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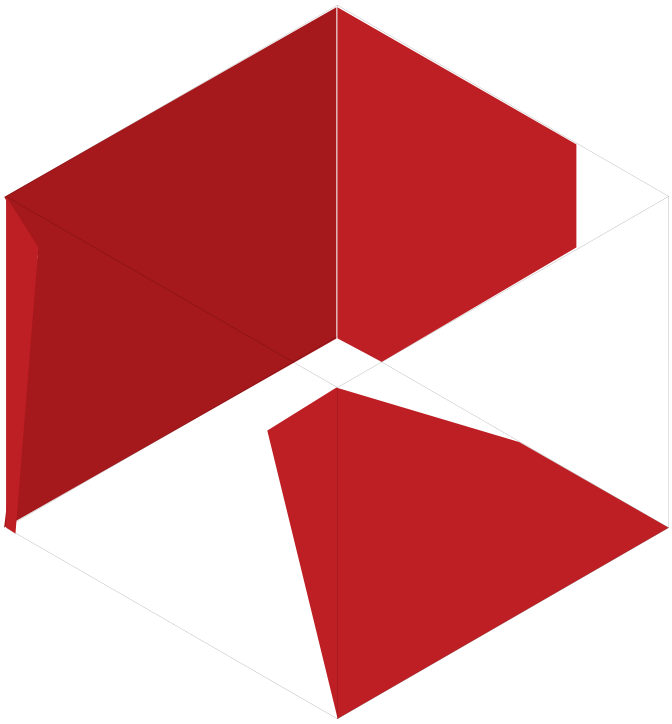

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Down the Rabbit Hole we go: evaluating the impacts of a situated design pedagogy

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Abstract: This paper reflects on the University of Western Sydney's Bachelor of Design teaching studio, officially recognised as the Rabbit Hole, and its impact on student learning. The award-winning Rabbit Hole's learning environment incorporates participatory design methods and a work integrated learning framework that facilitates situated learning experiences, where live projects with real-world outcomes bridge the gap between academia, community and industry. This study employs qualitative methods to explore the impact of the Rabbit Hole's curriculum on student learning and subsequent graduate experience, with a focus on demonstrating how the Rabbit Hole fosters socially responsible emergent designers through working on live projects. This paper affirms the need for design pedagogy that is underpinned by studio teaching that focuses on interdisciplinary collaboration and professional practice.

Key Words: Work integrated learning, participatory design, situated learning, design responsibility, visual communication pedagogy

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Down the Rabbit Hole we go: evaluating the impacts of a situated design pedagogy

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Introduction

Figure 1. The Rabbit Hole studio. Source: Author's own photograph.

Professional Design Studio, officially recognised as the Rabbit Hole, is a capstone unit in the 4 year Bachelor of Design (Visual Communication) degree in the School of Humanities and Communication Arts, University of Western Sydney. The Rabbit Hole curriculum incorporates work-integrated learning and participatory design methods, effecting a situated learning and teaching environment. The year-long Rabbit Hole experience, with an emphasis on student-centred learning and professional engagement, is the culmination of 3 years prior learning, and an opportunity for students to develop their professional studio practice through working with real clients. Established in 2007, the Rabbit Hole curriculum motivates, challenges and inspires students to learn, and is underpinned by a strong framework of socially responsible, ethical design practice that fosters creativity through collaboration and professional communication—thereby supporting students' transition to working life after university. The teaching team comprises Dr Samantha Edwards-Vandenhoek and Ms Katrina Sandbach, both academics with professional design practice backgrounds, and is supplemented by additional tutors who are current design practitioners. Our overarching goal has been to empower students to succeed in a highly competitive industry through understanding their own agency and, importantly, how their actions impact on others. In the Rabbit Hole, students are engaged in real-world contexts with tangible outcomes, encouraging them to become responsible design practitioners who understand the inherent power of visual communication to shape the world we live in.

This study of teaching and learning aims to evaluate the impact of the Rabbit Hole's curriculum on student learning outcomes, and subsequent graduate experience. Through qualitative modes of investigation including student and graduate surveys, and our own reflective practice, we will build a picture of how the Rabbit Hole has impacted on student learning and transition to the workplace. The findings of this study will inform the ongoing development of the Rabbit Hole curriculum, and potentially also tertiary design education across the sector.

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Aims

The specific aims of this study are:

- To understand the impact of the Rabbit Hole's iterative three phase 'design-learning' method.
- To support work-integrated learning, highlighting the benefits of collaborative teamwork, and to demonstrate how it encourages self-governance, empathy, mutual accountability and the development of higher level research, professional communication, presentation and interpersonal skills.
- To advocate the studio model of teaching and learning and to demonstrate how the reframing of teachers as creative directors, and clients as co-designers, creates a learning environment where students develop empathy, confidence, resilience, and heighten their communication skills.
- To endorse blended learning in design education.

