

Examining the Changing Shape of the Specialist Studio/Classroom Model in Communication Design education today

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The shift from specialised studio environments to standardized classroom learning has changed the shape of Communication Design education today. As networked learning and augmented digital classrooms continue to dominate higher education, the purpose of this paper is to examine the impact of a repertoire of learning spaces on students' engagement within contemporary Communication Design studio learning. This study proposes educators and learning space coordinators employ a methodological framework, known as a Methods Process Model (MPM), to empower students to form their own strategies for learning in conventional studio and generic classroom spaces. This paper discusses the findings from two case studies in the UK and Australia.

Introduction: The impact of standardized learning spaces on specialized Communication Design education today

The shift from specialized studio educational environments to standardized and augmented digital classroom learning has changed the shape of Communication Design education today. Networked learning continues to dominate higher education (HE) and institutional preference is for Technology Enhanced Learning (TEL). Uniform learning spaces to accommodate higher student numbers are widespread and as a result, Communication Design studio education now combines copious physical interactions and digital platforms. The purpose of this paper is to examine the impact of a repertoire of physical, blended and online learning spaces on students' engagement within contemporary design studio learning. The aim of this research study was to systematically examine the relationship between student engagement and learning spaces in the changing landscape of Communication Design education today.

This paper outlines a doctoral research project, which implemented an intervention-focused Participatory Action Research (PAR) approach to understand studio learning (Chevalier & Buckles, 2013). To understand the component parts of studio learning, sensory affect was effectively employed via the range of practice-led sensory research methods with students as participants. This was with the objective of improving student engagement by developing a

range of Participatory Design (PD) methods that may be used to adapt an individual's studio pedagogy (Sanders & Stappers, 2008). This study proposed that through employing a PD methodological framework, known as a Methods Process Model (MPM), students may be empowered to form their own strategies for learning in contemporary learning spaces. This paper discusses the findings from two case studies in the UK and Australia, in which the MPM was formed.

Context

As a discipline, Communication Design seeks to develop the relationship between the observer and visual design to strategically impart and express specific information. This information could be relayed for the purposes of advertising campaigns, book covers, websites, photojournalism, packaging, mobile phone applications and branding. Contemporary Communication Design practice exists across a wide range of media contexts, including dry and wet-based printing, electronic media, photography, moving image, typography, interaction design, graphic design and illustration.

In relation to students' engagement in Communication Design education, a student must have the freedom to experiment and express these creative techniques over longer periods of time than a formal university timetable often allows. Therefore, open-ended studio learning is key. According to Shaughnessy and Brook (2009, p.12) "*A studio is a combination of three things: the physical space, the people who occupy that space, and the work they produce*". The character of studio training has changed considerably over time, and originally, a team of people in a workshop environment produced work according to instructions. The master of the

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workshop, generally a respectable artist, would supervise, train, and pass on knowledge to small groups of students, teaching by example. In the mid-16th century, the master/apprentice model evolved into art academy training, which included lecture theatres alongside studios. Today, many designers have discarded the conventional artist's studio model in favour of new modes of working facilitated by technological advances. Consequently, conventional studio environments in higher education (HE) are rare in the face of growing student numbers across a repertoire of one-size-fits-all learning environments.

In the context of contemporary studio education in HE, student engagement involves an active participation in the learning of Communication Design. Student engagement pursues a psychological investment in learning, and a degree of attention, curiosity, optimism and passion motivated by the subject, which may be supported by suitable learning spaces, time and the curriculum. Communication Design students may be sensitive to the conditions within their learning spaces, yet the impact of these experiences may go unnoticed or simply be tolerated within the environment in which they are situated. To demonstrate the impact of sensory experiences detected through the body, Figure 1 shows a desk allocated to a student within a HE institution in the UK.

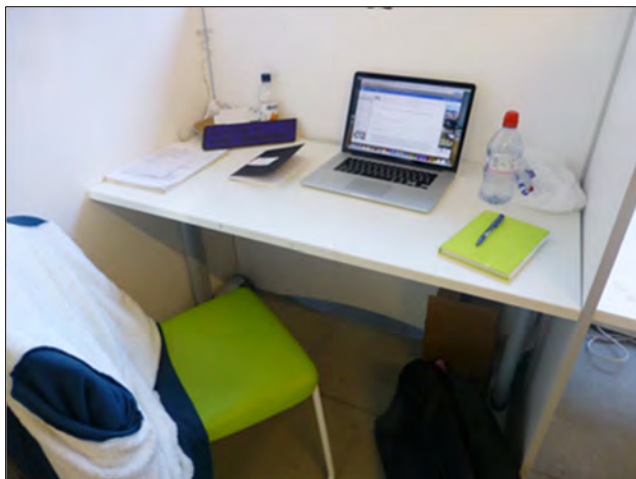


Figure 1. Desk allocated to a Communication Design student. ©

Using a wider perspective of the same workstation of this studio in Figure 2 lockers can now be seen in close proximity to the students' desk. In Figure 3, a wall of lockers is now visible, which means a regular flow of student traffic using the lockers. The noise and mess of a communal work table with a paper trimmer is in the adjacent vicinity. Other students' workstations are also now visible. In Figure 4, refuse bins are noted on the left of the image. To the right of this image the studio opens up into a fully open plan space with lots of similar desks. To the left of this image is the main

studio door. This area is the main thoroughfare in and out of the studio for dozens of students, and with a photocopier bordering the route, which means regular interaction with others and interruption for the student positioned at the original desk in Figure 1. Student engagement may be challenging to foster in this studio learning environment.

