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Resilience Building in Graduating Students: The Role of Scalable Communities of Practice

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Introduction

The emergence of COVID-19 in Australia in January 2020 signalled a significant change to the delivery of teaching by staff at UNSW School of Art & Design. In a fundamentally hands-on teaching environment, it seemed inconceivable that studio-based design practice could be conducted in anything other than a face-to-face modality. The conversation, when it did begin to emerge, was focussed on which elements of the learning experience could translate to the online space should that need arise. Barely halfway into Term 1 of teaching, a pivot to fully online delivery became necessary within a ten-day window—an experience that was shared by educators across the country and the world. The devastating effects of COVID-19 have been wide reaching for arts education and the creative industries generally. Over the course of 2020 and 2021, just one third of teaching weeks were delivered on our campus in workshops and studios. As co-convenors of the final year Major Project in the significantly revised Design Program at UNSW School of Art & Design, we now question the impact that a lack of intensive studio and material interaction in the degree will have on cohorts into the future. This remains to be seen. As we look to the next iterations of the course in 2022 and 2023, understanding how student skills and approaches to design problem-solving have been shaped by these strange times and circumstances will be an important conversation.

The Bachelor of Design is a three-year program with the option to undertake an additional one-year Honours degree. The program offers six disciplinary specialisations—Graphics, Object, Textiles, Interaction, Experience and 3D Visualisation, of which students choose four disciplines as an introduction in their first year, and then extend two through to the completion of their degree. Along with a strong focus on contextual studies to support these specialisations, the degree is structured around a core stream of six Design Studios, in which the students learn and apply foundational design principles, industry practices, practice methodologies

and skills in interdisciplinarity. These core studios are formulated to develop designerly thinking, high-level skills in collaboration, giving and receiving constructive critique, ethical practice, and the graduate capabilities necessary for contemporary design practice. This paper reflects on the final two of these studios, known as Design Studio 5 and 6, which combine to create the student's graduating major project, and in particular our experimentation with building student resilience through scalable Communities of Practice.

The Integrated Curriculum Framework that UNSW has developed to underpin program learning outcomes asks that we aspire to support our students in becoming 'globally focussed graduates who are rigorous scholars, capable of leadership and professional practice in an international community.' (UNSW n.d.). As we will discuss, Design Studio 5 and 6 specifically speak to these aspirations by embedding Communities of Practice in the courses with the view to mirroring the networks found in industry. These build student confidence as independent and lifelong learners capable of interacting in a broad range of collaborative contexts. Further to this, criticality and reflection underpin the students' self-directed projects and practices which must thematically speak to the broad framework of Ethics in Design. As a capstone project, these advanced studios complete the students' program and speak directly to UNSW Graduate Capabilities.

Resilience and Relationality

While resilience and scalable Communities of Practice sat at the core of our design of these capstone courses, the disconnection and disruption of the COVID-19 pandemic accelerated the prototype development of these initiatives and magnified their effectiveness in ways we did not foresee. By using the term *resilience*, we refer to the ability to adapt, recover and, if necessary, change trajectory throughout the course of a design project or design process. This is not a new concept to design education and goes hand in hand with iterating in the 'unknown' spaces of design practice. By unknown we mean the exploratory and creative phases where the nature of the problem is being defined and refined and therefore the problem and solution can be considered as evolving simultaneously (Dorst and Cross, 2001). More than this however, we see resilience in design practice as the ability to continuously respond to new and shifting parameters, reframing them as purposeful and productive for the process, even when they are as dramatic and unrelenting as a global pandemic. We see the support and scaffolding provided by Communities of Practice (CoPs) as essential to this, where CoPs are

defined as 'groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly' (Wegner-Traynor 2004, p.1) While the multiple, scalable and networked CoPs we will map in this paper were designed around tangible categories of disciplinary specialisation and studio groups, these communities taught the students far more by way of resilience in *being* and *becoming* design practitioners together.

We propose that at the core of the resilience and responsiveness required from current design graduates is the ability to build relationality and seek new perspectives through a multiplicity of interactions. We therefore sought to develop the student's capacity to create connections and define the relationships within their cohort through a spirit of generosity. This approach framed the outcomes of all the students within the cohort as a collective responsibility, rather than the traditionally inward focus on individual ambitions. Lisa Grocott, Kate McEntee, Kathryn Coleman and Roger Manix have previously outlined a pedagogical approach to modelling and scaffolding risk-taking in design students, proposing that the focus of design has shifted from making things to 'making *sense*, making *possible*, making *right*, and making *happen*' (Grocott et al. 2019, p. 100). This extends the now over-used trope of designers as system and service thinkers, to designers needing to *be* a certain way in the world, to effectively change and imagine new futures.