**The Rabbit Hole:
A Living Curriculum**

The Rabbit Hole is founded on a progressive studio-based curriculum, developed by Dr Samantha Edwards-Vandenhoek and largely informed by the theory and principles of work integrated learning (WIL), social responsibility and participatory design. The Rabbit Hole facilitates opportunities for students to work creatively and professionally with a client, bridging the divide between theory and practice, academic and industry expectations. Wenger (1998) describes this kind of situated learning as a 'living curriculum' that connects people and enables interaction, dialogue, and a sharing of knowledge. Situated learning advances an approach where education is embedded in participation and action—the argument being that it is through the process of collaboration and sharing in a local and social context that students learn and develop their communities of practice. Participatory design involves those affected by design decisions in the making of some of those decisions—with the basic premise of 'open dialogue, communication and trust' between participants, clients and designers (Sanoff, 1990, p.1). Essentially, it is an empathetic approach to design pedagogy that puts people first, thereby enabling students to imagine the world from a multitude of perspectives—for example, those of clients, end users and customers (Brown, 2008). Students are encouraged to develop their awareness of the values inherent in design, its potential connection to social responsibility, and its impact on communities and wider society (Margolin, 2006; Papanek, 1984). The Rabbit Hole's overarching WIL framework enables students to have engaging, relevant and meaningful learning experiences that give them insight into the complexity of design practice in a dynamic and changing world.

However, the Rabbit Hole does not rest on a conventional WIL teaching model as it also simulates a professional work environment. Clients visit the studio where they meet, brief, critique and discuss the project with students at iterative stages in what Edwards-Vandenhoek calls the 'design-learning' process. Student teams also conduct site visits to client premises and the places where their designs will be enacted, as well as engaging with other stakeholders. Nonetheless, the central focus is on the studio as the place of collaboration and participation, encouraging students to develop confidence in presenting their ideas and designs in a comfortable yet professional setting (Figure 1). The Rabbit Hole is an environment that supports students whilst challenging them, fostering the professional conduct expected of them as graduates.

The 'Design-Learning' framework

> Why, sometimes I've believed as many as six impossible things before breakfast.
> (Carroll, 2009/1871, p. 177)

At the core of the Rabbit Hole curriculum is the 'design-learning' framework that embeds the important stages of empathy, research, making, testing, refining and implementation within an iterative three-phase process of scoping, generating, and evaluating design (Figure 2). The emphasis of design-learning is self-initiative, peer support and self-reflection—skills

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that foster independent learning that is an essential and ongoing part of working life as a designer. Furthermore, through working collaboratively on different projects with real budgets, deadlines and clients, students develop their higher level functions such as applied research, professional communication, project management, presentation and interpersonal skills.

In alignment with the ideals of social responsibility, design-learning also encourages students to become engaged citizens through developing a sense of individual and shared accountability for their decisions and the design outcomes. Clients are seen as active participants in the design-learning process, who are involved in the briefings, interim discussions, critique sessions, presentations and decision-making. Moreover, the teaching team enact their role as 'creative directors' rather than tutors, and students are encouraged to consider themselves as designers who can each make a valued contribution. The premise of this is to scaffold students' transition to professional life, encouraging them to conduct themselves with confidence and a heightened sense of responsibility.

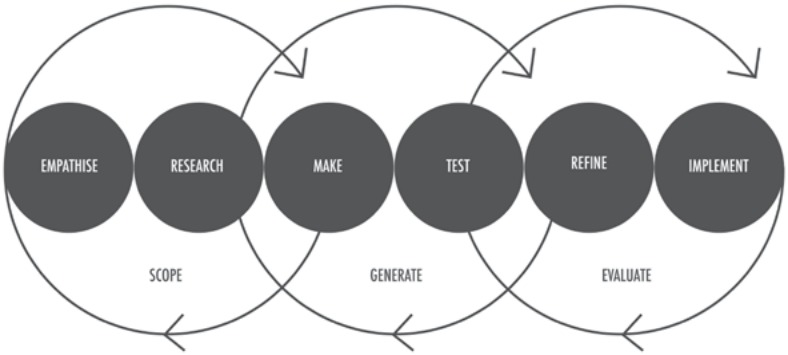

Figure 2. The Rabbit Hole's iterative 'design-learning' framework

Situated, flexible and authentic learning: the 'live briefs'

> One of the deep secrets of life – that all, that is really worth the doing is what we do for others. (Carroll, in Carpenter 2003, p. 103)

The Rabbit Hole curriculum is mobilised by the studio's 'live briefs', providing the foundation upon which successful project outcomes are built, measured and assessed in the design-learning framework. Essentially, live briefs are multidisciplinary design projects that have budgets, deadlines, and deliverable outcomes with real world implications for the studio's clients, some of whom have worked with the Rabbit Hole for many years, and others with one-off seasonal projects. Live briefs simulate formal industry-standard documents that outline the objectives and requirements of a design project—the client's goals, company profile, vision and values, scope of work, primary and secondary audience, issues, constraints and deliverables. Typically, live briefs run for a single term (8 weeks) or whole semester (14 weeks), depending on the client's requirements.

Live briefs integrate design pedagogy, current industry practices, and community needs, generally falling under these three categories:

- Commercial briefs
- Social advocacy and community based projects
- Exhibitions, competitions and design industry engagements

The wide range of live briefs draws on the different skills and aptitudes of our students, with the aim to:

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- Provide students with a professional experience that furthers their understanding of the relationship between design research, conceptual thinking and specific client needs
- Bridge the gap between theory and practice, academic and industry life
- Provide students with an understanding of the transformative agency of design
- Equip students with the literacies and confidence to traverse a range of graphic design contexts to impact real, sustainable change in their communities of practice

At the beginning of each semester and as part of a 'Skills and Experience Audit'—a document that enables students to rate their skills, strengths and aspirations—students are allocated a live brief project based on their existing expertise and interests (e.g. typography, illustration, photography, web, interactive design, media arts production, visual branding etc). Working in designated teams, students then analyse and action the design-learning process, with its emphasis on iteration, refinement, professional conduct and presentation. In some instances, students will be expected to follow the project through to production, launch and/or delivery of final product to client.

