Chapter 15

Future Connections: Implications for connectedness strategy, pedagogy and capability in Higher Education

Ruth Bridgstock¹ & Neil Tippet²

¹Griffith University

²University of South Australia

Future Connections: Implications for connectedness strategy, pedagogy and capability in Higher Education

The Connectedness Learning Approach sets out the institutional enabling strategies, pedagogic approaches, and individual capabilities that will enable learners to build, maintain and make the most of their social networks and relationships for success in life and career. As a practical exploration of the Connectedness Learning Approach in higher education, this volume has presented 10 accounts of connectedness learning, spanning a broad cross-section of higher educational contexts. Together, these chapters demonstrate that there is no single way in which universities should support connectedness learning. Rather, connectedness learning requires a detailed understanding of students' needs and existing capabilities, along with the institutional context and strengths, through which the pedagogic approaches and wider enabling strategies that enhance connectedness capabilities can be designed and enacted.

<a>Connectedness capabilities: Key findings

Connectedness capabilities represent the knowledge and skills that students require in order to build, maintain and make the most of their networks and social relationships for life and career. Given the centrality of these skills within the Connectedness Learning Approach, Chapters 3 through 5 of this volume explored the knowledge and use of social networks among students and recent graduates, finding that many had not yet developed the key capabilities required to connect professionally with others. Although there were promising signs in terms of students' social networking literacy and ability to create connections, the majority of students and graduates possessed significantly underdeveloped professional networks, even up to several years after graduation.

FUTURE CONNECTIONS

Exploring the concept of professional identities, in Chapter 3, Lupton, Oddone & Dreamson found that a major hurdle in encouraging students to develop and employ connectedness capabilities appeared to be their perception of themselves as a ‘student’ rather than as a ‘professional’. Learning activities which aimed to encourage and develop students’ connectedness capabilities tended to be treated as academic exercises which had little relevance to the professional context. There were, however, several students who exhibited strong digital professional identities, providing evidence of hands-on experimentation with their digital selves, and the ongoing development of their career identities, both of which were tested progressively with professional connections over time. This links back strongly to the extant theoretical literature surrounding career identity development (e.g. Holmes, 2013; Jackson, 2017; Tomlinson, 2017), which suggests that career identity development follows a cycle involving social experience followed by reflection (whether explicit or tacit). In higher education we hear many examples of this cycle breaking down, which would suggest that any form of connected career identity development needs to be supported from early on within the degree program, using well-promoted avenues and support through which students can revise and refine their identity.

In Chapter 4, de Villiers Scheepers, Macintyre, Crimmins & English found that while students had personal experience of using social media for social purposes, their professional connectedness capabilities tended to be at a foundational level. Their social networks were, as one might expect, largely comprised of family, friends and peers, with content being shared within these closed communities, but not beyond. Students were acutely aware of the value and importance of both career development learning and authentic learning experiences in establishing their professional identities, offering strong support for embedding these forms of learning into the curriculum to ensure positive student engagement. Attitudes towards connectedness learning differed according to whether participants had any prior career

FUTURE CONNECTIONS

experience. School-leavers or those with part-time work experience tended to compartmentalise their student and professional lives, perceiving connectedness capabilities and the development of professional networks as being future orientated; something to be developed once their studies had been completed. In contrast, students with previous full-time employment displayed a greater awareness and willingness to embrace connectedness practices, taking opportunities to acquire marketable skills and update their knowledge and professional networks as they transitioned to new career pathways. This would suggest that previous career development learning, including that related to connectedness, is broadly generalisable, and can be translated across multiple settings and disciplinary areas.

In Chapter 5, Bridgstock, Jackson, Lloyd & Tofa explored the professional networks of recent graduates as they transitioned into professional employment. Although most participants possessed some level of social network literacy and ability to build their social networks, their connectedness capabilities remained underdeveloped, and it was only after 4 or 5 years of professional employment that the quality and quantity of their professional social networks improved. Having experienced the professional world of work, many graduates expressed a clear desire to improve their connectedness capabilities, particularly their social network literacy, networking capabilities, and capacity to use networks for career development. This finding could be taken to support the idea of universities offering post-graduation just-in-time career launch support and development programs for early alumni. However, incorporating connectedness learning into the curricula of degree programs offers the best way to give students a head-start in creating and using professional networks, whilst also ensuring they have reasonably well-developed career identities by the time of graduation. Connectedness capabilities differed between Creative Industries and Business graduates, and between domestic and international graduates. These findings reinforce the

FUTURE CONNECTIONS

fact that connectedness learning needs to be specific to the needs of learners and their intended pathways.