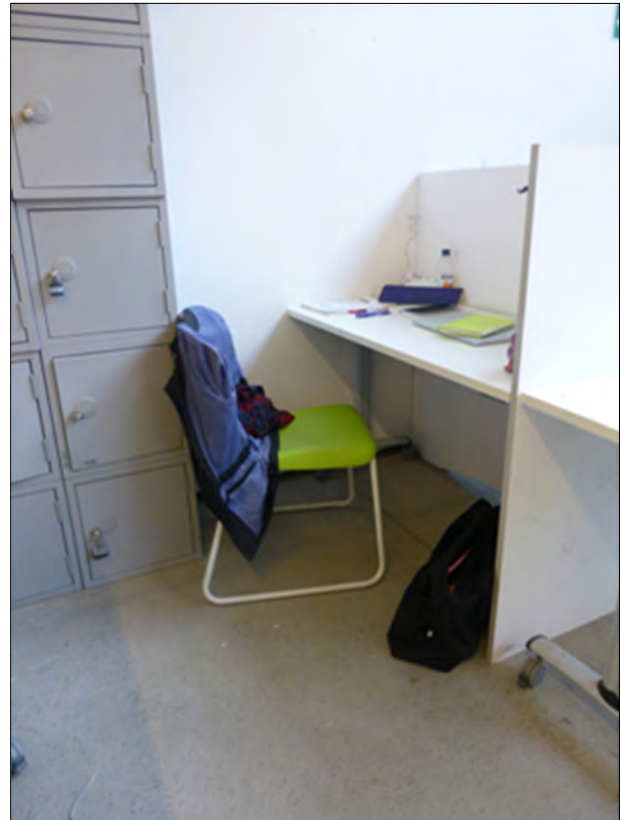


Figure 2. A wider perspective of the same workstation. ©

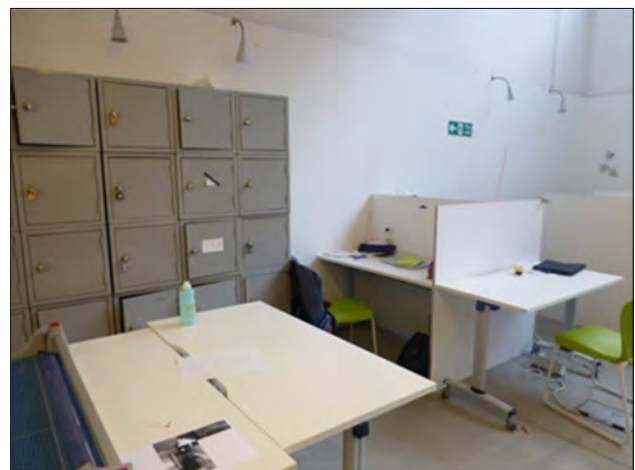


Figure 3. A wall of lockers is now visible, with a communal work table in the adjacent vicinity. ©



Figure 4. This area is the main thoroughfare in and out of the studio for dozens of students. ©

The research aims and objectives

There is, I argue, an imperative need to investigate how students experience the changing shape of the specialist studio/classroom model in Communication Design education today. The consequences of the rapid development of new technological and pedagogical practices within studio learning must be investigated to examine how this might impact on students' learning, engagement and creativity in generic classroom environments. In the interplay between Technology-Enhanced Learning (TEL is the support of teaching and learning through the use of technology) and conventional physical studio learning in universities today, are students gaining a valuable educative experience and what do they think about it? This paper contributes to the ongoing debate of the transformative changes to learning spaces within higher education (HE) today.

The research question

The central research question asks, *'What is the relationship between student engagement and learning spaces within Communication Design studio education today?'*. That is, to understand the different ways in which students interpret a range of experiences within the shifting boundaries of physical, blended and online learning spaces in order to understand the role of studio, and to develop ways to reflect upon their current studio learning.

This investigation did not set out to prove or test a pre-determined hypothesis from the onset of the study. Instead, to understand the component parts of studio learning, a range of sensory research methods were used to investigate the two case studies in different shared domains. Sensory affect was effectively employed as a lens via the range of practice-led methods to draw out experiential responses

from the participants. Studio learning (and the transformations of its learning spaces and student engagement) was then explored through a series of co-designed sensory focused interventions.

The transformative changes to Communication Design studio pedagogy within higher education

The challenges to studio pedagogy began with the 'top-down' implementation of key policy papers and economic drivers in the UK and Australia, which called for widening participation, the widespread use of technology and the growth of internationalization in creative education (Austerlitz et al., 2008; Author, 2018). The drive for efficiency, accountability and expansion led to a sequence of changes at ground level within educational environments. This meant the widespread standardization of creative learning spaces within higher education, and the embrace of technology-enhanced learning (TEL) in relation to studio learning (Goodyear & Retalis, 2010; Orr & Shreeve, 2018; Author, 2018).

Additionally, many universities favor the development of the 'digital campus' that *"allows you to study, learn, and connect when it suits you, anywhere, anytime. With plenty of flexibility and student support..."* (Griffith University, 2018). The Massive Open Online Course (MOOC) movement also increased the pressure of design education to fit within university-wide strategies and accelerates the move away from a slower-paced, physical studio learning (Schuwer et al., 2015). The establishment of networked and social media learning cultures significantly alters the studio community for current Communication Design students (de Laat, Lally, Simons, & Wenger, 2006; Carvalho & Saunders, 2018; Orr & Shreeve, 2018). As a consequence of these transformations the necessary ambiguity of project-led creative processes within design education and this distinct community of practice now sits uncomfortably within the fixed, formal structuring of university curriculums and spaces.

Ambiguity in the signature pedagogies of the studio and current literature in this field

According to Orr and Shreeve (2018), ambiguity is at the core of a creative education and the uncertain outcomes of project-led briefs are central to the growth of knowledge and ways of *"thinking and acting"* in design pedagogy (Powers, 2017, p.5). Consequently, Communication Design studio education has the responsibility to profoundly shape students' thinking, individual and group behaviors, as well as the practice and understanding of the culture of design. As a field of study, Communication Design can encompass diverse, continually evolving visual and non-visual methods in an undergraduate curriculum; *"a wide range of media and*

contexts, from paper to screen, from digital environments to public spaces” (University of the Arts London, Central St Martins, 2018).

It can be argued that maintaining a conventional face-to-face physical studio community in design education is important for several reasons. For example, physical learning spaces promote interpersonal relations between students, educators, and student peers. The ideal studio should foster trust, community, collaboration and camaraderie in an accessible, freely available space (Cennamo & Brandt, 2012). In a shared studio environment, creative work in progress is openly shared over longer periods of time in familiar and natural settings, which may foster a communal sense of place among the year group (Boling, Schwier, Gray, Smith, & Campbell, 2016, p.16). Time spent in the studio also helps students to embrace an immersive, personalised, and self-regulated approach to learning, with students taking responsibility for their own learning journeys. Furthermore, a studio environment can provide substantial physical space to work across desks, floors and walls, and can promote material thinking and process (Thrift, 2006).

