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Author

Bridgstock, Ruth, Jackson, Denise, Lloyd, Kate, Tofa, Matalena

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Chapter 5

Social Connectedness and Graduate Employability: Exploring the professional networks of graduates from Business and Creative Industries

Ruth Bridgstock¹, Denise Jackson², Kate Lloyd³ & Matalena Tofa³

¹Griffith University

²Edith Cowan University

³Macquarie University

Abstract

Despite widespread recognition of the importance of social networks to career development and professional learning among experienced professionals and graduates alike, there is evidence to suggest that many students complete undergraduate programs with nascent networks at best, and little idea of how to develop and make use of the affordances of face-to-face and online connections for their careers. Drawing upon data from more than 600 surveys of graduates of Bachelor level programs in Creative Industries and Business fields from three Australian universities, this chapter: describes the professional networks of recent graduates; characterises their levels of social capital and benchmarks current graduate connectedness capability levels to identify opportunities for development in degree programs.

Keywords: graduate employability, social networks, social capital, connectedness capabilities, career success, graduate outcomes

Social Connectedness and Graduate Employability: Exploring the professional networks of graduates from Business and Creative Industries

<a>Introduction

‘It’s not what you know, it’s who you know’, or so the saying goes. The idea that social connections are important to career success, and can actually be more important than individual knowledge and capabilities, is a common one. It is also an idea that is supported empirically by a raft of studies that demonstrate the relationships between social capital, wages and employment outcomes (Mortensen & Vishwanath, 1994), entrepreneurial success (Ramos-Rodríguez, Medina-Garrido, Lorenzo-Gómez, & Ruiz-Navarro, 2010), and career progression (Anderson-Gough, Grey, & Robson, 2006), among others. While the notion is often associated with the unfair advantage that class and background can confer over less well connected but more capable individuals, this isn’t necessarily the case: through networking behaviour, people from all kinds of backgrounds can obtain career benefit from social connectedness (Wolff & Moser, 2009).

It would appear that networking, if done well, doesn’t just yield career benefits for the networker. Developing and maintaining reciprocal relationships with others *for mutual benefit* particularly seems to help us find and secure employment opportunities, obtain access to information and resources, and receive guidance, sponsorship, and support. By contrast, highly instrumental and self-interested ‘taking’ networking behaviour has been demonstrated to be less effective, and can shrink social networks over time (Gjemmestad & Nasta, 2016).

As a core aspect of the career development repertoire of professionals across all fields, effective networking is underpinned by a range of capabilities that need to be learned, at least in part, through practice (de Janasz & Forret, 2008). In the 21st century, networking has moved

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online, and professionals now connect via social media, which requires the acquisition of a somewhat different but overlapping set of capabilities to analogue networking (Bridgstock, 2019a).

Given the current near-universal interest in graduate career outcomes among students, parents, industry, the government and universities themselves, one might expect that networking would be a common feature of professional practice curricula. However, in a higher education context that has always focussed upon the development of individual disciplinary and (more recently) transferable skills and knowledge, the inclusion of networking in programs is relatively infrequent (Bridgstock, 2017). The outcomes of preliminary survey-based research in the United States and Australia (Benson, Morgan, & Filippaios, 2014; Bridgstock, 2019b) indicate that for many students, learning to connect with others professionally online and offline could represent a significant learning opportunity for their employability. The study described in this chapter goes further to describe the professional networks of graduates across three universities and from two very different fields of study. It characterises the extent of their networking capabilities, and identifies learning opportunities through degree programs that will strengthen student employability and career success.

<a>Social connectedness, networking and careers

The majority of research that engages with the effects of social connectedness on career development is concerned with career advancement, including indicators such as job acquisition, promotions, and salary levels. Granovetter (1995) reported that between 40-50% of all jobs were acquired through social contacts; in some fields such as the arts, this figure is certainly much higher. Career-orientated social media platforms such as LinkedIn have increased both the reach

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and impact of social connections. For example, one survey of 3,000 workers found that 85% of them had obtained their most recent roles at least in part through social contacts (Adler, 2016). Members of LinkedIn strongly believe that it can advance their careers, by promoting access to employment opportunities and job acquisition, and facilitating networking (Florenthal, 2015).