Together, the findings from these three chapters offer several useful lessons which can guide educators. First, career identity development is a crucial journey for higher education learners, because identity determines how they will engage with future learning, how they will make career-related decisions, and whether / to what extent they will engage in career building activities (including networking). A key way that career identities are developed is through connectedness – through exposure to professionals and others related to their possible future careers. As such, connectedness learning becomes a virtuous circle. Through exposure to professional connections, learners develop identities that make them more likely to engage in purposeful networking behaviour, which in turn strengthens their identities and enhances their employability.

Although students may have the capacity to build and engage with their networks, learning how to apply this knowledge within the professional context is crucial. Authentic learning experiences, which focus on real-world, complex problems and their solutions (Lombardi, 2007), can support students in converting their knowledge into practice. These experiences, which have been explored in detail in the second section of this volume, ensure that learning has real-world relevance, including exposing students to professional connections, and can support students in bridging the gap between their student and career identities.

Second, the varying levels of social networking literacy evident among students suggests that foundational learning opportunities should be provided to those who lack core connectedness capabilities. As Lupton, Oddone & Dreamson contend, the affordances of connectedness learning may not be fully exploited if students lack the capacity to initiate, manage and utilise their network connections. Students who already possess these skills are

FUTURE CONNECTIONS

unlikely to benefit from any learning experiences pitched at a foundational level yet could offer the potential for peer forms of learning, whereby students share their knowledge and experience of professional networking and use this to enhance the connectedness capabilities of their peers. Thus, just as it is necessary to adapt connectedness learning to students and their intended pathways, it must also be tailored to their social networking literacy.

Third, if students are to learn how to use their connectedness capabilities effectively while at university, then they need to be given access to wider professional networks beyond the university so that they have the opportunity to develop, maintain and strengthen their own networks. Chapter 3 demonstrated that, even where students were able to demonstrate a high level of social networking literacy, without established networks and access to industry partners, there were few opportunities to put their learning into practice. For optimal outcomes, connectedness learning needs to be integrated into wider and deeper career development learning within the curriculum, including explorations of the world of work and reflective identity development, which requires social interaction and the development of professional networks.

The value of previous learning should be recognised, in particular, the connectedness capabilities and networks of students who have engaged in prior careers, or those with already established strong career identities. Educators should look for ways to acknowledge the resources and skills that prior experience can provide. In some cases, students are entering HE with highly developed connectedness capabilities and fully functioning professional networks, yet these are ascribed little importance in their additional learning. Most universities, even those with large non-traditional student populations, lack the mechanisms necessary to ascertain and recognise students prior learning, thus, as Chapter 6 suggests, some formal recognition of prior learning could be an important step in helping students leverage their existing skills while pursuing a new career.

<a>Connectedness pedagogies: Key findings

The second section of this volume focused on the pedagogic strategies that universities can adopt to integrate connectedness into the learning experiences of their students, both within and outside the formal curriculum. Many of the pedagogic approaches outlined under the Connectedness Learning Approach can already be found in higher education learning and teaching, however, they are by no means thoroughly integrated, and their value for enhancing connectedness goes under-recognised. Chapters 7 through 10 offer practical examples of how the Connectedness Learning Approach can be taken up in a way that responds to the specific needs of different learners and different institutions:

In Chapter 7, Brown, Healy, Lexis & Julien demonstrated how the delivery of an employability module inside a 3rd year non-vocational Health Sciences course was able to support students in recognising the value and relevance of connectedness learning for the development of their career identities. In Chapter 8, Radoll et al. considered how pedagogies might be better informed through connecting with cultural and community perspectives. Using the Aboriginal 8 Ways of Learning (Yunkaporta, 2009) as a cultural lens, the chapter forged connections between Indigenous perspectives, contemporary pedagogies, and connectedness learning, identifying how HE learning and teaching can be better aligned with cultural and community values and perspectives. In Chapter 9, Goodwin et al. brought together the experiences of educators across four large and diverse arts and humanities capstone courses within one higher education institution to set out a roadmap for effective capstone experiences. From this collaboration, the authors described five principles which define effective and connected capstone experiences: *authentic, reflective, creative, celebratory and networked*. Lastly, in Chapter 10, Bedford & Bell explored a whole-of institution curriculum transformation model at the University of Wollongong, outlining the

FUTURE CONNECTIONS

rationale for, and delivery of, a diverse range of pedagogic approaches that meet the needs of the learners, disciplines and professional contexts.