It may be argued that students’ assumed inability to adjust or comprehend the challenges presented to them within contemporary studio learning is wrongly attributed to students’ failure to grasp current design pedagogy within higher education (HE). Austerlitz et al. (2008) examines the nature and impact of differing expectations between student and educator and denotes this as a pedagogical gap. Educators now embrace flipped learning, online submissions, blogs in lieu of sketchbooks and online Personal Learning Spaces, such as PebblePad®, which promotes its suitability for the “*tech-savvy 21st century learner*” (PebblePad®, 2017). It may be argued that within Communication Design education today, students are directly experiencing the conflict between implicit university spaces for learning (inclusive of blended, online and online platforms), and their necessary self-directed ‘diverse wanderings’ of messy, creative experimentation and interpretation of the project briefs delivered to them. The “*ability to operate in the complexities of uncertainty*” is what Austerlitz et al. (2008, p.6) refer to as “*a pedagogy of ambiguity*”, and this underpins design studio education.

There is also an increase in educating designers in non-traditional environments by altering the knowledge and approaches from within specialised studio pedagogy, known as a ‘signature pedagogy’, to classroom-based learning (Sims & Shreeve, 2012; Crowther, 2013; Boling et al., 2016). Studio learning is now often interchangeable with classroom learning as the functions that these two environments separately assumed are now merged together (Boling et al., 2016). This is further evidence of the

pedagogical gap that exists between higher education and a specialised design education; an open project brief (to be critically interpreted by the student and which is characteristic of a design ‘pedagogy of ambiguity’) and the mass expectations of inflexible assessment-driven pedagogy within formal higher education today (Austerlitz et al., 2008). This disconnection also exists in the wide repertoire of learning spaces currently facilitating Communication Design studio learning within art schools, colleges of art and design departments today.

A case study approach in the UK and Australia

As a methodological approach, a qualitative case study approach was chosen to address the complexity and contextual conditions of conducting an in-depth inquiry within studio learning. That is, to investigate, participants on-the-ground, lived experiences of Communication Design studio learning, within two distinct higher education settings (Yin, 2013). Case Study 1 was situated within an independent art school in the UK, with three third-year participating students, enrolled in the BA (Hons) Communication Design (majoring in Graphic Design) course. Case Study 2 was conducted within a college of art inside a parent university in Australia, with seven participating third-year students, enrolled in the Bachelor of Digital Media (BDMe) course, majoring in Graphic Design.

Case Study 1 in the UK

This art school facilitates and supports the students and tutors to socialise together in a fluid, informal, open-plan, physical studio setting. The studio accommodates Communication Design students across a mix of year groups. This art school’s curriculum enables a flexible use of the conventional studio learning space, which is also known as ‘studio’. Individual and group critiques can occur at individually assigned desks, at communal sofa areas, within the various workshop spaces, or in hallways, with the workflow expressed in each setting. Many students work in close proximity, although desk dividers allow a small amount of privacy between each workstation. Wall space is a highly sought-after commodity and priority is given to students in years three and four. Active, experiential and ambiguous pedagogy is encouraged via the students’ creative interpretations and articulation of the project briefs delivered to them. Work-in-progress is openly displayed and visible for discussion, and there are no medium-specific briefs. Instead, diverse interests are dispersed across the programme, with overlapping interests, sub-communities, and activities, such as film screenings and speaker events, bringing students with common interests together. Students

are expected to attend this studio space full-time and, through a process of formal and informal engagement and community, the students are made aware of the value of studio through open-ended curriculum activities.

Case Study 2 in Australia

This institution was more formal in its approach to a Communication Design curriculum and the participants attended short, fixed timetabled tutorials within multi-purpose classroom spaces and in lecture theatres. As multiple rooms are used for design pedagogy the students are not assigned an individual desk space. In its place, hot-desking or no-desking is common practice due to the high turnover of design and non-design students using the learning spaces. Contact between the students and tutors mainly occurred during the formal, timetabled classes, as do the group and individual critiques. They engage with activities representing studio practice, such as working together in groups on project briefs. Work-in-progress is often not displayed nor visible for discussion until assessment presentations and deadlines. The students are defined by their specialisation (for example, Graphic Design) and they work on centralised, medium-specific set briefs in this college of art. They are not bound by a physical space, but by common interests, and individuals' group accordingly. Active and experiential pedagogy is encouraged at this institution. However, the rigid, assessment-driven timetable and classroom-based delivery reduces the opportunity for open-ended creative ambiguity. Full ethical permission was obtained from the institutions and participants in the UK and Australia prior the research activities.

Research methodologies and methods

The data was gathered via the systematic examination of formal and informal learning spaces, which provided the naturalistic settings in which to conduct the research within Case Study 1 in the UK and Case Study 2 in Australia. Each group of participants worked within conventional studio and Technology Enhanced Learning (TEL) classroom environments using an inductive Participatory Action Research (PAR) approach. Participants responded to their everyday learning experiences through detailed and reflective narrative accounts via a series of Participatory Design (PD) workshops and visual, sensory and sound ethnographic research methods.

Participatory Action Research (PAR) facilitates a multi-modal methodology that is progressively open-ended, and the research activities were developed in a collaborative partnership with the participants (Chevalier & Buckles, 2013). In PAR, participants interact and identify patterns and variations in their behaviours and practices by reflecting on

sections of the collated data. This reflection-in-action allowed the participants to react and plan future actions as they made improvements based upon judgments of accumulated evidence over time.

Participatory Design (PD) (formerly known as co-operative design and used interchangeably with co-design in other fields) is an approach that is grounded in the involvement of people in developmental processes (Sanders and Stappers, 2008). It builds on the participants' experiences and it challenges conventional approaches to designing. In this study, PD facilitated methods and tools for the design process in a variety of contexts and enabled descriptive and analytical discussions to emerge from the processes and outcomes when PD is applied to studio learning.