The relationship between social connectedness and career advancement has been described in terms of network structures, where ‘weak ties’ (that is, relationships that are less emotionally intense, with infrequent interaction, and are restricted to one relationship type), may be more likely to provide information about new job opportunities, because weak ties often form bridges between clusters of otherwise unconnected social networks. On the other hand, ‘strong ties’ (that is, relationships involving more frequent interactions, higher emotional intensity and investment of time and energy) are associated with greater sharing of information and resources, sponsorship and mentoring (Seibert, Kraimer, & Liden, 2001), which can help people acquire roles and advance their careers. Studies have demonstrated the utility of weak ties (that is, for improved employment outcomes (Sharabi & Simonovich, 2017; Zenou, 2013). However, further information on the relationship between weak ties through online networks and graduate employment outcomes is needed; for example, using Facebook network data and graduate outcomes, Mayer (2012) was not able to conclusively demonstrate an association between the use of weak ties and graduate employment. Recent critiques also point out that “assuming a simple dichotomy between the roles of different types of ties” is problematic (Maher & Cawley, 2015), that networks and ties can simultaneously have multiple purposes, not all of which relate to economic motives, and that weak ties can convert to strong ties, or vice versa, over time (Antcliff, Saundry, & Stuart, 2016).

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Social connectedness does influence career development in other ways than job acquisition and career advancement. For instance, Bridgstock (2019b) discusses socially-based informal learning, which forms the majority of professional enculturation and other knowledge acquisition in workplaces (Eraut, 2004; Webster-Wright, 2009). People who can build and use relationships effectively to learn in an ongoing way are more likely to have up-to-date and relevant skills and knowledge. They are therefore more likely to gain and maintain employment and be successful in professional contexts.

Eraut (2004) notes that in workplaces, while some codified knowledge can be found in textual form, far more uncodified knowledge (often tacit or procedural) is acquired informally. For instance, workplace learning occurs through participation in social activities such as team working. Working alongside others allows people to observe and listen to others at work, which permits transfer of knowledge and expertise, and learning of new practices and perspectives. Working with clients permits learning about the client and their needs. Even if the person is working on a task by themselves, they will receive feedback from others. Informal social learning processes include expert modelling, mentoring, explicit instruction, advice and feedback (Lave & Wenger, 1991).

People also learn professionally through communities and networks beyond the workplace. Balkundi and Kilduff (2005) note that beneath and beyond most formal professional structures and relationships lie a sea of informal ties, which form the basis for important learning. Face-to-face informal professional learning can take the form of a community of practice (Wenger, 1999), involving active relationship building, practice-based interaction, and engagement between individuals with similar interests.

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As job roles in the knowledge society continue to change because of digital influences such as automation and increased computer processing power, digital social connections play an important part in helping people learn new capabilities and keep up to date. These connections are not limited to intra-organisational contexts, or face-to-face interactions. Online modes of social informal learning are less likely to employ a community of practice model, but rather a distributed learning network of professionals and other interested people (Albors, Ramos, & Hervas, 2008), in which professionals may not even know the people with whom they were interacting, or know them only slightly (that is, weak ties and indirect ties). These networks can be used to obtain 'just in time' quick-turnaround information and skills via social networking sites, obtaining information quickly and then sharing it. This form of social learning is generally much less time and energy intensive than a community of practice model. The other ways that digital networks are often used for learning can be more active, but still rely on weak or indirect ties. These are collective intelligence, and crowdsourced approaches to learning (Leimeister, 2010), one example of which is posting a question to an online industry forum and receiving answers from colleagues all over the world. The power of socially networked learning is such that some theorists have started to suggest that knowledge and capability should not be thought of just in terms of the individual, but instead the individual plus the network to which they have access (Siemens, 2005; Swart & Kinnie, 2014).

It can be seen from the preceding discussion that social connectedness is crucially important for the employability and career success of most people, in terms of their job acquisition, career advancement, and professional learning. People benefit in their careers in different ways from wide networks and strong ties. Wide networks, including online networks, involve people that we don't know well and that can facilitate access to new information and

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different perspectives. Strong ties such as mentors and close colleagues can provide advice, feedback, resources, support, and facilitation of career opportunities.