Although each chapter addressed a different HE context, there are several overarching themes which can be applied to any institution looking to embed connectedness learning within their curricula. Foremost is the need for connectedness learning to be delivered as part of a scaffolded approach where students' capability development is supported through a structured and timely incremental process which commences from the outset of the course. Students enter university with differing levels of social network literacy; some have extensive professional networks while others have little or no social networking experience. First-year activities could focus on developing foundational career identities and also developing a threshold level of social network literacy throughout the cohort. Foundational career identity development provides the fundamental 'why' for development of social network literacy, which then provides the 'how' for network development and the further development of career identity. Those with existing professional networks or well-developed social network literacies might feed their expertise into strengthening learning activities as part of a peer-learning approach. This initial engagement with connectedness learning would enable students to begin constructing their own professional networks within the university and learn to use these strategically to support their academic growth.

Upon these foundations, educators can look to provide intermediate-level 'broadening and deepening' learning opportunities such as work integrated learning or industry-led teaching, which expand students' abilities to use social networks for professional purposes. The whole-of-course progression culminates with the capstone experience, where students reconcile their learning experiences by demonstrating their capacity to apply their learning critically and creatively as they transition into the workforce. As Goodwin et al. suggest, an

FUTURE CONNECTIONS

overarching whole-of-course process would require a carefully structured long-view toward curriculum design, with buy-in among all academics involved.

Scaffolded and progressive learning is reliant on the provision of appropriate, just-in-time learning activities. As such, the Connectedness Learning Approach does not focus on one specific pedagogy, but rather offers a suite of pedagogic approaches, each with different strengths, that can be used in concert to guide students' learning. Which pedagogies are used is dependent upon a number of individual learner, contextual, and disciplinary factors, and the four pedagogic chapters offer examples of how these approaches can be tailored to the individual context. Using a variety of pedagogies to thread connectedness learning throughout a whole degree supports students in realising the value of social networks and enables them to use their skills progressively to build and utilise their professional connections. Examining the outcomes for high school students who participated in a co-curricular social entrepreneurship program, Kerr, Wright & Barraud conclude that "students' connectedness capabilities were not developed from participation in one specific activity, but from a culmination of the learning experiences provided by the new, complex learning ecosystem."

Students also require access to the tools necessary to put their learning into practice. A common theme among the earlier chapters was the value of LinkedIn as a pedagogic tool. For many, LinkedIn is a pivotal means by which professionals can connect with others, as well as a means to develop connected professional identities. However, Bedford and Bell argue that just as a one size does not fit all with choice of pedagogic approaches, students should also be supported to engage with a 'wide range of technologies, media, tools and platforms to learn, create and connect with others, both within and beyond the university'. Using such tools does of course necessitate a consideration of the ethical and privacy implications associated with their use, but also the provision of professional learning and

FUTURE CONNECTIONS

capacity building initiatives for staff to support them in adopting new tools, adapting new pedagogic approaches, engaging with industry, and leading connectedness learning approaches. With any alternative approach to learning, Radoll et al. note that teaching staff will require clear training and guidance in making the transition, and undoubtedly this will need to be accompanied by clear messaging from university leaders which explains the value and purpose of connectedness learning.

Consistent with the guiding principle that ‘learning should be authentic, occurring in real professional contexts and involving professional activities and interactions with professionals’ the pedagogic chapters in this volume demonstrated the importance of authentic learning experiences in helping students translate and apply their knowledge outside of the university environment. The value of WIL activities in enhancing students’ employability skills is well documented, and Goodwin et al. recommend that these experiences continue to be employed as a means of extending students’ professional networks and connectedness capabilities. In their chapter, the authors suggest that while key capabilities of ‘*growing connections*’, ‘*working with connections*’ and ‘*developing social literacy*’ could potentially be achieved in simulated learning environments, ‘*strengthening and maintaining connections*’ and ‘*building a connected identity*’ require authentic engagement with industry and community partners to be fully realised. In an era where online learning is ubiquitous, and universities are developing digital campuses and delivering fully-online programs, one might ask how learning that best occurs through face-to-face interaction with others (such as through WIL in the workplace, or strengthening connections through close collaborative projects) might be achieved? Through seeking increased efficiency of teaching and flexibility of delivery for learners, are we inadvertently increasing their isolation and limiting the development of a key set of capabilities?

