The Capstone Experience: 

Five principles for a connected curriculum

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Introduction

The Arts Capstone Experience Project at the University of Melbourne was developed around five key design principles, that were our blueprint for reinterpreting the capstone as a sequence of authentic, reflective, creative, celebratory and networked experiences. We arrived at these principles by means of reflective practice over time rather than in advance as a prescriptive roadmap. Our priorities are also informed by the Faculty of Art’s strategic emphasis on active learning, critical thinking and leadership, and, more recently, student wellbeing (The University of Melbourne, 2015, 2017). Capstone experiences can be the most challenging yet satisfying experiences in a degree because performance is tested not only before teaching staff and peers but also in public spheres, both familiar and newly acquired. Students reaching the capstone are expected to have a solid theoretical grasp of their chosen
discipline and, ideally, to be capable of using their learning critically and creatively as they move into new realms (Houghton & Stewart, 2017; Hwang, Hsiung, Chen, & Lai, 2017).

A practical approach

In one sense, the ambition and distinctive remit of a connected capstone does make for shared challenges in design and practice: incorporating ‘non-traditional’ elements into curricula has implications for professional development, workload, logistics, and budget that are comparable across most disciplines (e.g. Lee & Loton, 2017). Capstones can also raise generalisable questions about the student experience and the achievement of learning outcomes (e.g. Fernandez, 2006). However, factors such as varying institutional policies (Lee & Loton, 2017), professional accreditation requirements (Rowles, Koch, Hundley, & Hamilton, 2004) and the wealth of disciplinary diversity in contemporary universities clearly call for capstones that are tailored, not templated.

The wide applicability of an Arts education as an employability hazard is a well-documented myth (Olejarz, 2017; Shulman, 2017) but HASS capstones are, too often, about students becoming disciplined, which exacerbates this perception. We would suggest that certain disciplines’ high engagement with capstone design and evaluation emerges from their strong awareness of professional connections: Finance and Engineering, for example (Schedin & Hassan, 2014), interface with ‘real world’ careers in ways that Philosophy and English Literature, traditionally at least, do not. Accordingly, HASS disciplines typically appear in capstone literature through their more professionally-oriented programs, such as Journalism (Cullen, 2017; Haney, 2017). To be sure, many of the capstone’s concerns are also found in the growing field of Work Integrated Learning (WIL) (Smith, 2012), where traditional academic learning is integrated into workplace exposure (von Treuer, Sturre,
Keele, & McLeod, 2010) and on-campus employment-related experiences (Fleischmann, 2015). WIL activities have produced documented evidence of improvement in student capacities including problem solving, team work, communication, information literacy and professionalism (Coll et al., 2009) – all skills recognised for their potential to increase graduate employability (Cleary, Flynn, Thomasson, Alexander, & McDonald, 2007). WIL is therefore not out of place in units designed to focus students’ attentions on the cumulative usefulness of their learning to workplace futures.

We argue, however, that the concentration of capstone literature in professionally-oriented disciplines is responsible for an overly narrow emphasis on WIL, employability and market-responsiveness. This developmental bias has skewed the potential for capstones to address students’ progress more holistically. It fails to consider learning as a social activity, which has strong implications for learning outcomes in a liberal arts education (Matthews, Andrews, & Adams, 2011; Williamson & Nodder, 2002), just as the advent of personal learning networks have become an important part of student and civic engagement within the networked commons (Rheingold, 2018).

The relative absence of HASS from conversations around capstones is a missed opportunity for the conceptual development of capstones as enablers of socially, culturally and psychologically well-integrated people, rather than employees. And it is here, that the concept of connectedness can help. (Bridgstock & Tippett, 2019).

The Connectedness Learning Approach affirms ‘the ability to harness one’s skills, knowledge and other attributes’ and redirect them to multiple ends and within manifold networks throughout a life. This also acknowledges that learning is only partly derived from exposure to workplaces. It suggests that the more transformative learning perhaps results from students’ ability to draw acquired knowledge and skills into making sense of the industrial, academic and interpersonal networks students navigate. That is, into constructing
networks that are meaningfully interconnected with each other. Therefore, the underlying metaphor for the capstone experience is not completion but connection.