Importantly, the live brief curriculum affords a communication channel between the teaching staff, students and clients to enable the constructive alignment of client requirements with the learning objectives and teaching delivery. At the commencement of each live brief, and in negotiation with their tutor, students are required to establish a 'Position Description' that specifies their role and responsibilities within a given project. This formal process ensures there is a clear and mutual understanding of learning objectives and professional expectations. The 'Position Description' functions like an employment contract in that it specifies individual responsibilities within the project team. Importantly, the fulfilment and self-evaluation of the 'Position Description' is a core part of the formal assessment. Coupled with the informal client, tutor and team evaluations, at two stages (midpoint and prior to implementation) students are formally assessed—as individuals and as a team. In this respect, the live brief format embodies the Rabbit Hole's participatory design methodology in assessment form, resulting in a responsive framework that is defined by shifting design project requirements and the nuances of individual student roles and aptitudes. A sample live brief schedule is outlined in Figure 3.

LIVE BRIEF SCHEDULE

WK	LIVE BRIEF 1A	WK	LIVE BRIEF 1B
0	SCOPE PROJECTS / CONSTRUCT BRIEFS	9	DEBRIEF TEAMS / REVISE POSITION DESCRIPTIONS
1	INTRODUCE BRIEFS / SKILLS AUDIT	10	REFLECT / REFINE / TEST
2	TEAM BRIEFING / COMPOSE POSITION DESCRIPTIONS	11	CLIENT FEEDBACK / INTERNAL CRITIQUE
3	MEET CLIENTS / CONDUCT SITUATION ANALYSIS	12	REFINE / TEST / REVIEW
4	EXPERIMENT / CONCEPTUALISE / INTERNAL REVIEW	13	CLIENT FEEDBACK
5	CLIENT FEEDBACK	14	FINAL PRESENTATION / FORMAL ASSESSMENT
6	REFINE / TEST / REVIEW	15	REFINE / PRODUCE
7	CONCEPT PITCH / FORMAL ASSESSMENT	16	IMPLEMENTATION / PRODUCTION
8	CLIENT EVALUATION / STUDENT FEEDBACK	17	CLIENT AND STUDENT EVALUATIONS

Figure 3. How the live brief is delivered and assessed.

A member of the teaching team oversees each project and functions as the creative director, facilitating the design process and client interactions, rather than intervening and making design decisions on behalf of the student design team. As such, the onus is on the student design team to take responsibility and be mutually accountable for the design approach, the effectiveness of the outcomes and the development of professional standards of practice, simulating a real life studio scenario. This inclusive and participatory approach also encourages students to develop confidence in presenting their ideas and designs in

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an informal yet professional setting, extending their independent learning, while challenging them in a real life context and in the Rabbit Hole online teaching space—www.commarts.uws.edu.au/rabbithole. This fosters the professionalism, positive attitude and integrative thinking that is expected of them as design graduates.

The live brief outcomes variously include publication, exhibition, video works, brand communication, campaign design, event production, packaging and so on. Following the 'design-learning' process, students see the creative work through briefing, research, conception, refinement, and final delivery to client and/or production/exhibition. Figures 4–7 provide a snapshot of Rabbit Hole live brief projects and outcomes.

Figure 4. Held annually in Sydney's CBD, this annual Bachelor of Design Graduation Exhibition is a significant multifaceted live brief which involves positioning, strategic brand development, event management, marketing, website and exhibition design. This live brief plays a pivotal role in raising awareness of the UWS design program to the general public. In 2012, the Rabbit Hole student team responsible for the 2011 visual identity design "MADE" were the recipients of a highly prestigious AGDA student design award. (Permission to reproduce work has been given by students).

Figure 5. Final Sessions is an annual music event designed, produced and managed by Rabbit Hole students. 'Final Sessions' affords an opportunity for emerging musicians from the Bachelor of Music program to showcase their talents and perform original music to a live audience. The event is filmed and edited by media arts production students and screened on the local community television station (TVS). Through its promotion of UWS student talents, 'Final Sessions' raises awareness of UWS as a contributor to regional cultural events in the public arena. (Permission to reproduce work has been given by students.)

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Figure 6. Launched 5 years earlier, in 2011 TVS required a brand strategy to reflect its current philosophy and future direction. Rabbit Hole students developed a brand strategy that addressed corporate stationery, print, web and television advertising campaigns, on air graphics, web design, indoor and outdoor environmental graphics and iPhone applications. As a result, a number of Rabbit Hole students were offered paid design internships with TVS. (Permission to reproduce work has been given by students.)

Figure 7. The UWS Equity and Diversity Unit represents staff and students from groups who have been traditionally under-represented in tertiary education. Over the past 7 years, Rabbit Hole students have been briefed to work on a number of campaigns around various thematics, events and issues which include: The Dreaming Film Festival, 'My Faith Our Australia', Disability Awareness, International Day of the Woman, Anti Bullying and the Equity & Diversity annual calendar. All of these projects are used to promote and celebrate the idea of equity and diversity amongst the UWS and wider community. (Permission to reproduce work has been given by students.)

