interviewees *'writing is hard but the more practice you get you can see the improvement...it's so important for work'*. Even though there was general consensus that writing is a critical skill for work it was evident students want a richer experience at university.

### **Speaking**

Focus group participants were divided in their opinions about the skill of speaking. Participants talked about how presentations to peers developed their speaking skills:

*'Group work builds interpersonal skills and being articulate at work is a very important part of life in the workplace' - (Jacinta)*

*'I wasn't good in first year but now in 3rd year I'm better' - (Sam)*

*'I've learnt how to tackle my nerves which will be invaluable when I have to speak in front of people at work' - (Matilda)*

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*'Speaking in groups has been a great learning experience which will definitely help me at work' - (Matt).*

A number of students wanted speaking skills to have a greater focus to work related scenarios - *'I think we need more opportunities to speak in front of other people.....organisation kinds of people' - (Suzie), ' Uni should offer more chances for us to speak with employers' - (Simone), for the reasons 'if we had more speaking we would be better prepared to articulate our thoughts when we start work' and 'it's essential to get your point across at work so we need more practise' - (Tyler).*

The twelve interviewees had similar views about what they had learned about speaking skills. *'I hate public speaking' (David, Ann, Melissa, Georgia, Aaron and Lydia) but 'the number of times we have presented has made a difference' (Maria). 'At uni we've had to stand up and speak...it's compulsory in some subjects' – (Susan) and '...just because we have to present doesn't mean we're good at speaking' – (Diana). 'Speaking is such a necessary thing' – (Ruby) and 'what we learn at uni is to not only speaking for ourselves - speak with and for others' (Michael). It would be beneficial 'if we could have debates with people from industry' – (Oliver) because that way ' we'd engage with what they (employers) want from us'.*

### ***Inquiry/Research***

Participants were divided on their views regarding inquiry and research.

*'I felt in first year I wasn't given enough guidance' - (Simone)*

*'This is something that should be at the foundation level....we saw it in lectures in first year but didn't get any activities to help us learn how to research' - (Suzie).*

*'I'm majoring in accounting and the subjects are very limited....it wasn't until I did some HR subjects I learnt about research so I'm not as prepared for research at work as others' - (Tom).*

Some participants found it difficult to relate the concept of research to the work setting:

*'I don't think research has a place at work' - (James)*

*'The constraints of time at work will mean researching isn't as important as at uni' - (Rebecca).*

*'Unless you're going to be an academic research probably doesn't matter at work' - (James).*

Other participants placed value on their research skills and clearly related their applicability to work -*'I think it's very important' - (Tyler).* Simone agreed that *'research is a necessary skill in the workplace'* but Jess felt that the university could do more so that *'it could be*

*covered much better in some courses....it's like some teachers care and others don't* - (Jess). Some lecturers *'bring in guest speakers to talk about what they do at their work....but most don't bother'* - (Jack).

When Lydia was interviewed about what she learned about inquiry/research skills during her course, she was a little confused. She could not *'understand why the Internet is not a good source of research'*. Instead of responding to the same question David appeared to have a similar view and asked a question *'How will research help us at work?'* and then proceeded to answer his own question *'I don't know...but I guess... I'll find out'*. However, it was evident that Michael, Ann and Maria had made the connection – *'I know if I can do good research it will be useful at work'* - (Michael) as *'research is such an important part of knowing'* (Georgia) about *'what's going on with other companies....I'm confident I know how to do good research and it will be impressive at work....that's if I've got the skills'* - (Maria).

### **Critical Thinking**

Focus groups participants were very definite that critical thinking is a necessary skill to develop for work situations. Tyler's opinion resonated with the other participants – *'learning how to think differently....out of the box....will give me the edge at work'*. Julia, Simone and Jessica agreed that critical thinking is important in work related situations. *'Critical thinking has been emphasised in some subjects and I feel well prepared'* - (Jane), *'it's most important because you will need it at work'* - (James) and *'I've learnt how to think critically so analysis kind of stuff.....or material at work should be easier'* - Matilda. There were some strong views about how critical thinking could be better taught at university - *'most subjects don't ask students to apply these skills'* - (Sam), *'what we need is a subject in first year to focus on critical thinking....teach us the basics'*- (Joe).