The Design Approach

In developing a research-led approach we drew on best practice in, among other areas, ‘connected learning’ (e.g. Ito et al., 2014), ‘connective learning’ (e.g. Siemens, 2005) and ‘autonomous motivation’ (Baik & Larcombe, 2016). However, when consolidating our project that sought to identify and leverage the specific kinds of connections-for-learning that capstones afford we found practical synergies with the Connectedness Learning Approach developed by Ruth Bridgstock (Bridgstock & Tippett, 2019). It spoke to and expanded our interpretation of the capstone’s potential utility as a site for learning from connections as well as for learning to connect. Bridgstock’s approach provided a vocabulary with which to reflect on our own experiences of flows and blockage in capstone development and to refine the means by which we evaluate and re-design capstone curriculum going forward.

Five Principles for a Connected Curriculum

1. Authenticity

First, in order for a capstone unit to enable students to recognise their connection to networks and, in turn, their networks’ interconnectedness, learning activities should strive to be authentic: interaction should occur in real rather than simulated contexts and involve genuine social and professional partners. Strengthening connections – and maintaining them – beyond university study can only be achieved if connections with genuine partners are made; students build their identity as connected to industry and
community when they discover in practice the authentic relevance of these partnerships to students’ lives.

The Connectedness Learning Approach (Bridgstock, 2019) theorises five ‘connectedness capabilities’ as central to students’ ability to capitalise on their social networks for career-building purposes. We observed that whereas ‘growing connections’, ‘working with connections’ and ‘developing social literacy’ are skill sets that can arguably be achieved in simulated environments, two of the five capabilities demanded authenticity: ‘strengthening and maintaining connections’ beyond university study can only be achieved if connections with genuine partners are made and ‘building a connected identity’ can only be the result of discovering in practice the authentic relevance of these partnerships to students’ identities. We saw that the capstone, as the culmination of a course of study, was the appropriate forum for embedding authentic experiences in support of these latter two capabilities.

2. Reflection

Experiences of connection in a capstone should be reflective, providing avenues for students to reflect on their place within networks, on their existing contribution to networks and on their potential ongoing value to networks. Constructivist theories of learning nominate reflection as a primary vehicle to lifelong learning and the development of learner identity (Bozalek & Zembylas, 2017; Walker, Boud, & Keogh, 1985). Thus, in positioning reflection as a principle of capstone development, we are emphasising the development of a connected identity. Several of the pedagogies observed in the literature also implicitly call on student reflection – such as student co-design of connective experiences, student partnerships and alumni
engagement. Therefore, constructivist theories of learning indicate reflection as a primary vehicle to lifelong learning.

3. **Creativity**

Given that capstones mark the maximal point in the acquisition of a degree’s theoretical and technical skills, capstone students are more likely to be able to deploy their cognitive and critical awareness in innovative ways if they can apply discipline knowledge in acts of *doing*, rather than isolated studious expressions of a discipline’s knowledge. This reinforced the need for students’ **creative** expressions of their learning to find authentic audiences and the need for institutional strategies that ensured affirming outcomes for student work.

4. **Celebration**

Given that capstones mark the maximal point in the acquisition of a degree’s theoretical and technical skills, capstone students are more likely to be able to deploy their cognitive and critical awareness in innovative ways if such a milestone is celebrated. This is likely to be celebrated by final-year students if they see their new capacities as valued by extended, post-study networks (ie. industry, community, government partners as well as peer and family). Students’ creative expressions of their learning must therefore find authentic audiences and institutional strategies must ensure affirming outcomes for student work.