Concern for equity and diversity

Equity and diversity is an important concern of the Rabbit Hole curriculum, closely tied to its pedagogy of ethical practice that connects with our desire as educators to instil the values and principles of responsible design in our students. The Rabbit Hole program also promotes and supports inclusiveness by improving access, participation and outcomes for diverse student groups through empathetic project allocation, a wide variety of live briefs, and tailored feedback and assessment mechanisms. Through the innovative live brief curricula, each individual student's professional growth is the core focus. At the commencement of each live brief students nominate their preferred projects based on their existing skills, strengths, and aspirations. The 'Skills and Experience Audit' provides information about each student's abilities, design experience, strengths, weaknesses and aspirations, foregrounding the unique needs and strengths of individual students. Once allocated a project, the evolving

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'Position Description' ensures that there is an equitable distribution of roles and responsibilities in the team reflecting the students' aptitudes and interests. Importantly, it ensures that students feel mutually accountable for the outcomes. Students are assessed on how effectively they fulfilled their own position descriptions in the context of the broader project, in line with the assessment criteria. This is a tailored approach to education design that responds to individual student achievement within the context of the live brief, rather than a generic one-size-fits-all model of assessment.

In line with Yorke (2011, p. 123), within the Rabbit Hole there is a holistic and flexible approach to assessment, which incorporates individual and team based outcomes, a record of actual workplace performance, and a student reflection on work-based experience. Feedback to students is delivered through a mixed approach to account for a diverse student cohort. Face-to-face, immediate feedback is tailored to individual students and teams during the weekly class time by tutors and clients. Interim presentations, peer review and informal pitches of student work also take place in the group setting. Written feedback is offered outside of class time via the project team's private Facebook group, where students are encouraged to upload work-in-progress, which is then critiqued by other students in their team and by the tutor—thereby instilling in students the confidence to critique the work of others respectfully and independently. This kind of frequent, flexible and well-timed feedback is known to have a significant bearing on learning (Ferns and Moore, 2012).

In addition to working on up to four live briefs throughout the year, students are engaged in developing a year-long, iterative self-promotion assignment, involving a professional positioning statement and promotional material. Through one-on-one consultations with the tutor, students develop their own unique brand and online portfolio that promotes them as an emerging creative to potential employers at their graduation exhibition and beyond.

Evaluating the Rabbit Hole experience

Qualitative methods of enquiry were used to evaluate the Rabbit Hole learning experience, including:

- Voluntary non-identifiable online survey of current Rabbit Hole students, and of graduates who completed the Rabbit Hole program between 2007-2012 (two separate surveys)
- Reflective practice through observation of the online learning space

We acknowledge that we were not objective researchers but, rather, active participants. Ryan (2006, p. 17) suggests that in qualitative enquiry 'the subjective is a valid form of knowledge'. We are aware of ourselves and our relationship to the study, and our view is that we were learning with our students, rather than conducting research on them. We were interested in developing a more holistic perspective of our teaching and learning to be considered in addition to the University's quantitative course evaluation tools such as the Student Feedback on Unit (SFU) survey, which were used to validate our qualitative findings.

Two separate groups of human participants were formed from past and present students. The survey of current students focused on their experiences, attitudes and perceptions of the Rabbit Hole curriculum, and its effects on their learning, work readiness and development into future professional creative practitioners. We did not want to intrude on their learning experience and therefore we decided that a non-identifiable online survey was the most appropriate approach. We chose to engage graduate participants in the same way to avoid invoking existing relationships or influence responses, as well as for practicality—many of our graduates being spread across Sydney and beyond. The survey of graduates focused on reflection on their time in the Rabbit Hole, and how this rated against their subsequent professional experience.

In addition to the voluntary surveys, current students' usage of the Rabbit Hole's online learning spaces was observed during Spring semester 2013, with analysis conducted through our reflective practice based on our own participation in these spaces. Students were informed of the observation at the beginning of the semester, and it was anticipated that this

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would not affect their behaviour, as our monitoring of these online spaces was already explicit and embedded in the curriculum since participation was a facet of assessment. The purpose of this observation was to understand whether the online learning spaces reinforced what transpired in the face-to-face studio time. Reflective practice enabled us to discuss and question our observations without affecting the online learning spaces or the live brief schedules. This enriched the other research data, as reflective practice provided a systematic way to integrate knowledge from experience, and develop practical tacit knowledge 'by considering what we know, believe, and value within the context of an event' (Sherwood & Horton-Deutsch, 2012).

Findings

The Student experience

A hundred current Rabbit Hole students were invited to participate, and we received 34 responses. Aged between 21-26 in 2013, all respondents were currently enrolled in the Bachelor of Design (Visual Communication), 94% of whom studied full-time and 53% of whom were currently working in a freelance or part-time capacity in the design industry. A breakdown of the key demographics has been captured in Figure 8.