FUTURE CONNECTIONS

Each chapter in this volume has taken a differing approach to partnerships: some focused on breaking down school or disciplinary boundaries within the university to create shared and networked learning experiences; others made use of careers or employability services to support students' transition into the workforce; and several looked beyond the university entirely, establishing links with industry and community stakeholders to ensure learning experiences were authentic and appropriate. Irrespective of who these partnerships involved, the industry specific knowledge they provided was invaluable in tailoring course content to service the development of learners' connectedness capabilities. Where partnerships extended beyond the university itself, opportunities were also provided through which students could begin forming their external professional networks, establishing their identities as a 'future professional' and no longer just a 'student'.

Further, as Chapter 8 suggested, authentic learning not only relies on input from industry stakeholders, but also the use of different cultural lenses and perspectives, which engage students with diverse ideas and new contexts. With specific consideration towards Indigenous ways of learning, Radoll et al. illustrate that cultural perspectives can help students reflect on and connect up their learning experiences, situating the knowledge and skills they have learnt within the broader social and cultural context. The authors suggest that this cultural authenticity can be achieved through progressively aligning university teaching across the whole curriculum and framing this process within broader historical and contemporary cultural frameworks to forge connections between students, universities and the communities in which they operate.

<a>Institutional enabling strategies: Key findings

In the final section of this volume we moved away from some of the individual approaches to connectedness learning to consider how degree programs, organisational areas

FUTURE CONNECTIONS

and universities more broadly can work to build connections and provide cohesive learning experiences which support connectedness capabilities. As Bridgstock (2019) found in her analysis of the Australian HE sector, contemporary universities are not set up in a way that supports connected and networked learning. From an internal perspective, many HE institutions are filled with staff, programs and organisational areas working in isolation to each other; there is often little interaction or collaboration occurring between these silos. Furthermore, many universities also struggle to facilitate lasting and meaningful relationships with external partners, limiting the transfer and exchange of knowledge between the institution and the wider community. Assembling a wide suite of pedagogies is a necessary step in delivering a whole-of-institution connectedness curriculum, however, in supporting and enabling this process, universities must also channel significant effort into developing and leading sustainable strategies which break down the siloes in learning and teaching to encourage greater networking and collaboration. Chapters 12 through 14 provided three examples of how higher education institutions have integrated these enabling strategies within and across differing contexts to support graduates' connectedness capabilities.

In Chapter 12, Kerr, Wright & Barraud recounted the experience of creating a university-school partnership to deliver a co-curricular social entrepreneurship program. Benefitting students and teachers alike through the connectedness opportunities that it offered, the development of a sustainable community of practice had spawned further opportunities for collaboration, both within and outside the university, exemplifying the value that connectedness could bring to an institution.

In Chapter 13, Hammer et al. created a cross-disciplinary team comprising educators and careers and employability staff to review programmatic quality in the Creative Arts and Engineering and enhance opportunities for students to connect with industry partners and promote their career identity. The authors found that intra-institutional collaboration enabled

FUTURE CONNECTIONS

educators to reframe and reconceptualise the purpose of their learning and teaching activities, creating greater connections with students, industry, community and other disciplines, and also establishing a platform for future collaboration across and beyond the institution.

Lastly, in Chapter 14, Kitto et al. considered the technological, systemic and data considerations necessary for learners and also universities to become better connected. The authors suggest that universities have the capacity to provide graduates with lifelong connected learning, outlining a series of key recommendations including organisational architecture, IT infrastructure, data portability and institutional knowledge sharing, which will allow universities to fulfil their potential, and enable graduates to connect with others across a lifetime of learning.

Based on what we have learnt from these chapters, how can universities implement a whole-of-institution approach to connectedness learning? Undoubtedly, one of the most critical antecedents for any form of connectedness learning is the development of sustainable and meaningful partnerships, both within and beyond the university. This can be a challenging endeavour in large institutional bureaucracies, where entrenched hierarchical relationships, discrete divisions, and organisational areas competing for funding and KPIs can militate against clear communication and collaboration.

The formation of intra-university partnerships, specifically cross-disciplinary teams and communities of practice is evident in several chapters in this volume, whereby academics from different programs and schools have collaborated in developing and delivering a connectedness curriculum. In Chapter 9 we saw how the integration of disciplinary perspectives towards capstone experiences was integral in developing a series of guiding principles which could be applied more broadly, across and even beyond the institution. The knowledge provided by different partners enabled the authors to identify commonalities and differences between their approaches, establishing a platform from which disciplines, schools

FUTURE CONNECTIONS

or courses can develop their own individual learning experiences, while at the same time providing learning opportunities which align with and are informed by other capstone experiences provided throughout the institution.