Ethnography as a methodological approach and visual, sensory and sound ethnographic research methods were employed with the PD approach in the gathering of the data. Ethnography is a technique that began in social anthropology when Claude Lévi-Strauss examined "patterns of kinship and behavior" in the late 19th and early 20th centuries (Given, 2008, p.807). Visual ethnography is considered invaluable for generating interpretative research from data via visual methods, such as video and photography. Consequently, GoPro® filming research methods, as a form of Photovoice, were integral to the research design. Photovoice is a form of arts-based visual ethnography in action. It elicits responses from individuals as an image-based discovery and action method of storytelling (Brandt, 2014; Delgado, 2015). Sensory ethnography challenges, revises, and rethinks core components of the ethnographic framework, stressing the numerous ways that smell, taste, touch, and vision can be interconnected and interrelated within research (Pink, 2009; Gianoncelli, 2013). In this investigation, sensory ethnography was implemented via the practice-led methods.

Conducting research through the lens of sensory affect via the practice-led methods

To begin, the character and structure of sensory affect must be understood in order to understand developing conscious awareness of sensory experiences in studio learning. The word affect means to 'have an effect on' or 'to make a difference to', and to influence, stir, impact, imitate or assume a particular state of feeling 'something'. It can be an emotion, desire, or mood associated with sharing or influencing an action, feeling, or notion as a means to effect changes in individuals (Wetherell 2014). Wetherell (2014, pp.221-222) describes affect as a feeling of control or lack of control. Patterns of affect relate to a sense of belonging. Pfaffmann and Norgren (1977, p.18) draw upon a scientific notion of sensory affect and motivational behaviour as

having three possible reactions: approach and acceptance, rejection or withdrawal, or neutrality (Wetherell 2014). Sensory affect is the awareness of control or lack of control of sensory inputs through the senses, that may interfere with engagement and learning. In short, sensory affect is experience, and the effect of those experiences, detected through the body.

This study aimed to foreground an awareness of these experiences in order to instigate dramatic shifts in a student's understanding of their experiences of studio learning. This was achieved by 'reflection-in-action': the process when participants were actively encouraged to partake in self-reflective inquiry to improve their own practice and engage in a cycle of continuous learning as they pay critical attention to everyday actions (Sullivan, 2009, p.67). The analysis was iterative and the distinctly different ways of experiencing the phenomena were discussed collectively and not individually (Prosser & Trigwell, 1999, p.57). The next part of this paper outlines a limited sample of the practice-led methods used in this study.

Practice-led method: Sonic-mapping in Case Study 1

Focussing on the visualisation of sound, I launched a sonic-mapping (sound recording) design activity with the participants in Case Study 1 in the UK. In week five of the eight-week case study schedule, they were allocated two weeks in which to produce and deliver a sonic map, i.e., to record and interpret the sound phenomenon present within the studio via a creative outcome. The final construction and format would be entirely the participants' own choosing in order to elicit their own interpreted sound investigation. The results obtained from this sensory ethnographic method were surprising as all three participants used differing approaches. The different formats expressing their responses to sound within the studio are shown in Figures 5, 6 and 7. The first participant generated an animated gif of repeated shapes (Figure 5). Each shape had different sizes and colours, and with slow and fast animation to represent the intensity and frequency of sound generated by other students within the studio. The second participant produced a clay cube, hollowed in the centre as an expression of sound (Figure 6). This artefact conveyed and communicated the sound present within the broader, concrete architecture of the art school. Another created a hand drawn, haphazard coloured visual map of sound waves (Figure 7). This map included an aerosol can, which represented the location of this students' personal workstation within the studio.

The sonic-mapping artefacts achieved two main objectives: a developing individual awareness of sound, and the realisation that sound might be constructed from layers originating from differing sources, such as the architecture itself or the studio participants. Interestingly, the

participants initially attempted to reduce the impact of their visual sense by closing their eyes to tune into the sound better as a means to comprehend it, prior to creating their own sound-mapping artefact.

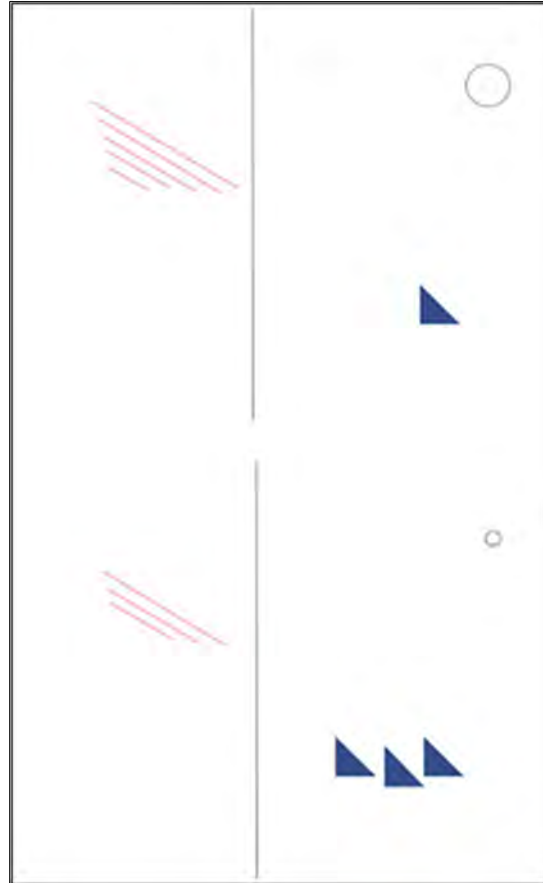


Figure 5. The participants used differing creative approaches, to express their notions of studio sound: an animated gif. ©



Figure 6. The participants used differing creative approaches, to express their notions of studio sound: a clay cube. ©



Figure 7. The participants used differing creative approaches, to express their notions of studio sound: a visual map. ©

Practice-led method: Sound drawing workshop in Case Study 2

Within Case Study 2 in Australia, I used sound clips recorded from studio learning spaces as the stimulus for analogue drawing. I recorded and edited the five sound clips with each lasting three minutes. The nature of the sounds remained unknown until the task had ended in order to encourage spontaneity in the participants' drawing responses. The six participants taking part in this workshop simultaneously produced a set of five drawings each, visualising their responses to the sound clips through mark-making on paper (Figures 8 and 9). The sound clips consisted of five mixed social and non-social sounds; air conditioning, the sound present inside the open-plan studio from Case Study 1; a loud intermittent beep; a creative workshop; and a clip of music from Mort Garson' electronic symphony Plantasia from 1976. This last portion of music was chosen by the participants from Case Study 1 to use in their concluding research workshop activity to promote healthy sound in their studio spaces.