While Grocott et al. addressed this through risk-taking, we aimed to address this through relationality. In using the term relationality, we refer to the necessary advanced interpersonal skills of a designer in relating to and working with others. This occurs on a multitude of scales from the one-to-one exchange through to complex interdisciplinary groups and the myriad variations in-between. Pragmatically, we sought to build these qualities in the student cohort through the following objectives. Firstly, we focussed on breaking down patterns of one-on-one feedback with lecturers which students so often come to rely upon for project progression. Secondly, we sought to develop students' abilities and confidence in giving and receiving constructive feedback. Finally, we embedded processes of reflective practice beyond the tangible practices of making in design by asking them to reflect on their personal approaches to being, engaging, interacting and relating within the cohort.

Mapping Pedagogies

Reflection through mapping was an overarching strategy throughout the course

structure and was explored both through individual student projects and the ethos of the course. This was especially important as a methodology for planning, and for communicating our pedagogical approaches transparently to students. As an example, the following diagram was developed during the first delivery of the course in response to student feedback (Figure 1). The diagram was presented as a linear animation and used as a prompt for locating and discussing key project milestones with students.

As illustrated in Figure 1, the course commences with a rapid reflective mapping activity in which students visualise the various parts of their degree as an interconnected ecosystem within an interdisciplinary framework. This activity draws out important connections for the students and communicates nuanced data to the teaching staff that underpins the formation of the networked and scalable CoPs. To further connect interdisciplinarity to materiality, the final layer of this reflective mapping activity asked students to iterate their maps in a physical or digital material form in a short time frame. This process revealed the breadth of material practices of the cohort, confirming the critical need for the supportive CoPs that were planned. As an example of this breadth, some practice maps were relatively conventional in form, using recognisable data visualisation techniques; however, extended material responses included the development of the maps as woven objects, sculptural ceramic pieces, and complex hand-rendered illustrations, to name a few. The results of the activity therefore became a visual indicator of the disciplinary strengths of the students and shaped the potential CoPs in more nuanced ways. Furthermore, this enabled our interdisciplinary lecturing staff to quickly understand the wide range of specialisations within the studio groups, and therefore the unique and diverse levels of support that would be required.

DDES 3100 DESIGN STUDIO 5

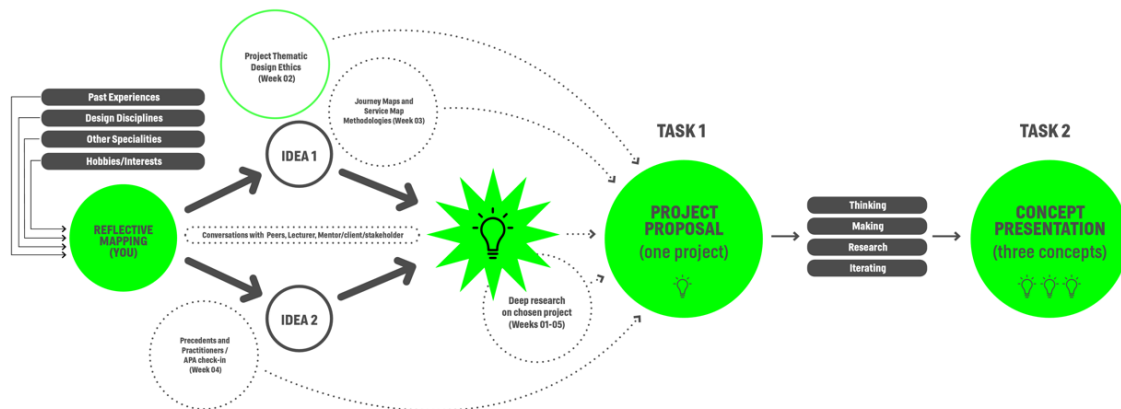


Figure 1: Still image of animated mapping used to discuss the course structure with students. Carly Vickers and Stephen Goddard, 2021

Mapping Communities of Practice

The theme for the 2021 ACUADS conference at which this paper was first presented made reference to Leonhard Euler's 'Seven Bridges of Königsberg' (ACUADS 2021). For us, this reference evoked John Wood's deployment of Euler's tetrahedron-like network in which the sum of the potential interactions is greater than the number of agents – that is, for any four agents there is the possibility of six interactions, which he describes as *Quadratic Consciousness* (Wood n.d.). This theory can be applied to explain an exponential increase in the number of agents and therefore interactions, forming a background theory for the collective design wisdom of CoPs for student cohorts. The map below describes the application of this theory—at five players the interactions between individual students have doubled relative to the number of agents, and at seven agents the interactions have tripled (Figure 2). Complexity increases when the agents are considered within their variety of relationships and roles, including students, peers, tutors, convenors, mentors, and studio support. This theory when mapped can demonstrate for students the pedagogical philosophy behind CoPs and therefore encourage self-initiation and engagement.