Another common approach to intra-university partnerships involved bringing in additional expertise, such as Careers and Employability staff, who were able to link learning and teaching approaches with graduate skill requirements. Hammer et al. found that incorporating careers and employability staff into program review and enhancement activities enabled career development activities to be more deeply embedded into program design processes. Furthermore, these staff were able to identify knowledge gaps and support faculty colleagues in areas where they lacked expertise.

As Brown et al. suggest, the creation of partnerships within the university is dependent upon all staff possessing a shared vision of students' needs and working in partnership to achieve this vision. Furthermore, Kitto et al. assert that collaborative activities also require cohesive and tightly-coupled systems which enable information to be easily transferred between organisational structures. As the authors contend, any approach to connectedness learning in which one partner maintains core responsibilities or decision-making capabilities over another is likely doomed to failure. An intra-institutional approach to learning therefore not only requires connectedness between staff to break down disciplinary siloes, but also connected systems to enable the fluent transfer of information across differing institutional partners.

The formation of sustainable, equitable partnerships with industry and community outside of the university is also an important step in providing students with authentic learning experiences. The nature of these partnerships will vary depending upon student needs and institutional context. These might involve WIL experiences with industry partners, such as the school-university social entrepreneurship program in Chapter 12, or the alignment

FUTURE CONNECTIONS

of learning and teaching with community values and perspectives, as shown in Chapter 7. What all of these partnerships require is that the institution itself has the capacity to identify and make strategic connections with those beyond its walls. As Bedford & Bell suggest, these connections create a ‘pipeline’ to support graduate employability, while simultaneously fostering “interdisciplinary discussion between key stakeholders to eliminate silos and improve efficacy and institutional uptake”.

Consistent with the enabling strategies of *identifying, making and growing strategic extra-university connections*, and *strengthening and maintaining extra-university connections*, the partnerships explored within this volume were developed on the basis of sustainable and substantive collaboration over time. This approach is not without its challenges; namely the intensive effort required to facilitate these partnerships and develop and deliver an industry relevant curriculum. However, the value that they offer in terms of institutional connectedness was evident. For students, these connections implanted their learning within the real world. Direct interactions with industry figures provided inspiration and the drive to develop their own professional identity, but crucially, also gave them their first taste of connecting with others as a professional. Goodwin et al found that networked learning not only enabled the development of disciplinary skills and industry connections, but also empowered the students in their study to independently seek out and extend their own professional communities. Inviting external stakeholders into the teaching space can also offer wider institutional benefits. As Hammer et al, found connections with industry in the two programs they reviewed had created a platform for sharing good practice, and paved the way for a ‘more systematic, whole-of-discipline approach to industry connection and career development’.

Finally, the chapters in this volume demonstrated the importance of senior leadership in enabling the implementation of connectedness learning across the institution as a whole.

FUTURE CONNECTIONS

Any effective integrated and systemic approach to connectedness learning is contingent on strategic vision and leadership. The curriculum transformation program documented in Chapter 10 acts as an example of how this might be achieved. In their chapter, Bedford and Bell outline the overarching vision, design principles, themes and transformative practices which define the University of Wollongong's approach to graduate employability. Although clearly a lengthy and resource-intensive process, a whole-of-institution approach offers a consistent and communicable way to ensure all university stakeholders work towards the same goals, while permitting sufficient diversity and innovation in practice inside programs and different disciplinary areas.

<a>Connecting with the future: Future-proofing the university through connectedness learning

In the final section of this book, we turn to consider the future forces that will shape learners, learning, teaching, and the university, and the roles that connectedness can play in supporting higher education to navigate turbulent times ahead. We ask what will the learning needs of future students be, and what will universities need to offer them in order to meet those needs? In turn, what would a genuinely connected university look like, and how would it function? How can we start to 'future proof' our universities through connectedness learning?

It is hard to know exactly what the future will bring to higher education, however, it is fair to say that we can all expect to experience significant and ongoing change. This change is already happening. Technological advancements in automation and machine learning, big data, the Internet of Things, robotics, and increases in computer processing power are key drivers, and their impacts are likely to be felt even more significantly over coming years (Hajkowicz et al., 2016; Organisation for Economic Cooperation and Development, 2017).