The mention of critical thinking had an impact on each of the interviewees. Diana sounded almost defeated *'When I think I've got it [critical thinking] the next day I wake up and it's gone'* – (Melissa). Susan told us *'I don't understand it [critical thinking]...but we hear all the time we have to improve it.....if I don't know what it is how can I improve it?'* Ann recognised the importance of critical thinking but could not quite 'get it'. With a confused look on his face David threw his hands up in the air *'I'm not sure I do critical thinking very well....I know it's complex and we need it for work....but I'm better at doing things others think about'*. Maria was very direct *'critical thinking is hard....if I know a topic I can give it a go but at work I'm thinking it will not be easy'*. For Michael *'we hear about it from academics'*

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*all the time and how we need it for work but no one really explains it very well'. Maria suggested that the university should 'give us some good examples...give us some bad examples.....then we might work it [critical thinking] out'. Lydia acknowledged the importance of critical thinking at work and believed that 'the first time I'm asked to think critically I'll know what it is but it'll be somewhat of a challenge'. The most profound statement was made by Georgia:*

*'Sometimes I think what I've learned is as narrow as a hallway.....there's lots of rooms that haven't been filled. Most subjects are empty rooms because they don't make any connection to real work situations. We need to know what we've learned will meet employers' expectations'*

### ***Creative Problem Solving***

There were very strong opinions in the focus groups about the perceived lack of preparedness for solving problems in future work situations. *'We didn't really learn this until our last semester' - (Jacinta), 'this is so important for work but it's not emphasized until the end of our degree' - (Joe), '... a highly relevant skill but I feel like I've just found out about it' - (Jack). Participants were adamant that more education is needed to develop creativity and problem solving skills from the beginning of their degrees. 'We need more experience and much earlier' - (Anna), 'some students might have natural talents but I wish I had more experience' - (Jacinta). 'We've finally learnt how to analyse and ask questions [in third year]' - (Warren) and 'now it's time to go....and work....we know we have to do this stuff.....guess we'll find out there [at work]' - (Rose). Rebecca pointed out 'if we had three years of what we've done in third year I know I'd feel much more confident'.*

Participant interviewees echoed the sentiments of the focus group participants. Michael explained *'I'm creative in some ways but with work type problems there's not much of it at uni'*. Maria, Diana and Lydia also told us they did not feel they had been exposed to enough problem solving in their degrees. Maria reflected on the three years of her degree *'other than a couple of subjects at the end we didn't get into solving any problems'*. David felt he could have had more experience with problem solving *'we did some work related problem stuff this year [third year] ....it would be better to start in first year...it's good stuff a bit late in our studies'*. Maria added *'it will be freaky if I'm ever asked to solve a work problem because we're not prepared'*. Lydia also commented *'I don't think I'm ready to solve anything difficult at work....maybe small problems'*.

### **Team Work**

Teamwork generated the most rigorous discussion amongst focus group participants. Whilst participants acknowledged working with others is imperative most had experienced challenging team-related experiences.

*'Team work would be fine if other team mates could speak basic English' - (Anna).*

*'When we can't choose our group members it's hard because you know you're going to get a low mark....it's not fair....I hate it [team work] (Angela).*

*'What's important is that the group has a good leader' - (Jack)*

*'The problem is the leader does all the work' - (Peter)*

*'There's no doubt team work is essential in the workplace - (Joe)*

*'Most of us find it [team work] difficult' - (Jacinta).*

*'It's so important at work to be part of a team' - (Rebecca)*

*'The frustrations we feel at uni at least prepare us for what it might be like to work with people who don't know how to work together' - (Tom).*

The interviews supported what we found in the focus groups. *'One of my sort of pet hates is this idea of group work' - (Michael).* *'We all know group work will happen at work but we don't like it at uni...' - (Ann).* *'Group work is not meant to be bad.....it's a part of working life' (David) but 'it's forced on us' (Aaron) and, 'I got a low mark working with students who didn't care.....and it affected my grade....now that's not fair' - (Michael).* *'When you have to do all the work of four people it's difficult' - (Lidya) so 'what we need in all subjects is a consistent way of keeping everyone in check....like in OCD where we had behavioural contracts' - (Maria).*

### **Discussion**

Broadly, we asked the students to reveal their understanding of what employers want and how they perceived graduate capability skills would help in their transition from university to work. The lack of graduates' understanding about some of the university's graduate capabilities suggests a gap in knowledge about what will be critical in the workforce. Although publicised on the university website and in all course guidelines, it appears many students do not recognise or understand there is a relationship between criteria referenced graduate capabilities, the development of skills in these categories and anticipated

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and required skills to be demonstrated at work (Oliver et al. 2011). Without a clear understanding of the skill and competence elements required, there is the potential for learners and instructional pedagogies to remain broad at entry level and continue until exit from the academic program. Entry level writing skills improved with practice and exposure to a range of genres of writing and learning activities within the university program. The development of speaking skills was rated positively. Participants expressed relative confidence in their speaking abilities as well as the relevance to work. In estimations of skill acquisition and competence, participants generally believed that they had developed writing and speaking capabilities which would assist their transition to work.