When reflecting on this task, the participants described the creative workshop as sounding organised and invigorating. Dan said, "it sounded like more of a controlled space, so and then all of the creativity flowing and so, sort of like noise floating". In contrast, the sound of an open-plan studio environment produced this verbal response from Dan, "the sound was like a hundred people walking past, I felt like I was in this corridor working and then a hundred people walking behind me". His accompanying visual drawing response to this can be seen in Figure 10.



Figure 8. The six participants simultaneously produced drawings visualising their responses to the sound clips. ©



Figure 9. The six participants simultaneously produced drawings visualising their responses to the sound clips. ©



Figure 10. The sound of an open-plan studio environment produced this drawn and verbal response: "the sound was like a hundred people walking past". ©

A visual and verbal correlation was found between each of the drawings produced in response to the fire alarm and intermittent security beep. The participants commented: *“Did everyone use red to draw that?”*, *“Is it always this loud?”*, *“...It’s aggravating now”*, *“I really hated it and it was hurting my head”*. Interestingly, the security beep was previously unnoticed until Charlie identified it in the early stages of the Case Study 2 activities; as Dan confirms: *“I never noticed it until Charlie said something [about it] ... I’m pretty good at zoning out stuff like that”*. The presence of multiple sounds in their everyday classroom space were also previously overlooked until this task foregrounded the impact of sound as a sensory affect, and how these experiences might disrupt engagement in their educational environments.

The results of this activity suggested that music received the most relaxed response of all, yet it did not appear to encourage work on creative projects. As Dan said, *“And the last one was like really nice and calming, but it is more like I want to go to sleep... I didn’t feel like doing more work so, it was really nice and [I] felt relaxed but I did not want to do anything”*. By the end of this group activity workshop, and with a successive range of verbal and drawn responses, the overall data for this case study indicated that sound is a factor that impacts upon learning spaces.

Meaning making

The Participatory Design (PD) workshops and activities enabled the participants to externalise their internal interpretations of studio learning through the practice-led methods. Using Communication Design creative processes (both analogue and digital) as tools to externalise meaning with the participants facilitated discussion among the group. This process provided strategies to bring pertinent themes out into the open. Deliberate and conscious reflective analysis, as a form of mental processing, prompted questions and revealed things the participants and I may not have known. As Bolton (2014, p.2) says, *“reflective practice can enable practitioners to learn from experience about themselves, their work, and the way they relate to home and work, significant others and wider society and culture”*. Taking the time to reflect was critical in order for the participants and me to understand and respond to the most valuable information that surfaced from a comparison of the methods we used in order to understand sensory affect within our main working environments.

Analysis and interpretation

This research investigation closely adheres to the process of analysis of Creswell’s (2013) data analysis spiral. Creswell (2013, p.183) designed the four tiers of this spiral to define the simultaneous processes involved in analysing qualitative

data, beginning with the data collection stage and its organisation, then reading, memoing, and classifying categories of data, and ending with the concluding account (Figure 11). It should be noted that the process of analysis applicable to the case studies in this research investigation is original. The four-stage analytical framework used in this investigation adheres to a transcription process and subsequent thematic narrative analysis, and the coding of categories followed an analysis of the narratives in the data. This approach is influenced by the work of others, specifically Birch (2011), Cavendish (2011), and Varbelow (2015) and informed by a number of sources and strategies, which have been modified to best suit the qualitative, narrative inquiry of this study.

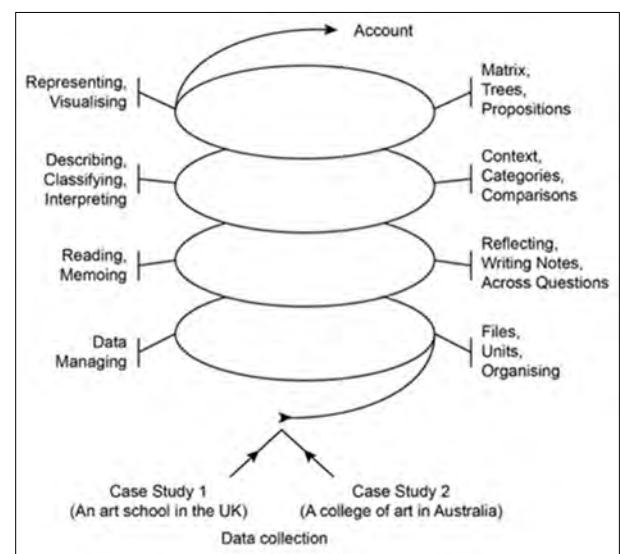


Figure 11. The Data Analysis Spiral diagram modified from Creswell (2013, p.183). ©

The complex, multiple case study exploration of Case Study 1 in the UK and Case Study 2 in Australia produced visual, narrative, and sensory empirical data. This provided a pooled data collection greater than its distinct parts, from which patterns, categories, and themes could be identified.

Discussion of findings

Overall, the findings showed that the participants could either be disturbed or supported in their experiences of learning spaces. Two different and opposing perspectives emerged from the two case studies. The Case Study 1 participants in the UK responded that their friendly, informal, day-to-day social interactions with peers and staff in their situated, conventional studio community, are integral to their collective and individual learning and practice. The allocated workstations for each student and the high-density desk space formation fostered a closeness in the

community. Natural light was abundant in this studio. Although the open plan studio was busy and at times, noisy, visual distractions were reduced by the use of desk dividers. The participants were happy to openly demonstrate, display or reflect on their work-in-progress to their community within the studio. Impromptu discussions triggered ideas, collaboration and social gatherings. They had confidence in their work and conviction in their identity as design students within this institution. All participants were motivated and willing to engage in studio and despite having a repertoire of conventional techniques available to them, there was a dominance of digital practice.