FUTURE CONNECTIONS

Technological progress is only one class of the change drivers that will impact the world in which our students will work and live (Bakhshi, Downing, Osborne, & Schneider, 2017).

Environmental sustainability concerns, urbanisation, increasing social inequality, demographic changes, and political instability can be added to the list of ‘mega trends’ that contribute to a complex and mutable future for us all.

These influences also ensure that the era of the single undergraduate degree, where all of the knowledge required for professional life is acquired in a single place over a single time period, is over. Lifelong learning is no longer something that is “voluntary and self-regulated” (Department of Education and Science, 2000). While significant self-regulation of learning is still required (possibly now more than ever), a lifelong commitment to the acquisition of new knowledge and capabilities has become essential. Some commentators have predicted the demise of entire occupational fields (accountants, lawyers, professional drivers, manufacturing workers), along with the creation of others (such as cybersecurity, social media marketing and robotic engineering - see Tytler et al., 2018), at a rate that has not been seen since the last Industrial Revolution. Certainly, with technological advancements and ongoing social / environmental changes, the emphases of many job roles and the tasks people will undertake inside those roles are already changing and will continue to do so (Manyika et al., 2017). Cognitively and manually routine tasks and roles are already disappearing, and people are taking on more roles that require high level and specialised knowledge and skills, and emotional intelligence. Good quality, relevant and lifelong higher education is pivotal to the future of work.

Shifting labour markets, changes to labour policy and HR practice mean that people are more likely to need to reskill, change job roles more often, and hold multiple roles, including in the so-called ‘gig’ economy. As well as being recurrently tasked with acquiring new work and acquiring the capabilities required to be successful in that work, individuals in

FUTURE CONNECTIONS

the gig economy bear much of the risk of employment and unemployment that would usually be taken on by employer firms. In order to protect themselves, they also need to learn and be prepared for changing and evolving HR practices and workforce regulations.

Ongoing higher education-based learning is increasingly central to employment and career development. It is also important to people's capacities to traverse and contribute meaningfully to an increasingly complex society. Higher education develops the capabilities that learners require in order to be informed and capable citizens, through the development of critical and digital literacies, and broader issues-based educational experiences beyond disciplinary learning. Ongoing social and environmental change means that learners benefit from continuing to be plugged in to the sensemaking and capability development facilitation that the university can provide. Learners become critically engaged 'citizen scholars', who are engaged in an ongoing way in applying their knowledge and skills for the betterment of society (Arvanitakis & Hornsby, 2016). Part of the role of the university becomes explicitly about supporting learners to make sense of, and know how to contribute to, the world over their lifespans. Connectedness learning can help them to do this.

It is clear that in the age of hyper-complexity and rapid change in which we live, there are strong positive implications for learners from ongoing access to the learning opportunities that universities can offer. As learners benefit from this learning, they contribute in a continuing way to the economy and society through their work and citizenship activities. Such a university maintains its connections with learners in a lifelong way, offering ongoing informal and formal learning opportunities to alumni, and providing ways to continue to connect inside and outside the university with researchers, teachers and learners who have access to valued and up-to-date information and capabilities. This picture is presented in striking contrast with lingering notions of Western universities as 'ivory towers', operating in a state of privileged seclusion and separation from the world.

FUTURE CONNECTIONS

The lifelong connections that the university seeks to foster are not just with its students. The connections are with a wide range of stakeholders. Thus, the university becomes a broker of learning, and hub of a global network of learners, teachers, researchers, industry and community representatives, and interested citizens who are engaged in ongoing learning and production of new knowledge, and sharing of that knowledge (Bridgstock, 2017). Rather than emphasising the static transfer of knowledge and ‘content’ in the industrial-age educational institution, in the learning broker / network hub university, the focus is on production of new knowledge through research and discovery, and also synthesis and sharing of knowledge that is relevant and useful to its networks, in dynamic and adaptable ways (Bridgstock, 2017). The university supports transformative learning of individuals and societies (Brennan, King, & Labeau, 2004), by engaging openly, and facilitating the ongoing pursuit of procedural and tacit knowledge in applied ways. People who are connected with the university learn from it and its associated network, and in turn the university and its associated network learns from them.