It can take some years and several job roles for these professional networks to reach maturity as the individual's career identity and expertise develops. In fact, career identity is shaped through the development of, and exposure to, social networks, which in turn evolve over time (Ibarra & Deshpande, 2007). The relationship between career identity and social network is reciprocal. Social networks shape aspiring members and confer social identity through normative processes. People adapt to new career possibilities through different job and career-related experiences by experimenting with provisional selves. As they pursue chosen identities, they alter their networks and forge new relationships. Thus, it takes time and experience to develop professional social networks, and a career identity. Through these experiences over time, people also develop connectedness capabilities – those needed to grow, navigate and make the most of social networks (both digital and analogue) for professional purposes (Bridgstock, 2019b).

<a>The professional networks and connectedness capabilities of graduates

For many (although not all) graduates from undergraduate programs, the completion of a degree represents an opportunity to pursue new career identities and roles. For school leavers this may be their first career identity, although they may have work experience in non 'career' roles. Mature-aged students will often have previous career identities and networks, and they will therefore also possess some connectedness capabilities, albeit relating to different contexts and roles (see de Villiers Scheepers et al. in Chapter 4). Given the importance of professional networks to manifold aspects of career development and success, one might expect that both connectedness capabilities and the professional networks themselves would be included among

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the learning and teaching priorities that higher education programs seek to address. Jackson (2016) highlights the importance of interaction with the external environment in developing what she terms pre-professional identity, a key aspect of graduate employability. Adopting Wenger's (2006) notion of a landscape of practice, she asserts higher education institutions must facilitate student engagement with relevant communities, including employers, professional associations, clubs and societies, to develop student understanding of and connection with the norms, beliefs and values of their intended profession.

Some constituent elements of connectedness capabilities have indeed commonly been found in university transferable skill / attribute lists around the world for many years, including digital literacies, written and oral communication and team work (Donleavy, 2012). More recently, universities have started to take more holistic approaches to fostering employability beyond transferable skill development. There is also evidence of a growing recognition of the need for connectedness in recent university statements around students' career and leadership readiness and industry engagement (O'Leary, 2017). The category of 'Experience and Networks' is now included in the latest version of the UK Higher Education Academy's (2015) Framework For Embedding Employability in Higher Education, indicating increased sectoral awareness of the need to expose students to professional life. The rise in work integrated learning (WIL) in university employability strategies, catalysed by the National Strategy for WIL (see Universities Australia et al., 2015), evidences the increasing focus on industry engagement. WIL, a form of experiential learning also known as work-based learning or cooperative education, engages students with industry and community partners on authentic learning activities as a formal component of their degree studies. It is considered a valuable opportunity for students to establish and grow their networks, professional enculturation and professional identity

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development (see Jackson, 2016). An institution-wide evaluation conducted with 1,135 final year undergraduates across 34 WIL units found that one of the most important goals for students when undertaking a WIL unit was enhancing their professional networks (Nay & Corrigan, 2018). Further, the value of WIL in providing professional networking opportunities through industry and community engagement was also highlighted by the low proportion of students (46%) who felt confident using their professional networks to seek work at the beginning of the WIL unit, despite most being in their final year of studies.

Despite the burgeoning interest in connectedness in sector and university publications, studies of the professional networks of students and graduates and the connectedness capabilities that they possess are fairly thin on the ground. The research that does exist indicates that graduates who use their social networks to gain employment tend to have better job acquisition outcomes than those who do not (Jackson, 2014), and may be more likely to acquire jobs that are linked to their degrees and offer good career prospects (Franzen & Hangartner, 2006). Further, in their study of undergraduate Business students, Batistic and Tymon (2017) demonstrated that active industry networking behaviour by students is predictive of enhanced access to career resources and higher perceived employability. Nay and Corrigan (2018) also found that students felt significantly more confident using their professional networks to seek work at the end of a WIL opportunity. However, the professional networks and connectedness capabilities of students and recent graduates can be underdeveloped, and this can be a barrier to their career development and employability.