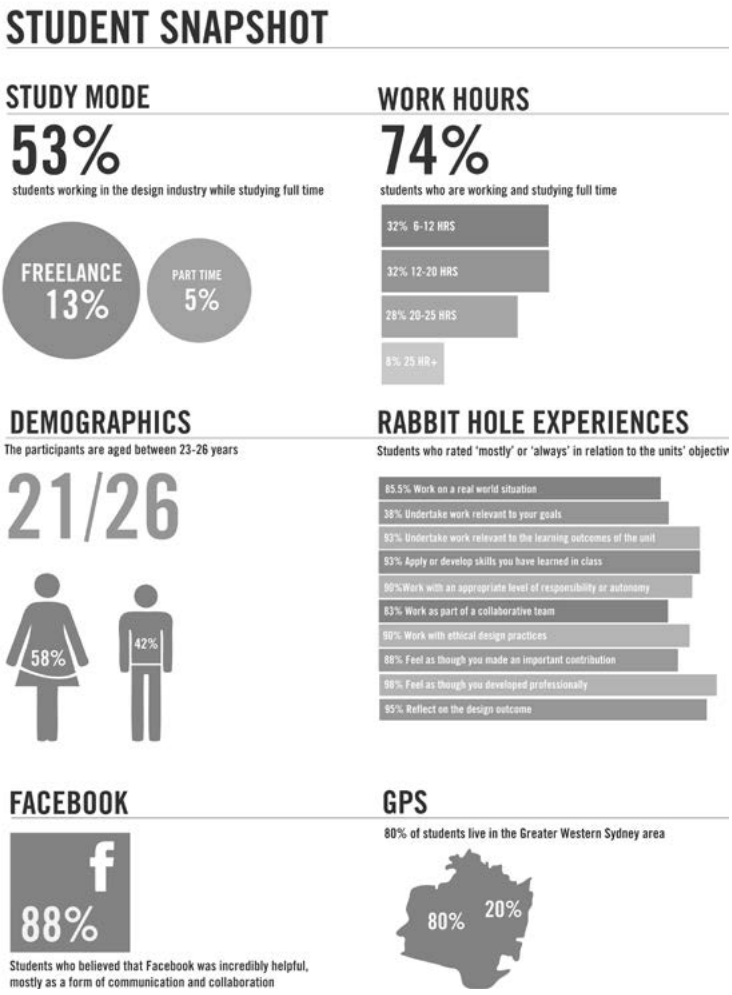

Figure 8. Rabbit Hole student snapshot. NEAF survey data.

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Overall, student responses indicated that the Rabbit Hole experience made a significant and positive impact on their learning and development into professional creatives. Recurring themes in responses were that the students gained more confidence and drive, making them feel more workplace ready. Other respondents explained that the Rabbit Hole put everything they had learned prior into practice, and that their portfolios were better for the experience. Many respondents described feeling excited about their immediate future as designers as a result of their time in the Rabbit Hole. To cite one respondent's comments:

> The Rabbit Hole has made me feel more prepared moving into the industry. It gave me a totally different experience from the rest of the degree and gave me some of my strongest portfolio pieces moving forward. It has made me prouder of myself, and the work. I have been able to produce and helped me to build confidence in my ideas. I think it will place me as a stronger competitor when applying for full-time work and has also helped me to build strong collaborative relationships and friendships with other students that will form a great design network.

Resoundingly, when asked to identify the best aspects of the unit, most cited were the live briefs and the experience of working with clients, teamwork, project management and production that framed their learning in a tangible context. As one respondent commented:

> The fact that it's the first unit to allow for real life experience in a design position…enables a real life studio and design team experience, and teaches you professional conduct and how to work within a team far more effectively than other units. It taught you ownership, responsibility to yourself, your work and your teammates.

Eighty per cent of respondents said that the Rabbit Hole helped them to understand their social and design responsibility, with some elaborating that this was because they had to consider all the ethical implications of their work, striving to produce meaningful work, and respecting their team members, which gave them a heightened awareness of their responsibilities as a designer and as a human being.

> Working on the grad show made me realise that it wasn't really about us—just because we were designing it, doesn't make it ours. We are designing for our entire year group and so we needed to consider their wants and needs above our own.

Many respondents explained that seeing their teacher as the creative director blurred the conventional lines between teacher and student, allowing them to regard the team as a whole, together all striving for the same goal. A few respondents also explained that they saw the teaching team as professionals, who they wanted to impress with their work, encouraging them to strive further:

> The respect held for their direction, knowledge and feedback meant that you were willing to take direction and wanted to produce the best possible work that they would be proud of. The amount of hours they put into giving detailed feedback and pushing your skills beyond what you knew you could achieve gives you the drive to produce better work and willing to take on advice and make changes under their direction.

> It made me feel more relaxed and less uptight about showing my work as I felt less of a boundary between teacher and student because I felt we were all striving to achieve the same goal: to make the client happy and that we were all a team.

Importantly, students felt that the Rabbit Hole experience helped them become more work-ready than they felt prior to their time in the studio:

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> It has given me confidence in rationalising my work and I no longer fear taking risks as much and experimenting and will be doing this more often. I will always seek and value feedback from other people's perspectives to improve my work as a result. Without doing this unit, I would not have gained a wider perspective of how the industry works in a studio context and still would have been too self-absorbed.

Students were asked to make recommendations on how the Rabbit Hole could be improved and, while 50% said they would not change anything, some recurring suggestions for improvement were: more digital projects, longer tutorial times, and smaller team sizes. Significantly, many respondents suggested that the Rabbit Hole mode should be introduced earlier in the degree because it was so beneficial to their developing design practice.

The Graduate experience

A hundred UWS design graduates who completed the Rabbit Hole program between 2007-2012 were invited to participate, and we received 47 responses. In 2013, the graduates were aged between 23-29 years—with 85% speaking English as their main language at home. Fifteen spoke a range of languages (Punjabi, Tamil, Spanish, Macedonian, Chinese, Tagalog, Persian) and 97% of the participants called Australia home. Moreover, 58% of graduates still resided in Western Sydney, which is the location of the design campus. However, of those who were working professionally as graphic designers 48% worked in Sydney's inner city, and 74% of respondents currently worked professionally as graphic designers. A breakdown of the key demographics and disciplinary areas our graduates work in has been captured in Figure 9.