Figure 2: A greater number or potential interactions between students as the number of agents increases. Carly Vickers and Stephen Goddard, 2021.

This system of scalable communities—which we designed to mirror industry practice scenarios such as design studio team interactions, art director feedback, pin-up critiques, client relationships and experimental practice—provided students with the contexts to engage and reflect upon their own ways of relating as designers. The CoPs were achieved through a series of facilitated relationships within the Major Project cohort, with the individual student at the centre (Figures 3 and 4). Firstly, each student was asked to establish a ‘buddy’ within their studio class which encouraged accountability through a learning partner. Learning partners attended each other’s feedback sessions, assisted with missed studio work, and understood their partner’s project at a detailed level. Building on this, we collaborated with students to establish close groups of four, which they would join for studio activities. These groups simulated working in a small industry studio and were used for learning and practicing new design processes and methods. When learning in these groups we purposefully provided new and simulated design problems for skills development, encouraging a move away from fixating on individual and personal design projects when in group contexts.

With just the buddy and the group of four, staff then had modules of two and four students to work with in different combinations throughout the course – for example,

three groups of four would comprise half the studio group when organising students for certain activities. Students were then supported through the traditional relationship with their lecturer, who met with them in groups of two, four or combinations of this. Furthermore, activities were designed to encourage strong relationships across the studio groups of 24, such as pin-ups and frequent peer critique. This ensured that students were invested in all the projects within their studio group, and therefore shared knowledge and learnings across the materiality, processes, and ethical practices of 23 other design projects.

To connect students across the cohort, the disciplinary CoPs were established online using the Microsoft Teams platform. In these virtual spaces, students met and shared knowledge specific to their material or disciplinary space, such as textile design, graphic design and experience design. Staff were assigned to the online CoPs that reflected their own expertise in order to facilitate these communities throughout the week. Further relationships were formed as part of the CoPs model, including the establishment of a mentor, client or stakeholder from industry for every student, and a strong interaction with the Making Centre staff on campus – all with the view to building student resilience in seeking assistance, advice, and collaborative experience through diverse relationships. Finally, relationships were built across the cohort, and across the studio modalities of face-to-face classes and online classes through cohort question times, where studio groups met simultaneously through Microsoft Teams at strategic moments within the curriculum design.

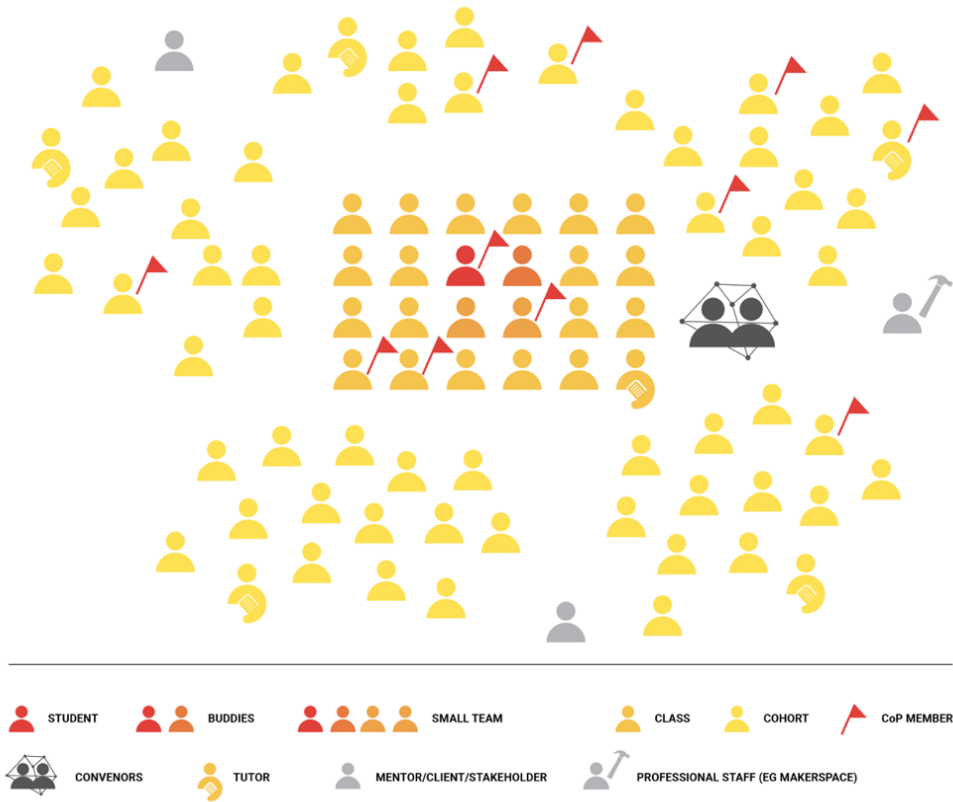


Figure 3: The deployment of the prototype communities of practice.
 Carly Vickers and Stephen Goddard, 2021.