Bridgstock (2019c) conducted surveys of final year undergraduates across all fields in two Australian universities, and found that more than nine in ten wanted more information about how to network professionally to maximise their career opportunities. The majority of students

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reported that they had met one employer in their field/s of professional interest (typically through a work integrated learning opportunity), however, nearly one-third said that they had met zero employers. Qualitative follow-ups with a sub-set of the students who had indicated that they knew zero employers revealed that while nearly all had encountered employers through guest lectures, careers fairs or other industry events, some had often not taken the opportunity to speak to the employers or otherwise connected with them individually. Some students were not aware that their teachers at university were industry active and therefore could be included in the category of employers they had met. Others were interpreting 'in their field/s of interest' very narrowly to mean an employer in the specific sub-field that they wanted to enter (such as a user experience design firm vs broader digital design agencies containing user experience design teams). These findings could all be taken to indicate that many of the students in Bridgstock's study were not yet thinking of the career development possibilities associated with professional networks.

Bridgstock's (2019c) study also suggested that students' professional networks and networking online could be strengthened: While 82% of the final year undergraduates logged in to Facebook every day, only 12% used LinkedIn regularly. Despite acknowledging that networking was important to job acquisition, more than eight in ten recent university graduates surveyed in the study only applied for jobs using direct application methods (e.g., responding to advertisements on job platforms. Social media for professional and career development represents a significant opportunity in university students' career and employability development (Lancaster, 2016). According to one study, merely eight per cent of student members of LinkedIn engage in frequent self-promotion using the platform (Bohnert & Ross, 2010). Repeatedly, it has been demonstrated that informal use of social media by students for personal

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and social purposes does not translate into confidence or awareness of using these applications for work and career (Benson, et al., 2014; Hinrichsen & Coombs, 2014; Pozzi, 2015).

<a>Method

The present study used an online self-report survey to provide a comprehensive description of graduates' social network characteristics, their social capital (access to resources, opportunities, sponsorship and support for career purposes), and their connectedness capabilities. Graduates from courses relating to Business (fields of study such as marketing, human resource management, management, economics and finance, innovation and entrepreneurship) and Creative Industries (fields of study from the arts, media and design) were surveyed. The aim was to explore capabilities and networks across diverse fields; that is, from Business where graduates are more likely to pursue 'traditional' careers as employees, and Creative Industries where short term and part-time contracts and self-employment are very common.

Participants.

The sample comprised 620 graduates from Business and Creative Industries undergraduate programs (Business n=338, Creative Industries n=235, double degree n=47) from three metropolitan universities located in different States of Australia (University 1 n=335, University 2 n=128, University 3 n=157). The graduates had completed their courses either one to two years previously (n=296), or four to five years previously (n=324). Their email addresses were retrieved from the universities' official Alumni contact databases. An invitation email and two reminders were sent to all eligible graduates across the period the survey was open from September 2017 to February 2018, and a prize draw for twelve retail store gift cards of \$100 or

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\$150 was offered as an incentive. The demographic profile of the participants is shown in Table

1. Some differences were observed between the demographic profiles of the universities:

University 3 had a greater proportion of non-school leavers participants, and had a higher proportion of 25-34 year old participants in the 1-2 year graduate range. University 2 had a higher proportion of Business graduate participants than the other two universities, and University 1 had a higher proportion of Creative Industries graduates. These differences are reflective of the balance of the program offerings of the universities.

<insert Table 1 about here>

Measures and analysis.

Social network characteristics. The characteristics of the graduates' social networks were described using a nine-item scale, containing subscales relating to: friends and family and social support; close colleagues (bonding ties); and wider professional networks (bridging ties). These items were adapted from Pinho (2013), and Williams (2006), and were measured using a 1-5 scale ranging from 'strongly disagree' to 'strongly agree'. All items were positively worded.

Social capital. Social capital was measured by a 12-item scale comprising four subscales corresponding to Seibert et al.'s (2001) dimensions of social capital: access to information and opportunities; access to resources; sponsorship; and social support. The chief modification to the scale was to focus on career more broadly rather than intra-organisational and specific-job related factors. All items were positively worded.