Overall, the graduate responses illuminated the effectiveness of the Rabbit Hole curriculum according to participants, as well as casting light on potential areas of development.

Seventy per cent of Rabbit Hole graduates from 2007-2012 felt that they developed professionally and personally as a creative practitioner as a direct result of their experiences in the studio, recurrently citing as the best aspects of the unit being the experience of developing, finishing and producing 'real world' projects, the social aspect of collaboration and team work, having a 'home base' in the dedicated physical studio space, honing existing and developing new design skills, producing professional work for their portfolio, and working directly with a client with the support of the teaching team. One respondent summed this up by stating:

> Rabbit Hole brought a better understanding of what graphic design in the real world is compared to the rest of the 3 years previously at UWS. It was my favourite place to be and brought many memorable moments. Despite this—[in] the real world graphic design is something that must be learned through practice. From experience, each workplace practice and approach to design has been quite different to the next. The Rabbit Hole prepared me well enough to get a job and enter the design world—that to me is success.

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Figure 9. Graduate Snapshot. NEAF survey data.

Respondents said that the Rabbit Hole was their favourite part of the design degree, making a significant impact on their development into professional practitioners, and in hindsight they considered the studio as being reflective of a 'real world' environment in that the most successful students did well because they were self-motivated. As one respondent stated:

> It was a space in which students came together in design, working as a team and becoming closer in a social respect. Visually and conceptually it was a stimulating environment where I felt as a student I could be not only myself but contribute my skills in an industry style team setup. It was the only year of the four in which I look back and remember positively.

Most respondents also felt that seeing their teacher as the creative director encouraged them to see themselves as designers, taking charge and ownership of their work because they had real implications. Retrospectively, respondents said that this prepared them for working as a junior designer in the real world:

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> It was like working in a real studio...when I entered the work force working for HarperCollins Publishers...I was not intimidated or surprised by anything the art director expected of me because I was taught in a real life situation before hand.

Sixty-two per cent said that the Rabbit Hole experience encouraged them to understand their social and design responsibility for a variety of reasons, but often mentioned was the idea that they understood they were responsible for their work and the impact it had on others—the client, audience, and society. For students who worked on projects that had less social-design focus, they valued the insight into how to conduct themselves professionally as part of the group, and learning how to trust and share ideas with others, realising that their actions impacted on the rest of the group.

> Yes, we held ourselves quite accountable for our roles. We took it seriously. It was no longer simply a team project, it became more than that because it involved people outside of the classroom e.g. real life clients, consumers etc.

Importantly, 96% of survey respondents said that they would have had a more difficult transition into the design industry without the Rabbit Hole experience. One graduate remarked that 'I grew a lot as a designer in my last year and gained the confidence to believe I could do well in the design world', and respondents recurrently commented that the live brief outcomes crystallised their design portfolios. Many respondents also felt that the fourth year studio enabled them to practice and refine what they had learned previously:

> I don't think I would be working in the industry had I not stayed on for a 4th year. I grew a lot as a designer in my last year and gained the confidence to believe I could do well in the design world.

Ninety per cent of respondents said that they would return to Rabbit Hole as a professional mentor or guest teacher, suggesting that the Rabbit Hole experience is a conduit through which communities of practice develop. Ultimately, graduates believed that the Rabbit Hole had a positive impact on their learning and development into professional creative practitioners. The studio gave them the space to realise and hone their strengths, often not specifically design-related such as project management, leadership, production and presentation skills. The live briefs helped them learn time management, as well as the positives and negatives of working with others, and how not to take critique personally—all important skills that are typically learned 'on the job' rather than beforehand.

> It's like a simulated design environment. NASA doesn't send their astronauts out into space without giving the proper training and showing them what they're in for. That's what the Rabbit Hole was for me.

Graduates were also asked to make recommendations on how the Rabbit Hole could be improved, and we value their feedback immensely as these participants are now industry practitioners. While some respondents said that no improvements were necessary, others suggested that smaller group sizes, more studio time, shorter turnaround times, and more digital-focused briefs are areas worth looking at.

With increased enrolments and only 2 hours of face-to-face time scheduled per class per week, it became essential to explore online tools that would extend the studio space beyond its physical form. We identified some essential characteristics that would make an online studio space feasible:

- Easily accessible and flexible—students were expected to work on their Rabbit Hole projects independently 8 hours per week, but with varying other responsibilities and

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commitments, it was important that students could engage with the online learning space with some flexibility in timing.
- Reliable—the studio had schedules and deadlines to keep and it was important that the online learning space was functional, always.
- Private —we would be discussing work in progress, often competing within the studio for particular projects, so these discussions needed to be closed to those outside the team.
- Participatory—it was important that students felt included and able to participate, and be able to be recognised for making a contribution to the online space.
- Recordable—the way teams conducted themselves in class was a part of the live brief assessment, and therefore this needed to translate to the online space. It was therefore important that the discussion feed could be recorded chronologically for assessment reference.
- Visual component—it was vital that students could present, share, and give feedback to each other on work-in-progress in between face-to-face class to expedite workflow.

A range of options were considered, including the UWS eLearning Framework vUWS which had discussion forums and a blogging platform, and the industry favourite Basecamp. Neither option was deemed suitable. At the time vUWS was going through a major update and there were a few technical issues that were being resolved, and Basecamp came at an additional cost that could not be justified by the School. Furthermore, these were online modes relatively unfamiliar to students, requiring some kind of training or orientation before use. It became evident that we needed to look at something that students were adept at using, and Facebook was a good fit.