The cross matching of focus group and semi-structured responses revealed problematic clusters in estimations of skills acquisition and competence in inquiry/ research, creative problem solving and team work. The majority of respondents indicated that they were predominantly exposed to these areas of skill development at the end of the academic program. On exit, graduate students themselves perceived their own deficiencies in critical skills areas and indicating their problem solving capabilities were also underdeveloped. Most believed that they were not ready for problem solving at work. Some did not perceive inquiry/ research skills as even being relevant to work. Team work rated most negatively as a forced situation that impacted on students' academic performance. Some participants responded very strongly with 'hating' team work or having to do the work of others. Some perceived team work as an issue of unfairness and inequity where their performance was negatively impacted. Skill deficiencies were acknowledged by participants when reflecting on their skill development on entry but the development of skill acquisition and competence to perform those skills appeared to be a result of ad-hoc learning and informal learning processes rather than intentional instruction and guidance towards desired learning objectives.

First, students' general lack of understanding about graduate capabilities and relevance to skills required in the workplace; second, the relevance of graduate capabilities to academic practices, learning and work; third, the need for a more pragmatic approach to teaching graduate capabilities linked to work scenarios. Participants reported that they had little to no knowledge about graduate capabilities. Although these capabilities are publicised on the university website and in all course guidelines, it appears that students do not recognise there is a relationship between the curriculum and learning outcomes. This absence of recognition suggests that students either do not think that these are relevant or that the university has not communicated these capabilities strongly enough to students. This is an

area of future research however this finding concurs with Hager and Holland (2006) who recommended that academics need to re-design their curricula and introduce new methodologies to fill this gap. We agree and also believe that students themselves should not be expected to decode graduate capabilities and apply them to their skill development. Graduate capabilities should be embedded pedagogically and linked to specific learning outcomes relative to content, curriculum design and the relationship to employability skills.

Cranmer's (2006) study casts some doubt on whether universities are the best places for enhancing graduate employability not only because employability is a 'woolly concept' for employers to define but also for universities and academics to accurately gauge and anticipate what the labour market will require. The recommendation was for universities to encourage more employer involvement in the selection of employability criteria and for greater employment based training and experience (Mason, Williams, and Cranmer 2009). As supply-demand and employment markets fluctuate and facing greater competition from other graduates seeking employment, students tend to perceive that their degrees are less valuable for gaining positional advantage and less convinced that universities can provide the skill sets more likely to gain employment (Tomlinson 2008).

Lydia's response approximated the tone of participants' reflections of skill development and estimation of acquisition and competence in graduate capabilities. Learning was characterised by *'the frustrations we feel at uni'*. Resilience to cope with variability of learning and skill development may appear to be the most valued skill that would assist students in their transition from university: *'at least ... it would....prepare us for what it will be like at work'*. The graduate capability elements of writing and speaking were positively regarded. Reflecting on their first year experiences, final year graduates ready to exit the university considered that their writing skills improved by repeated practice and range of writing tasks required of their courses. Speaking and presenting to peers were also rated positively as well as for their relevance to the workplace. The more positive feedback about these two elements was outweighed by the balance of negative opinions on inquiry/research; critical thinking; creative problem solving and team work. Some participants could not connect the relevance of research to the workplace although one conceded it might be valuable. The perception that research is academic work and not a workplace issue raises the question of students' understanding of the workplace itself. In the business/commerce/financial sectors, research is critical for analysing the movements of capital, trading and forecasting. The student undertaking an accounting major was of

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particular interest when drawing the inference of little understanding of the broader ecologies of finance and market-economies. With respect to critical thinking, it appeared that this element was covered explicitly in one subject area and not consistently in others. Tyler believed that his ability for *'thinking out of the box'* would be recognised and would therefore *'give him an edge at work'*. In other words, he was selling the 'soft' currency skill set of personal attributes that Tomlinson (2008) identified in his investigation of students' perceptions of education credentials and employability skills. For the most part, the findings on critical thinking skills suggested greater deficit than competence or confidence in knowing what the practices of critical thinking were and how to apply these at the workplace.

Comparative differences between categories indicate that entry skills of reading, writing and speaking improve through pedagogic intervention. Participants were more confident in their competence in these skill areas. These skills were perceived as being relevant and would assist their transition from university to work. In relation to inquiry/research, critical thinking, problem solving and teamwork skills, respondents generally believed that they were less confident and not well prepared for work. Participant students' criticism of instruction, curriculum and lack of opportunity within the academic program suggests there are misalignments between instruction/pedagogy and the acquisition and competence in graduate capabilities and desired work ready skills. Data suggests that the margin of entry and exit skills does not narrow but is porous and variable. Learners' skills and competence remain relatively uneven and variable.