5. **Networking**

Finally, and perhaps most obviously, we affirmed as our fifth design principle that capstones should be socially and industrially networked – that core student activity
should build and strengthen new networks, identify and maintain existing networks and meaningfully engage with nodes along multiple networks, within the one unit. The value of networks underpins a connected curriculum approach if we prioritise student’s ability to creatively use their disciplinary skills to contribute to responsive and authentic social and industrial partnerships. If managed professionally by staff in conjunction with industry and community partners students will come to value networks as resources that can support their movement between worlds of work and study. Core student activity should therefore build and strengthen new networks, identify and maintain existing networks and meaningfully engage with nodes along multiple networks, within the one subject.

Tactics for a connected capstone experience

The five principles therefore provide a conceptual framework for curriculum design in relation to capstone units that seeks to overcome the limitations inherent in the WIL-focussed capstone model discussed at the beginning of this chapter. When considering the practicalities of classroom delivery, it is worth reiterating some of the practical ways this can be achieved:

- Clearly articulate to students how the enterprise of research and critical thinking and the building of academic networks link in practical terms with career pathways, industry expectations and professional networks;
- Talk about the desired outcomes at the very start of the unit - what are we here to achieve? Explain the value of incorporating a public facing launch event to accompany any such outcome.
• Make sure any such event engages both industry (possible employers) and public (new audiences) giving students a sense of professional accomplishment and individual exposure;

• Classroom discourse should attempt to synthesise, wherever possible, academic requirements with industry expectations in relation to project outcomes and event design;

• Build production milestones into the classroom schedule that lead directly towards the final outcome both in terms of the individual student and the broader collaborative endeavour;

• Structure each session in the service of constructive outcomes, to train focus on the “doing” part of the project: discussing/ planning/ researching/ making/ managing/ communicating/ resourcing/ networking, etc;

• Consider facilitating collaboration between students from more than one discipline. The interdisciplinary benefits are amplified and the experience more realistic if collaboration involves complementary assessment and/or project provision from outside of the discipline;

• Consider devoting a portion of the curriculum to building professional attributes: portfolio preparation, professional communication methods, managing interdisciplinarity, structuring a career and entrepreneurship;

• Build in opportunities for student reflection on their own process and its outcomes, as well as for student feedback on the unit’s pertinence to their networks.

Final Observations

We would like to see a shift in HASS disciplines where connectedness skills are introduced in earlier years so that a connected capstone is scaffolded by the structure of the degree and students are supported to develop relevant skills over time (Healey, Lannin, Stibbe, &
This relies on careful, long-view curriculum design; on academic practitioners placing value on the pedagogical principles we have outlined here; and on revisiting the intended graduate attributes and learning outcomes of capstone units with a more nuanced lens. This lens should of course emphasise an industrial perspective but also remain cognisant of the expectations of a HASS graduate as a well-rounded community engaged citizen scholar (Arvanitakis & Hornsby, 2016; Watson, 2008).

To support the work of their staff, universities need to build reliable and enduring partnerships with industry, government and community to develop projects that are practical, substantive and sustainable over time. Where practical, external collaborators should also be involved in the teaching space – not just as guest lectures or practical workshop training, but also in the evaluation of project milestones, participating in assessment moderation and contributing to feedback. Universities must also incentivise professional development and capacity-building initiatives: often, we have observed reluctance to use alternative forms of assessment – such as video essays, timelines, social media campaigns, podcasts, infographics or annotated media – due to the perceived need for extra support and a persistent scepticism regarding their academic merit (Timmis, Broadfoot, Sutherland, & Oldfield, 2016).

Designing alternative assessment tasks that depend on technology integration can be unfamiliar to a seasoned academic, as may be new teaching techniques involving a mix of seemingly exotic software or conventional equipment used in more sophisticated ways.

The benefits to student learning and to students’ ongoing holistic development, however, are immeasurable. The more a student interfaces with industry and community, the more genuine a student feels their learning experience has been. This can have an empowering influence on the cohort at the culmination of study – a potentially challenging time. Therefore, when we think about designing capstone experiences, we should not only seek to leverage the key design principles detailed here – authenticity, reflection, creativity,
celebration and networking – but we should also find ways to harness these principles to provide practical guidelines that can alleviate student anxiety around career trajectories and foster a sense of professional connectedness and personal accomplishment.

Amended Bibliography