How it worked

The teaching team each had 'Rabbit Hole' Facebook profiles that we used solely for managing the online learning space. At the onset of the first semester, students were asked to manage their privacy settings to keep their personal Facebook usage separate from their Rabbit Hole presence, and then they were asked to 'add' their respective teachers/creative directors as 'friends'. One of the immediate group tasks was to set up a private Facebook 'group' for each project, and each member was invited to join. The project Facebook group was used throughout the duration of the project to communicate, share, collaborate, and report on research/progress in between classes.

We did not assume that all students used Facebook to the same extent, so at the beginning of the year there was a briefing on how it was to be used specifically for the Rabbit Hole, setting some ground rules including:

- Specific timeframes where the teacher/creative director would be available online, often in 2-hour blocks twice a week
- That everyone was expected to 'post' work, and also to offer critique to their team mates
- How the group's different functions (such as 'docs', 'photo albums', 'polls') were to be used

Between August-October 2013, together we observed the Facebook learning spaces that we managed for our projects, discussing our observations on a weekly basis and keeping an informal reflective practice journal. Overall, we found that the Facebook learning space was a valuable extension of the physical learning space, and that student behaviour was consistent between both spaces in most cases. Our key observations are listed below.

- Generally, student participation on Facebook mirrored the face-to-face time. The more confident personalities were often initiating discussions in the Facebook group, and similarly, those often requiring coaxing to speak up or share ideas in class needed to be 'tagged' to cajole them into participating online.
- If the group lacked strong leadership, as was sometimes the case, the teacher/creative

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director had to be more hands-on and take charge of the space. With one or two effective leaders, the Facebook group ran autonomously and was active space outside of class time, even in the absence of the teacher/creative director.

- Prior to the Rabbit Hole, students used Facebook almost entirely for socialising, so they needed to rethink how they behaved and used the Facebook group for work and this was explicitly discussed at the beginning of the year. Most students adapted fairly quickly, realising that their presence on the group wall was visible and recordable.
- The feedback students gave to each other online was similar to how they spoke to each other in class, largely dependent on the individual student's communication style, personality, and level of comfort within the group.
- It was easy for us to keep track of who was engaging with the online space because Facebook charts who in the group sees what, and at what time. This made students more accountable to deadlines and their responsibilities to the group.
- Just like a physical learning space, the Facebook space sometimes became stagnant when work was 'off peak', bursting back into activity just prior to deadlines.
- From a teaching perspective, managing the Facebook spaces was often quite laborious, although reinforcing ground rules helped reduce this.

As part of the student and graduate surveys discussed in the previous sub-sections, we asked participants to reflect on how the use of Facebook's project group impacted on their learning experiences. Current students said it was a useful tool for communication and collaboration outside of the somewhat limited face-to-face time. Many referred to its ability to enable immediate connection, making them feel more accountable to the team as their engagement (or lack thereof) was visible and recorded. Comments included:

> Was fantastic to easily get meaningful peer and tutor feedback anytime instead of getting it once a week in class. Facebook was also the quickest method to reach people.

> I learned how to participate in giving feedback to others as well as receiving feedback, regular posting and showing of work in progress to the team. Very important in developing my learning in team communication and the design iterative process.

While it was considered much more dynamic and social than other established modes such as vUWS or university email, one student did remark that it would never replace face-to-face time:

> Facebook is and always will be social screen conversations. Nothing compares to human interaction, simple.

Graduates reflected that Facebook was convenient and easily accessible, although a few respondents commented that they would often post something just to show they were present but they weren't really engaged. According to these participants, its greatest value was as a communication tool rather than a space for collaboration, although one respondent commented that it was unfair because everyone used Facebook differently, and some people not at all:

> I found that it helped me stay on track with my work and it was a good way to interact and share ideas with my group outside of uni. However, not all team members were active online, which sometimes made it difficult to organise group meetings etc.

From a teaching perspective, while Facebook was an effective extension of the face-to-face time, it did not substitute for physically working together in the studio, and could never wholly replace face-to-face contact. Shaughnessy (2009) argues that it is impossible to understand contemporary graphic design without also understanding how studios function,

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and it is our resolve that this 'function' is not transmitted online. For the Rabbit Hole, Facebook effectively kept students connected to the studio outside of class, but this worked only because it was deeply rooted in what transpired in the face-to-face studio space. Moreover, as observed by McCarthy (2012, p. 7) 'The online environment in Facebook helped establish a framework for an evolving and expanding community of students, recent graduates and industry leaders, to promote professional networking.'

Validation

The University of Western Sydney administers quantitative evaluation tools under strict conditions, such as the Student Feedback on Unit (SFU) to measure individual units of study, as well as the Course Exit Questionnaire (CEQ) that asks students to appraise the whole degree at completion. The effectiveness of the live brief curriculum is evidenced in