Surprisingly, the Case Study 2 participants rarely attended university. Instead, they had created their own informal, offline and online, community outside of the boundaries of their classroom learning spaces, mainly in cafes, at home and via social media. The hot-desking and no-desking culture at this institution meant the participants and their peers created their own strategies for learning elsewhere. With no dedicated physical studio or personal workstation, the participants vocalized a strength of emotion around this and in the language they used. They expressed that the university hadn't provided creative learning spaces for engagement within a specialised design education. The participants were willing to engage with studio learning but felt that their experiences of design education were limited or not authentic to the discipline.

Furthermore, they did not feel a sense of belonging in the university and were confused over their identity as a design student within a college of art inside a parent university. Their degree had much larger numbers enrolled into the curriculum and the formal timetable fostered feelings of vulnerability and less contact with educators on a day-to-day basis. They exhibited self-conscious behaviour and felt time pressure to complete assignments. They displayed a lack of confidence in their work. This was evidenced by their need to hide their work in progress. They saw little value in what they produced, even to the point of shunning sketchbooks. A dominance of digital practice was evident in their creative work. Reliance on digital practice meant that it was easy for the participants to obscure their work from the view of others and to not receive peer or educator formal or informal feedback at regular intervals.

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1. Implications for Communication Design practice
2. Supporting the community of practice
3. Institutional structure and management
4. The role of the studio environment
5. Pedagogical design / methodology
6. Meaning making of sensory affect

The following section outlines the practical significance of these findings for students, and in relation to the current management, and future development, of studio learning environments by educators and institutions. This is achieved by employing iterations of the Methods Process Model (MPM) alongside a set of practical recommendations specifically for each thematic category 1-6.

The Methods Process Model (MPM) as a set of practice-led research methods

The Methods Process Model (MPM) is a set of ethnographic participatory practice-led research methods, identified as examples of methodological best practice based on this study. In this investigation, the MPM is based on the findings of the research from each of the two case studies and the limited number of participants. The following sections frame a range of future recommendations for Communication Design studio and classroom-based learning and summarize why is it important that the discipline looks to challenge its educative process – in terms of thinking, creativity, practice, environment, community and education.

MPM 1: Implications for Communication Design practice

The Methods Process Model (MPM) was adjusted to investigate the implications for Communication Design practice within studio learning as shown in Figure 12. The practice-led tools and methods outlined in this version of the MPM can help and support the participants to learn in the environments in which they are situated, and since individual learning is revealed in the collective process. Participants can make meta-cognitive connections – learning how to learn in studio education – as they engage in the step-by-step, scaffolded process of the MPM specifically modified for creative practice. In combination with this iteration of the MPM, a range of future recommendations for Communication Design practice within studio and generic

classroom learning can be defined for educators and institutions. These recommendations (and in the subsequent sections MPM 2 - 6) imply student engagement can be improved and nurtured if implemented in contemporary Communication Design studio education and learning spaces. Educators and learning space coordinators should explicitly apply the following suggestions:

- Readily available tools and resources should be accessible in the studio and for longer periods of open-ended time;
- Encourage both digital and conventional methods of practice;

- Display work in progress openly and use physical, printed, 2-D and 3-D artefacts as a form of place-making and as a two-way process necessary for learning;
- Encourage the benefits of peer feedback on students' creative practice, as building and being part of a community of practice;
- Display student work, to the smaller peer group in the brief period following assessment, and to the college of art community or the wider university population on a broader collective basis, and as necessary to feel valued.