Barnett (2011, 2017) discusses the associated notion of the ecological university, which is engaged with deepening and widening its networks across society, a task which it performs in the interests of the world. He argues that the university is interconnected with seven ecosystems in which it is embedded: knowledge; social institutions (including politics); physical environment; economy; culture; learning; and human subjectivity. The university is influenced by, and in turn intentionally acts upon, the seven zones. Barnett argues that these ecosystems are not separate from the ecological university, but that they all flow into one another. He further suggests that even now when universities maintain some level of perceived independence from their ecosystems, that these still form a ‘deep ecology’ of the university that can be brought to the surface and strengthened through visioning, strategy and intentional networking activity.

FUTURE CONNECTIONS

It is relatively easy to propose a more connected university, and quite another matter to achieve it. Universities maintain the same basic organisational structures as their early Industrial Age counterparts. To a great extent they maintain strong institutional boundaries in order to manage risk and protect themselves from outside influences. These practices lead them to sacrifice agility and responsiveness (Doz & Kosonen, 2008). As Gibb and Haskins (2014) suggest, to achieve the kinds of connected dynamism and agility required as a future-capable institution, the university must be porous to learning from stakeholders at all levels of the organisation. It does this by creating a shared culture of trust and learning. Second, it must facilitate a flow of knowledge gained across horizontal and vertical boundaries of the university. This book starts to suggest how we might get there from here, but there is a significant journey ahead of us.

The overarching vision and direction around the connected university's ecosystems and enabling strategies and structures are set by the top level of the university (Gibb & Haskins, 2014), which undertakes a strategic assessment of the stakeholder environment and brings forward stakeholder futures and visions to identify ways forward together. This is how the top-level research, academic, and engagement priorities are determined. Such strategies are already emerging among universities, with higher education institutions building distinctive profiles and differentiating themselves on the basis of regional, community, international, pedagogic or research areas of focus. In the connected university, central units of the organisation perform integration, co-ordination and communication functions. Heads of School and Faculty Leaders are responsible for communication of top-level priorities, innovation scaling, support of risk-taking, formation of high-level strategic partnerships, and breaking down of silos and organisational boundaries in order to promote information and knowledge sharing.

FUTURE CONNECTIONS

The connected university also demands decentralisation of the ability and the freedom and support for staff inside Schools to reach out to stakeholders and work / learn with them, while their activities are co-ordinated and integrated across the institution. Academics may collaborate with engagement professionals employed by the university in order to facilitate connections with stakeholders. This distributed model is advantageous because of the demonstrated learning and innovation effects of informal networks and social interactions (Obstfeld, 2005). It also enhances the agility of the institution, and its capacity to learn from both within and outside organisational boundaries. Through a combination of top level strategic-enabling, distributed-engaged, and vertically integrated connectedness processes, the university can influence our society, culture and the economy in meaningful and important ways.

This book started with an affirmation of the individual value of learning from, and with, others to all aspects of life and career development. It finishes the same way, but at a grander scale. Just as students make meaning of what they are learning and learn who they are and what they can contribute to the world through connectedness, so, too, do our educational institutions, our businesses, our communities, and indeed our governments. Through fostering diverse connections and learning with these connections, we develop social cohesion. Social cohesion creates a sense of belonging and trust and works towards the wellbeing of all. In this way, connectedness learning may be one key way that we can ensure that we strengthen our society and foster our collective capability to navigate global challenges ahead.

<a>References

- Arvanitakis, J., & Hornsby, D. J. (2016). *Universities, the citizen scholar and the future of higher education*. New York, NY: Palgrave Macmillan.
- Bakhshi, H., Downing, J., Osborne, M. A., & Schneider, P. (2017). *The future of skills: Employment in 2030*. London: Pearson and NESTA.
- Barnett, R. (2011). The coming of the ecological university. *Oxford Review of Education*, 37(4), 439-455.
- Barnett, R. (2017). *The ecological university: A feasible utopia*. London: Routledge.
- Bedford, S., & Bell, K. (2019). Curriculum transformation for graduate connectedness and employability: Perspectives from the University of Wollongong. In R. Bridgstock & N. Tippett (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Brennan, J., King, R., & Labeau, Y. (2004). *The role of universities in the transformation of societies: An international research project*. London: Association of Commonwealth Universities.
- Bridgstock, R. (2017). The university and the knowledge network: A new educational model for 21st century learning and employability. In M. Tomlinson (Ed.), *Graduate Employability in Context: Research, Theory and Debate*. London: Palgrave-MacMillan
- Bridgstock, R. (2019). *Graduate Employability 2.0: Enhancing the Connectedness of Learners, Teachers and Higher Education Institutions. Final Report of the National Senior Teaching Fellowship*. Canberra: Department of Education and Training.
- Bridgstock, R., Jackson, D., Lloyd, K., & Tofa, M. (2019). Social connectedness and graduate employability: Exploring the professional networks of graduates from Business and Creative Industries. In R. Bridgstock & N. Tippett (Eds.), *Higher*