SFU AGGREGATION OF RESULTS FROM 2007.2 - 2012.2		Rabbit Hole	School of Humanities & Communication Arts	UWS
Unit Content	The unit covered what the unit outline said it would	4.4	4.1	4.1
Relevance	I was able to see the relevance of this unit to my course	4.6	3.9	4.0
Learning Design	The learning activities in this unit have helped my learning	4.4	3.9	3.9
Assessment Activities	The assessments in this unit have helped me learn	4.4	3.9	3.7
Assessment Feedback	I was able to learn from feedback I received in this unit	4.4	3.8	3.8
Assessment Guidelines	There were clear guidelines for all assessment tasks in this unit	4.2	3.9	3.8
Learning Resources	The learning resources provided for this unit helped me to engage in learning	4.2	3.8	3.8
Learning Flexibility	The unit provided a reasonable amount of flexibility for study	4.2	3.9	3.9
Learning Space	The teaching and learning spaces used for this unit were adequate	4.3	4.0	3.9
Workload	The amount of work required in this unit was reasonable	4.2	3.9	3.9
Equity/Fairness	In this unit people treated each other fairly and with respect	4.4	4.3	4.2
Generic Skills	This unit helped me develop my skills in critical thinking, analysing, problem solving and communicating	4.4	3.9	3.9
Overall Experience	Overall I've had a satisfactory learning experience in this unit	4.4	4.0	3.9

Figure 10. Student Feedback on Unit results for the Rabbit Hole (2007-2012).

aggregated SFU results from 2007-2012, with an average score of 4.5 out of a possible 5 (Figure 10).

The SFU 'best aspects' comments from 2007-2012 validate the qualitative findings of this study with regard to the overall effectiveness of the Rabbit Hole curriculum:

> Working in teams—makes it feel like an actual job/studio.
> Achieving a goal, completing a task and feeling confident in your work.
> Hands-on real client experience.
> Knowing our work is going to be made public.
> The professional nature of the projects is really helpful in that it makes you more prepared and more confident about working professionally once uni is over.
> It increased my confidence in dealing with clients and working to a deadline.
> The flexibility and the learning and dealing with clients were awesome.
> It helped me see how it will be in the real world of design.
> Being exposed to situations, which would happen in the real world.

Over the 2008-2011 period, satisfaction for the Bachelor of Design (Visual Communications) experience rose from 54%- 87% and has largely been attributed to the Rabbit Hole experience, as supported by the 2011 CEQ item 'best aspect of the degree' comments below:

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> Final year working as a part of team of the Rabbit Dole design studio. The fourth year. The Rabbit hole Design Studio. Group projects. Fourth year—Rabbit Hole experience. Photography and 4th year professional strand. The final professional year. Preparation for professional environment. Group work, 4th year.

Conclusion

This study has shown that the Rabbit Hole affords a rich, varied and responsive learning environment that provides students with a more 'integrated, more authentic view of life' (Boyer, 1990, p. 89) in a complex and ever changing world, with far reaching implications for many of its graduates, and which cannot be fully evaluated in the confines of this chapter. However, in line with the aims of this study we have been able to effectively evaluate the effectiveness and impact of the Rabbit Hole's participatory and iterative three phase 'design-learning' method to enhance peer support, accountability and engagement evidenced in the standard and responsiveness of the live brief outcomes, student experience and graduate reflections—coupled with strong and sustained employment figures. The reframing of academic staff as creative directors, and clients as co-designers, has generated a learning environment where students learn to understand empathy and develop confidence, and heighten their communication skills both in the studio and reflected in the formal presentations and design prototypes.

Moreover, the student surveys and Facebook observations point to the benefits of both in-studio and online environments as places for collaborative learning—with specific regard to self-governance, empathy, mutual accountability, and the development of professional communication and interpersonal skills. Through the graduate survey we have also been able to understand and qualify studio-based learning impacts on our graduates' subsequent work experiences and practices—the majority appearing to move into multidisciplinary design environments which value community-based and social design practices. Importantly, this research testifies to the value of both face-to-face and online learning spaces in design pedagogy. As discussed, the Rabbit Hole teaching studio is facilitated through face-to-face and online learning spaces, with the latter extending the otherwise limited contact time, expanding the design studio beyond the classroom environment, and enriching the Rabbit Hole's 'design-learning' process. This symbiotic relationship between face-to-face and online studio practice paves the way for a new kind of teaching studio, which is currently understood only as a 'physical place' (Shao et al., 2007). As evidenced by McCarthy (2012, p. 6) in first year design education, 'the online environment in Facebook improved…experience by providing students with a platform to establish connections with their peers.' It also 'led to a sense of belonging in the learning community.'

Furthermore, this research points to how fundamental the design studio is to professional design practice. However, there is sparse existing literature, and considering how prevalent studios are in design practice, it is astonishing how little there is on the subject of design studios (Brook and Shaughnessy, 2009), suggesting that this knowledge is best transmitted through practice. This notion of situated learning and doing is supported by Cooper et al. (2010, p. 208) who suggest that:

> …the challenge for universities to move from traditional curriculum design paradigms of isolated academic subjects to a more innovative approach that aligns the theoretical components of curriculum with the practical elements of the professional workplace. In doing so it is expected that there will be a closer alignment between the academic curricula and the student's employability capabilities.

The Honorable Julie Bishop MP, Deputy Leader of the Liberal Party proposes that 'if universities are to engage more effectively with businesses and communities they will need to align their structures, processes and operations with the needs of businesses and communities' (Franz, 2007, p. 1). However, as Ferns and Moore (2012, p. 207) recognise,

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it is not a ‘quick fix solution to national economic challenges and workforce inadequacies…it is an effective means of preparing graduates for the world of work and encompasses a range of experiences.’

In summary, the effectiveness of the Rabbit Hole program and its situated WIL pedagogy, and collaborative approach to learning and teaching to enhance student learning, is a testament to the importance of studio teaching in design education. Through educational partnerships and cross-institutional collaborations the Rabbit Hole engenders responsible, inspired, work-ready designers with an understanding of how their actions can positively contribute to their communities, and the world at large.

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