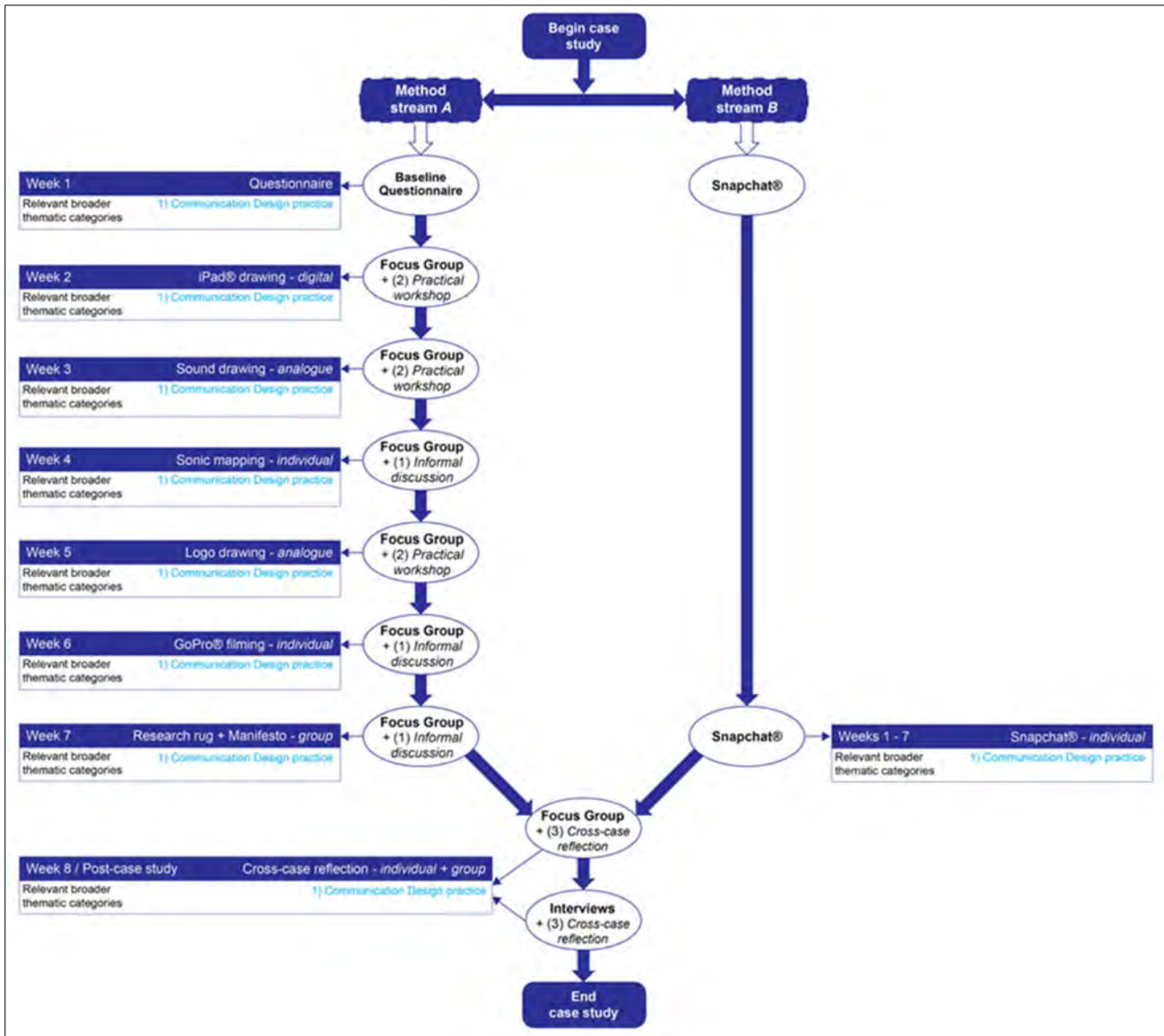


Figure 12. The Methods Process Model (MPM) adjusted to investigate the implications for Communication Design practice within studio learning. ©

MPM 2: Supporting the community of practice

This section outlines an iteration of the Methods Process Model (MPM) for supporting the community of practice (shown in Figure 13) together with a set of recommendations for educators to support participants' experiences of social interaction and community within the studio.

A key finding is the important role that the community plays in both supporting and helping to drive learning individually and collectively as friendships, collaboration and teamwork were central to the creative process. Experiential learning and collaborative practice leading to socially constructed meaning was more evident in Case Study 1 in the UK as everyday group work (formal and informal), and much less so in Case Study 2 in Australia. The participants from Case Study 1 benefitted much more from their friendly, informal, day-to-day social interactions with peers and staff than the participants of Case Study 2. Wenger's (2000) community of practice theory supports the idea of developing a shared repertoire of experience where practice and community become inter-connected as experienced by participants in the two case study domains.

The range of future recommendations for educators and learning space coordinators to support the community of practice includes: (option—remove “The range of” and keep the “s”)

- Allocating formal, communal creative learning spaces and individual desk spaces to foster a closeness in community;
- Allocating informal, non-creative areas within the studio for lunch, rest, spontaneous debate/critiques and allow the community to take ownership/make use of the space themselves;
- Foster friendly, informal, day-to-day social interactions with peers and staff;
- Foster multi-memberships in the community across offline and online participation platforms;
- Foster a sense of belonging in the studio community via collaborative group projects;
- Demonstrate and visually/verbally reflect the students' practice-led work back into their community to feel valued.

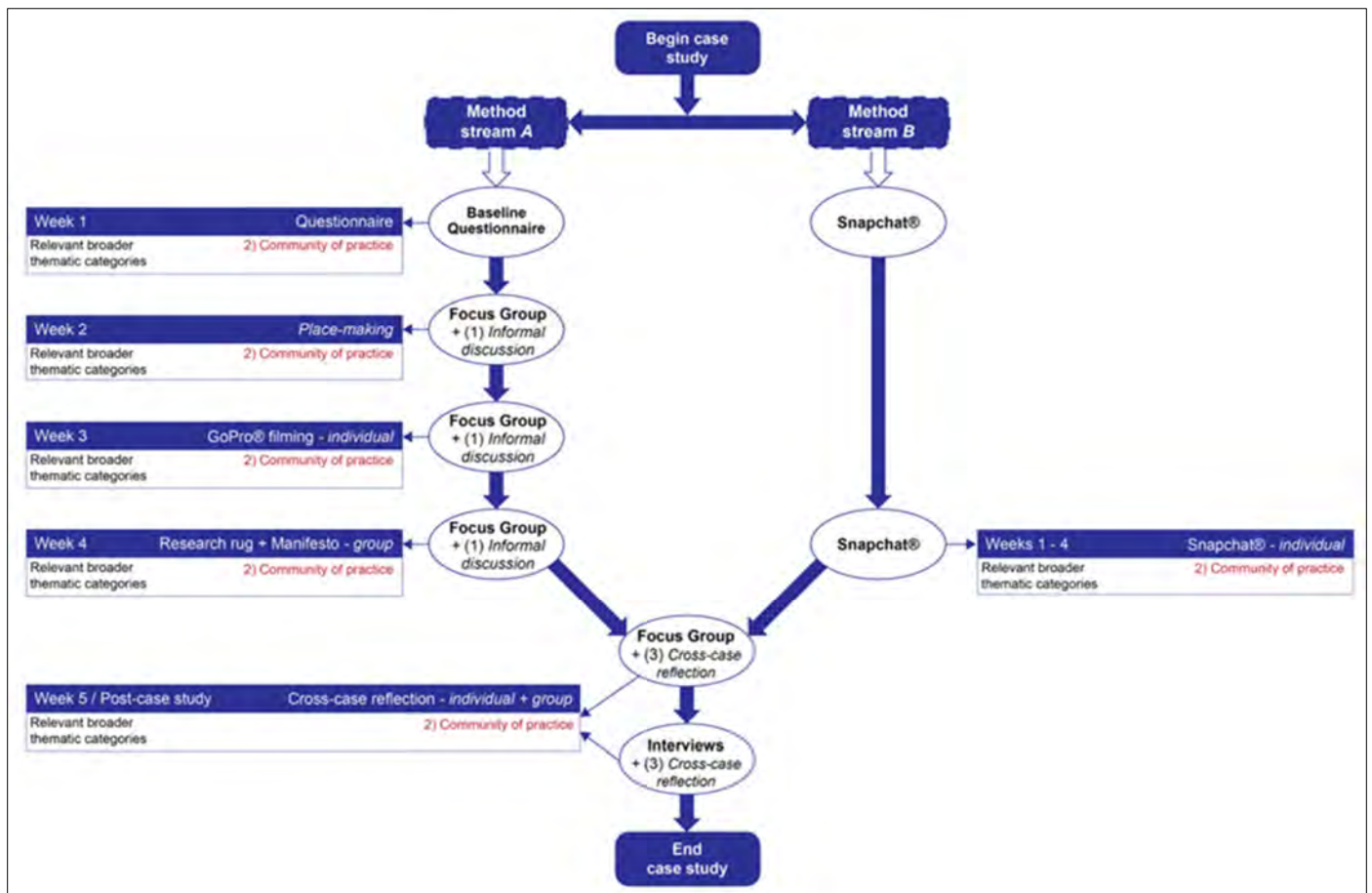


Figure 13. The Methods Process Model (MPM) adjusted to support the community of practice within studio learning. ©