Connectedness capabilities. Participants self-rated their connectedness capabilities on a 21-item scale. A total of seven subscales were included, relating to the categories of social

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network capabilities proposed in Bridgstock's Fellowship (see Bridgstock, 2019c) and piloted in a survey of undergraduate students (social network literacy; constructing a connected professional identity; social network development; social network strengthening and maintenance; working with connections: professional learning, working with connections: career development; working with connections: problem solving). All items were positively worded.

Descriptive statistics for each subscale of social network characteristics, social capital, and connectedness capabilities scales are presented in Table 2. For nearly all of the variables included in the survey, the data obtained violated assumptions of normality, so analysis was conducted using non-parametric tests, including Mann-Whitney U tests for comparisons of two independent groups, Kruskal-Wallis tests for comparisons for three or more independent groups, and Wilcoxon signed-ranks test for repeated measures. Both medians and means/standard deviations are reported where relevant in order to provide maximum descriptive information about the data. Where multiple tests of group difference were conducted, a Bonferroni correction was applied to maintain the familywise error rate.

<insert Table 2 about here>

<a>Results

The significant by-group differences across social network characteristics, social capital, and connectedness capabilities are presented textually in the following sections.

Social network characteristics.

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Overall, the graduates agreed that they possessed enough friend and family ties, and that these were of good quality (mean = 4.14, SD = .66, median = 4.67). The exception to this was international graduates, who reported significantly lower *friends and family* subscale scores than domestic graduates ($U = 14,230.500$, $p < .001$). Overall, participants were somewhat less confident about the extent and adequacy of their networks of close colleagues (mean = 3.80, SD = .86, median = 4.00), and even less confident about their wider networks (mean = 3.21, SD = .83, median = 3.17) ($\chi^2(2) = 440.542$, $p < .001$) than their friends and family networks. In terms of their close colleague networks, participants tended to agree that they had close colleagues with whom they collaborated well (mean = 4.05, SD = .90, median = 4.00), but some questioned whether they had enough close colleagues (mean = 3.42, SD = 1.13, median = 4). Some did not have one or more career mentors that they could trust (mean = 3.50, SD = 1.14, median = 4). With respect to their wider networks, some graduates were not certain whether their professional network was large enough for career development purposes (mean = 2.95, SD = 1.09, median = 3), particularly their online professional contacts network (mean = 2.95, SD = 1.08, median = 3.00).

On average, Creative Industries and Business graduates assigned similar ratings to the items relating to the *friends and family* and *wider networks* scales ($\chi^2(2) = .30$, n.s. and $\chi^2(2) = 4.03$, n.s. respectively), but Creative Industries graduates were less likely to agree that their close professional networks were extensive enough or that they interacted with close colleagues regularly enough. Significantly fewer Creative Industries graduates reported having close colleagues they could trust ($\chi^2(2) = 19.02$, $p < .001$).

Differences were also found by length of time after graduation. While 1-2 year and 4-5 year graduates were equally likely to agree that they had enough good quality close friends and

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family ties, 1-2 year graduates were on average significantly less likely than 4-5 year graduates to agree that their close colleague networks were sufficient ($U=42,214.500$, $p<.01$). The difference between 1-2 and 4-5 year graduates for *wider networks* was even greater ($U=39,242.000$, $p<.0001$), with 4-5 year graduates far more likely to indicate that they had large enough professional networks ($U=40,676.000$, $p<.003$), that these networks contained the right kinds of people for their career development ($U=40,677.000$, $p<.002$), and that they maintained an extensive network of contacts online ($U=38,956.000$, $p<.0001$).

Social capital.