Education and the Future of Graduate Employability: A Connectedness Learning Approach. Cheltenham, UK: Edward Elgar

Brown, J. L., Healy, M., Lexis, L., & Julien, B. (2019). Connectedness learning in the life sciences: LinkedIn as an assessment task for employability and career exploration. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar

de Villiers Scheepers, M. J., McIntyre, J., Crimmins, G., & English, P. (2019).

Connectedness capabilities of non-traditional students: Pedagogical implications. In

R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate*

Employability: A Connectedness Learning Approach. Cheltenham, UK: Edward Elgar

Department of Education and Science. (2000). *Learning for life: Paper on adult education*.

Dublin: Stationery Office.

Doz, Y. L., & Kosonen, M. (2008). *Fast strategy: How strategic agility will help you stay ahead of the game*. London: Wharton School Publishing.

Gibb, A. A., & Haskins, G. (2014). The university of the future: An entrepreneurial stakeholder learning organization? . In A. Fayolle & D. T. Redford (Eds.), *Handbook on the Entrepreneurial University* (pp. 25-63). Cheltenham, UK: Edward Elgar

Goodwin, M., Are, K., Schmitz, M., Goodwin-Hawkins, B., Aayeshah, W., & Lakey, E.

(2019). The capstone experience: Five principles for a connected curriculum. In R.

Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate*

Employability: A Connectedness Learning Approach. Cheltenham, UK: Edward Elgar

Hajkowicz, S., Reeson, A., Rudd, L., Bratanova, A., Hodggers, L., Mason, C., & Boughen, N.

(2016). *Tomorrow's digitally enabled workforce: Megatrends and scenarios for jobs*

and employment in Australia over the coming twenty years. Brisbane:

Commonwealth Scientific and Industrial Research Organisation.

- Hammer, S., Ayriss, P., Basson, M., Batorowicz, B., Devine, J., Forbes, M., . . . Wade, B. (2019). Integrating connectedness learning into institutional program review processes in an Australian regional university. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Holmes, L. (2013). Competing perspectives on graduate employability: possession, position or process? *Studies in Higher Education*, 38(4), 538-554.
- Jackson, D. (2017). Developing pre-professional identity in undergraduates through work-integrated learning. *Higher Education*, 74(5), 833-853.
- Kerr, J., Wright, N., & Barraud, T. (2019). Developing a connected learning community for social entrepreneurship through university and high school collaboration. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Kitto, K., O'Hara, J., Philips, M., Gardiner, G., Ghodrati, M., & Buckingham Shum, S. (2019). The connected university: Connectedness learning across a lifetime. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Lombardi, M. M. (2007). Authentic learning for the 21st century: An overview. *Educause Learning Initiative*, 1(2007), 1-12.
- Lupton, M., Oddone, K., & Dreamson, N. (2019). Students' professional digital identities. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P., . . . Sanghvi, S. (2017). *Jobs lost, jobs gained: Workforce transitions in a time of automation*. San Francisco, CA: McKinsey Global Institute.

FUTURE CONNECTIONS

- Obstfeld, D. (2005). Social networks, the tertius iungens orientation, and involvement in innovation. *Administrative Science Quarterly*, 50(1), 100-130.
- Organisation for Economic Cooperation and Development. (2017). *Future of work and skills*. Paper presented at the 2nd meeting of the G20 Employment Working Group, Hamburg, Germany.
- Radoll, P., Copeman, P., Heyes, S., Walsh, M., Byrnand, S., & Egloff, B. (2019). Indigenous perspectives on connected and networked learning: Towards holistic connectedness pedagogies. In R. Bridgstock & N. Tippet (Eds.), *Higher Education and the Future of Graduate Employability: A Connectedness Learning Approach*. Cheltenham, UK: Edward Elgar
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education+Training*, 59(4), 338-352.
- Tytler, R., Bridgstock, R., White, P., Mather, D., McCandles, T., & Grant-Iramu, M. (2018). *100 jobs of the future*. Melbourne: Deakin University.
- Yunkaporta, T. (2009). *Aboriginal pedagogies at the cultural interface* Doctor of Education PhD thesis, James Cook University, Townsville, Qld.