A serious issue emerging from responses was the belief that participants had limited opportunity within the academic program to develop skills for work. In effect they believed that they had experienced some improvement in their learning and in the development of skills and competence between entry and exit. Some criticised the lack of, or the deficiencies of, university curricula while others perceived that the academic program was problematic in terms of not introducing the graduate capability skills earlier in the program. The inference is that there is minimum improvement in the higher order graduate capabilities over the course of the program and that business students leave with minimal employability skills.

On the *prima facie* evidence, the development of graduate capabilities within the academic program is random and unequal in relation to skill acquisition, competence, development and estimation of competence in employability skills. Remedial attempts to provide graduates with higher order thinking, research and problem solving skills are undertaken in a last subject or close to exit from university. The introduction of higher order thinking and problem solving skills until the last subject or relatively late in the course

program suggests that final year graduates are underprepared and at risk of criticism for not having sufficient competence in these valued employability skills. Graduates perceived they were lacking or inadequately prepared in these critical skill areas in their preparation to enter the workforce. There was also a level of misunderstanding about the relevance of inquiry/research skills in work contexts. The assumption that graduates were not provided learning opportunities or experiences to develop inquiry/research, critical thinking and problem solving would need to be further investigated. The findings on critical thinking and creative problem solving skills suggest greater deficit than competence or confidence in knowing what these mean and how they could apply to workplace situations.

These findings concur with other views on whether universities are the appropriate places for developing the types of skills needed and valued by employers (Harvey 2001, Cranmer 2006). A criticism is that neither universities nor individual academics have the appropriate understanding of employers' needs or have the skills to gauge and anticipate the types of skills that labour markets will require in the future. Hager and Holland (2006) believe that the time has come for universities to re-design curricula and introduce new and relevant methodologies so that graduates acquire competence in work readiness and employability skills. Mason, Williams and Cranmer (2009) have argued for greater employer involvement in curricula design and for increased practicum experiences in employment. As employment markets fluctuate and face greater competition, graduates may also become less convinced that universities can provide the skill sets that will help them to gain employment (Tomlinson, 2008, Shierholz, *et al.* 2012).

## **Conclusion**

This study was conducted at a time when there is a great deal of scepticism by employer sectors and organisational bodies in Australia about graduate work readiness and the quality of their employability skills. Three main themes emerged from the data. Deficiencies in students' skill development emerged on entry and either were not remedied or addressed until the last subject or near exit from the academic program; misalignments in perceptions and understanding about the relationship between graduate capabilities, skill development and competence in the university context and skill development for employability; misalignments in perceptions about the relationship and relevance of higher order thinking skills such as inquiry/research and critical thinking to the development and demonstration of work-ready skills; misalignments in perceptions of the types of skills

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perceived to assist in the transition to employment. There was a gap between instructional methods, curricula and skill development. There was a lack of student understanding of the relevance and relationship between graduate capabilities and applicability to the workplace despite the provision of on-line information and explicitly embedded graduate capabilities included in subject and course guides. This study suggests that students' exposure and experiences with creative problem solving, critical thinking and collaboration are more negatively perceived than enjoyed.

This exploratory study has highlighted pedagogical implications in terms of the apparent lack of synergy between the university curriculum and the development of work-ready capacities. This includes implications for curriculum designers to re-design curricula in terms of work readiness, learning and the acquisition of graduate capabilities, skills and demonstration of competence from entry to exit and to the workplace. Practical strategies to overcome these issues could be provided through clear evaluation methods such as detailed criteria rubrics and peer evaluations. Given the nature of this exploratory study we tentatively suggest future research could be undertaken to identify other critical learning instances in order to develop understandings of the effect or relationship between instruction pedagogy on learning and the acquisition of graduate capabilities and work readiness skills. We also recommend other exploratory research could be done with internships, co-teaching with industry practitioners, and involvement of professional bodies. The ideal condition could be reflected in a synthetic alignment between graduate capabilities and employability skills and an enhanced trajectory of competence on exit from university. After a period of instruction, graduates could possibly exit university with improved graduate capability skills rather than remaining static on a continuum or diverging downwards from the ideal trajectory target.

In sum, a broad, graduate-centered understanding of work readiness is a fluid concept mandating curricula be designed by universities with well-planned negotiations and interactions between universities, employers and students. Graduate capabilities contribute to students' work readiness but in effect the capabilities prepare them to a work entry level that can only be expanded within organisations. Engaging students with graduate capabilities on entry to university, using more case scenarios in curricula and linking students with industry representatives, as a standard practice in pedagogy, will enhance work readiness. Moreover, being work ready has to come from students' desire to learn and find work.

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