On average, the four subscales of the social capital scale obtained similar ratings, at between 'neutral' and 'agree' (*access to information and opportunities* mean = 3.36, SD = .88, median = .88; *access to resources* mean = 3.48, SD = .86, median = 3.67; *sponsorship and mentoring* mean = 3.54, SD = .75, median = 3.67; *social support* mean = 3.48, SD = .91, median = 3.67). International graduates had significantly lower levels of agreement than domestic graduates to three of the scales: *access to support* ($U = 14122.500$, $p<.004$), *access to resources* ($U=14,437.000$, $p<.001$), and *access to sponsorship and mentoring* ($U=14,180.500$, $p<.003$). There was no difference between international and domestic graduates on the *access to information and opportunities* subscale ($U=12,401.000$, n.s.). More recent graduates indicated lower levels of social capital than 4-5 year graduates across *access to information and opportunities* ($U=33,023.000$, $p<.002$), *access to resources* ($U=33,481.000$, $p<.006$), and *access to social support* ($U=33,342.00$, $p<.004$), but not *sponsorship and mentoring* when a Bonferroni correction was applied. Two items that differentiated 1-2 year and 4-5 year graduates were 'I know who to ask about career opportunities' ($U=32,688.000$, $p<.002$), and 'I have enough social

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support for my career development' ($U=32,164.000$, $p<.001$). No significant differences in social capital were found by field of study, school leaver status, or first in family status.

Connectedness capabilities.

Of the seven connectedness capabilities subscales, graduates were most confident about their capabilities in *constructing a connected professional identity* (mean = 3.80, SD = 1.02, median = 3.67), and *working with connections: problem solving* (mean = 3.93, SD = .80, median = 4.00). They were least confident about *working with connections: career development* (mean = 3.31, SD = .90, median = 3.50), their levels of *social network literacy* (mean = 3.34, SD = 3.67, median = 1.02), and *social network strengthening and maintenance* (mean = 3.36, SD = .94, median = 3.67). The individual items that obtained the lowest confidence ratings were 'draw upon your professional contacts to find or create work' (mean = 3.16, SD = 3.00, median = 1.19), 'make new contacts online using social media' (mean = 3.22, SD = 1.15, median = 3.00), and 'develop your career by meeting new people at an event' (mean = 3.23, SD = 1.16, median = 4.00).

Graduates who were over the age of 35, and those who had entered university as mature students, were less confident about their capabilities in networking for career development purposes (age $\chi^2(4) 15.941$, $p<.003$; school leavers $U=16,030.000$, $p<.001$), and their ability to construct a connected professional identity (age $\chi^2(4) = 13.503$, $p<.009$; school leavers $U=17,143.000$, $p<.01$). This finding was tied to the specific capabilities required to use online social networks and social media to create a connected identity (age $\chi^2(4) = 16.716$, $p<.002$; school leavers $U=16,867$, $p<.009$), and 'making new professional contacts online' (age $\chi^2(4) = 14.725$, $p<.005$; school leavers $U=16,195.000$, $p<.002$). Older graduates lacked confidence in

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their ability to ‘identify opportunities for professional networking’ (age $\chi^2(4) = 16.675$, $p < .002$), while non-school leaver graduates were less confident to ‘network effectively at a face to face event’ ($U=16,354.000$, $p < .005$) and ‘use social media to find, obtain or create work’ ($U=16,356.000$, $p < .005$).

Strong differences in connectedness capabilities were found for international students in comparison with domestic students, this time relating to low confidence in two of the *working with connections* subscales: their capability to learn from social networks ($U=15,050.000$, $p < .0001$), and being able to solve problems with others ($U=14,264.000$, $p < .001$). Business graduates were also less confident of their *working with connections: professional learning* capabilities than Creative Industries graduates ($\chi^2(2)=9.474$, $p < .009$). More specifically, Business students were less confident of their capabilities relating to items ‘keeping abreast of developments in your field through social media’ ($\chi^2(2)=10.954$, $p < .004$), and ‘find and take advantage of social opportunities to learn professionally, such as workshops or informal get-togethers’ ($\chi^2(2)=10.513$, $p < .005$). There was only one difference in the connectedness capability subscales between recent and less recent graduates, once the Bonferroni correction was applied – that of *working with connections: problem solving*, in which 1-2 year graduates were significantly less confident of their capabilities in this area than 4-5 year graduates ($U=27,986.000$, $p < .009$).