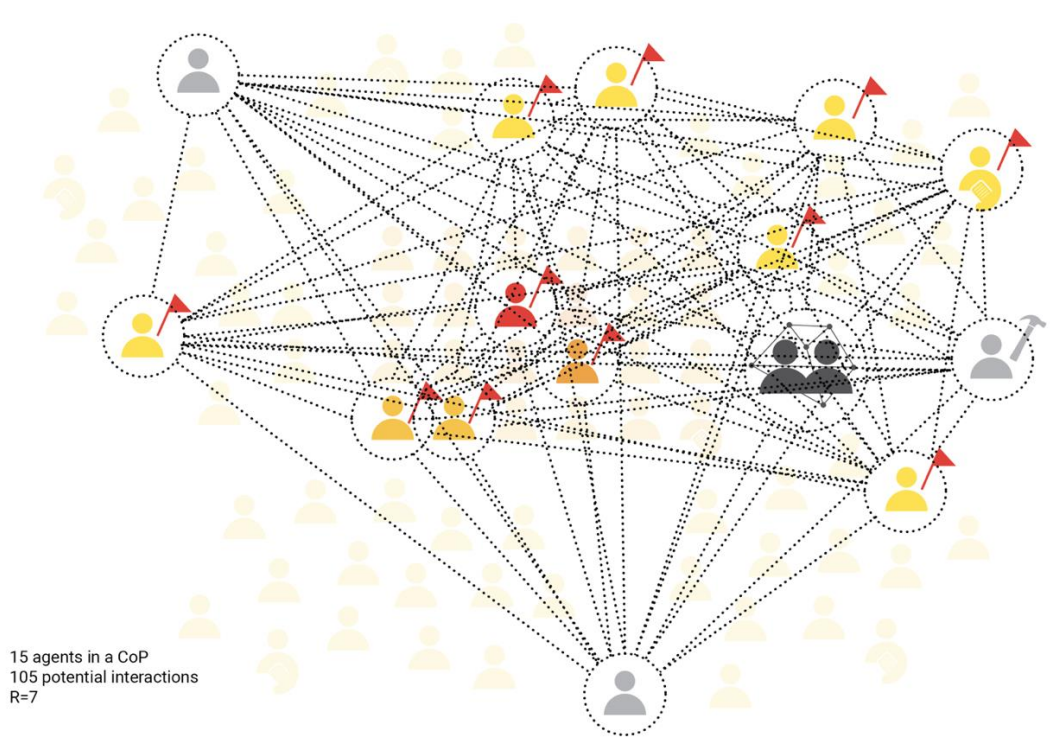


Figure 4: Example of potential interactions for a student in a CoP of 15 agents.
 Carly Vickers and Stephen Goddard, 2021.

Our method for both the Communities of Practice and cohort question times was to use hybrid teaching technology in real-time to connect face-to-face groups in different teaching spaces with online classes accessing the courses remotely. Our early prototypes of the technology enabling these hybrid teaching moments revealed the importance of implementing custom teaching kits, with appropriate Jabra office speakerphones to minimise the audio disruption that multiple devices produce in spaces of close proximity. This technical iteration will be the focus of our attention moving forward, as maintaining a cohesive cohort across locations is key to the success of the CoPs and the resilience we are trying to promote, alongside our own adaptability in times of unpredictable lockdowns.

Conclusion

Ultimately, this Communities of Practice prototype sought to demonstrate to students the relational skills at the heart of design practice, mirroring the industry evolution away from the metaphor of the designer as hero or white knight and towards metaphors of collaborator and facilitator, as discussed by Melehat Nil Gulari (2015). This was built upon encouraging students to move through the course in a spirit of generosity and collegiality with their peers, and for the benefit of all student projects. Students responded positively to the greater relationality built into the course, noting the changed emphasis of the course from an introspective project experience to a networked system. As this was a pilot and deployed in extraordinary times, given the societal effects of COVID-19, we acknowledge the need to iterate the systems we established. As previously outlined, this will rely on more considered embedding of the system through the available technology, and the ongoing onboarding and support of teaching staff charged with implementation across the studio groups and greater cohort.

Our approach to the Major Project course design required the student cohort to develop increased interpersonal skills, demonstrate self-initiation in project work, increase their reliance on peer critique, and engage in deep reflection on their ways of relating as designers. Student feedback suggested that this was a difficult transition; however, their comments recognised the value of these skills for industry readiness. This first iteration of the course therefore seeded new approaches to student relationality, online delivery, and hybrid modes of interaction which we are now socialising as a potential method across an expanded range of courses at UNSW School of Art & Design.

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