<a>Discussion

The survey findings indicate that graduates up to five years after course completion believe that they don’t have enough professional contacts. At 1-2 years after course completion, graduates report that both close professional ties and wider networks need development. By 4-5

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years after course completion, the quality and quantity of close professional ties is better, presumably in part because of more experience in professional workplaces over time. This perception of inadequate professional networks raises concerns given their importance for accessing the hidden job market (Hansen, 2013).

Social network literacy, networking and acquiring new connections, and using networks for career development are identified in the analysis as key capability sets for development, including being able to articulate how social networks are important to career, developing new contacts, either online or face to face, and drawing upon professional contacts to help with career development. This emphasises the need for higher education providers to engage students in career development learning that targets connectedness. Specifically, this engagement should include how students can effectively develop and maintain networks, how they should be used for career development purposes, and – in particular – provide students with access to relevant networks during their university years. The latter may be achieved, for example, through on- and off-campus networking events in conjunction with employers, industry bodies and professional associations. There is particular underconfidence among graduates about social media and online networking, emphasising the importance of formally introducing students to valuable platforms, such as LinkedIn, and how to use them effectively.

Graduates moving into Creative Industries particularly appear to feel that their close colleague networks are inadequate. This may be reflective of the relatively higher likelihood of self-employment (than organizationally-based careers) in creative industries, and the greater importance of networks for work allocation (Antcliff, et al., 2016). Educators in this discipline area may consider introducing industry mentoring interventions that may develop trusting relationships proven useful for career counselling, advice and support purposes (for example

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Adler & Stringer, 2016). Conversely, Business graduates may be less confident engaging in professional learning via networks, for instance through social media or through workshops, and informal get-togethers. Again, this highlights the value of targeted interventions which may involve industry members facilitating both face-to-face and virtual sessions for developing dimensions of student employability or discipline-specific skills and knowledge.

Older students and non school-leavers, such as those who have come to university to retrain and follow a different career path, would benefit from additional learning opportunities and support to develop their professional identities and professional networks, and to make the most of social media for career development. This may be achieved through WIL where students engage with industry through authentic learning and assessment activities such as internships or practicums, or less immersive experiences such as industry-based projects, consultances or field work. WIL is increasingly acknowledged as a valuable platform for professional identity development, through exposing students to the reality of the work setting and professional ideology, and providing access to networks (Jackson, 2017).

The findings with respect to international graduates indicate that they are a distinctive group with particular support and development needs. It can be inferred that some international students feel isolated, with insufficient family and friend networks. The international graduates report much lower levels of social capital (particularly access to support, resources and mentoring) than domestic graduates. Quite separate from the finding that all students would benefit from learning experiences targeted at developing and using social networks for career development, international graduates can also be concerned that they don't have the workplace capabilities required to work with connections to solve problems, and to engage in professional learning via their social networks. Further, international students have relatively weak access to

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professional networks given they find it more difficult to secure WIL opportunities as they are less favoured by local employers due to perceived inadequacies in English language skills and concerns with cultural immersion (Gribble, Dender, Lawrence, Manning, & Falkmer, 2014).

As expected, findings confirm that more recent graduates perceive their networks, social capital and connectedness as less adequate than those graduates who have been immersed in professional life for a longer period. This, and the relatively weak ratings in areas previously outlined, highlight a clear need for targeted career development learning interventions in higher education to improve graduating students' social connectedness and thus their employability. Evidence suggests that career development learning may be more effective if embedded into the curriculum, more specifically assessment, to maximise student outcomes (Bridgstock, 2009; Jorre de St Jorre & Oliver, 2018).

<a>Conclusion

The research described in this chapter characterises the professional networks and social capital of recent Australian higher education graduates from Creative Industries and Business disciplines, and identifies opportunities for augmentation and strengthening of students' social capital while they are at university, particularly those who are likely to be less well connected, such as first in family and international students. The study clearly illuminates a need for higher education to better engage students with effective ways to network professionally, particularly through online means, and provide them with access to relevant and meaningful networks. Higher education educators need to carefully consider how they can engage the broader student body to enhance their social connectedness, as well as develop targeted interventions for certain student groups.

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A limitation of the study is its reliance on self-report data which some consider unreliable for gauging learning and development (see for example Sitzmann, Ely, Brown, & Bauer, 2010) and concern for common method variance, given data were gathered using one survey instrument at one particular time point (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The latter, however, is somewhat alleviated by the multi-institutional and transdisciplinary research design, drawing on more than one sample of graduates. In relation to directions for future research, extending the study to other disciplines may add further insight. Complementing the survey findings with qualitative data, gathered via focus groups or semi-structured interviews with graduates, may enrich our understanding beyond the status of graduates' social connectedness as to why and how certain groups are better connected than others, and the challenges faced in the process of networking and connecting with others.

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Table 5.1: Demographic profile of participants

Graduates 1-2 years after course completion				
	University 1 (n=159)	University 2 (n=67)	University 3 (n=70)	Overall (n=296)
Modal age group (%)	18-24 (60.75%)	18-24 (54.00%)	25-34 (52.57%)	18-24 (58.74%)
% full-time	81.48%	90.20%	79.55%	83.25%
% international	6.48%	38.00%	16.28%	16.42%
% school leaver	67.27%	86.27%	43.18%	66.82%
% first in family	31.78%	32.25%	38.10%	34.50%
% male	29.63%	33.33%	27.27%	30.05%
% Business course, % joint Business and CI courses	42.76% 6.35%	71.64% 5.97%	54.29% 8.57%	52.03% 8.79%
Graduates 4-5 years after course completion				
	University 1 (n=176)	University 2 (n=61)	University 3 (n=87)	Overall (n=324)
Modal age group	25-34 (57.60%)	25-34 (52.63%)	25-34 (43.86%)	25-34 (51.72%)
% full-time	79.23%	79.23%	80.70%	81.42%
% international	6.25%	41.67%	14.93%	13.84%
% school leaver	76.15%	89.74%	42.11%	66.91%
% first in family	33.33%	41.03%	43.86%	35.40%
% male	31.58%	29.13%	31.58%	30.68%
% Business course, % joint Business and CI courses	48.46% 10.23%	77.04% 3.28%	58.62% 11.49%	56.79% 6.48%

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Table 5.2: Average ratings for social network characteristics, social capital and connectedness capabilities

	Business graduates (n=338)			Creative arts graduates (n=235)			All graduates (n=620) ¹		
	<i>Mean</i>	<i>SD</i>	<i>Median</i>	<i>Mean</i>	<i>SD</i>	<i>Median</i>	<i>Mean</i>	<i>SD</i>	<i>Median</i>
Social network characteristics subscales									
Close colleagues	3.89	.83	4.00	3.62	.88	3.80	3.80	.86	3.17
Wider networks	3.20	.80	3.17	3.21	.89	3.33	3.21	.83	3.17
Family and friends	4.14	.65	4.17	4.10	.66	4.00	4.14	.66	4.67
Social capital subscales									
Access to information and opportunities	3.42	.86	3.67	3.24	.93	3.33	3.36	.89	3.50
Access to resources	3.54	.75	3.67	3.49	.77	3.67	3.53	.75	3.67
Access to sponsorship	3.43	.90	3.42	3.49	.91	3.67	3.48	.91	3.67
Access to social support	3.54	.84	3.67	3.38	.90	3.33	3.48	.87	3.67
Connectedness capabilities subscales									
Social network literacy	3.29	.99	3.33	3.34	1.04	3.67	3.34	1.01	3.67
Constructing a connected professional identity	3.80	.83	4.00	3.76	.94	4.00	3.80	.86	4.00
Social network development	3.32	.91	3.33	3.35	.98	3.67	3.36	3.67	.94
Social network strengthening and maintenance	3.49	.88	3.67	3.54	.94	4.00	3.54	3.67	.92
Working with connections: professional learning	3.60	.85	4.00	3.74	.83	4.00	3.68	4.00	.84
Working with connections: career development	3.31	.86	3.50	3.26	.95	3.50	3.31	3.50	.90
Working with connections: problem solving	3.92	.76	4.00	3.89	.85	4.00	3.93	4.00	.80

¹Please note that the overall N includes 47 additional double degree Business/Creative Industries students