MPM 3: Institutional structure and management

When considering institutional structure and management, the Methods Process Model (MPM) can be adjusted to support studio learning as shown in Figure 14 and the suggestions for key educators and educational managers to fulfil include recommending:

- Governing institutions should provide greater support and a stronger sense of identity to design students within mainstream university structures for the duration of their degree;
- Governing institutions should foster and support a stronger identity to design departments, art schools

- and colleges of art, especially when situated within mainstream universities;
- Governing institutions should provide specialised and dedicated Communication Design studio learning spaces, which are distinct from generic classroom learning environments;
- Institutional management should adjust university-wide rules and guidelines to support creative and practice-led studio learning;
- Institutional management should provide open-ended curriculum frameworks and timetabling for Communication Design studio learning.

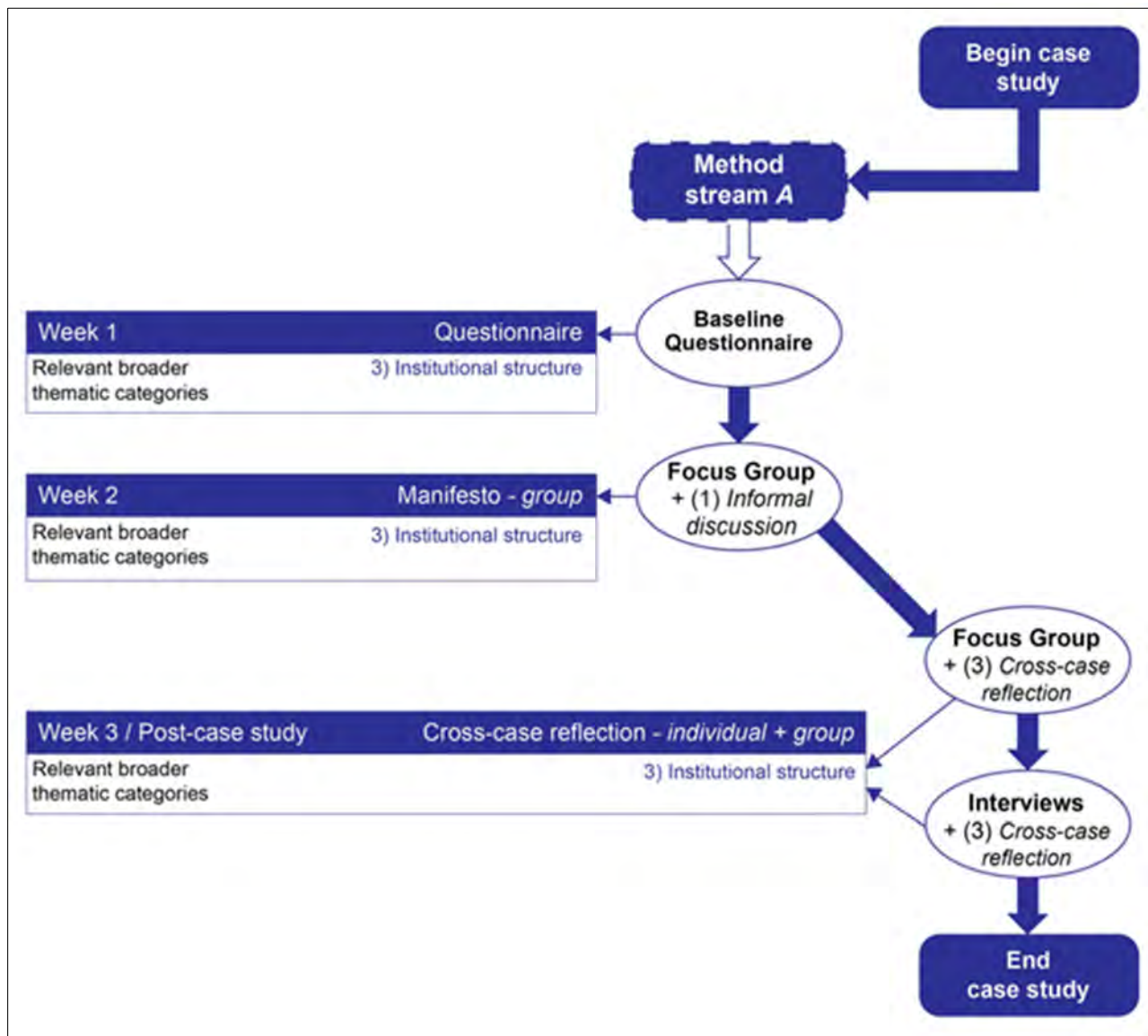


Figure 14. The Methods Process Model (MPM) adjusted to investigate the institutional structure and management within studio learning. ©

MPM 4: The role of the studio environment

When reflecting on the role of the studio environment in the current management and future development of creative learning spaces, the Methods Process Model (MPM) can be adjusted as shown in Figure 15 and the recommendations prepared for educators and learning space coordinators include:

- Assigning a personal desk space to design students means that they are more likely to implement strategies to engage with studio learning;
- The modular delivery of a hot-desking and no-desking culture should be avoided;
- Studio learning can function in a variety of spaces, internal and external to the physical studio environment;
- Design students require formal and informal studio learning spaces that provide:

- Communal and private space
- Digital and conventional processes
- Ergonomic comfort
- Storage
- Opportunities for creative mess

MPM 5: Pedagogical design / methodology

When investigating their experiences within the design curriculum, it was clear that the participants from Case Study 1 were more supported in their ambiguous studio learning and practice than those in Case Study 2. Therefore, the variation of the MPM methodology shown in Figure 16 can become the mechanism through which I, as an educator, could support participants to explore a 'pedagogy of ambiguity' within their studio learning spaces.

This approach draws upon Wenger's notion of reification (Wenger 2000). The creation and use of artefacts from the

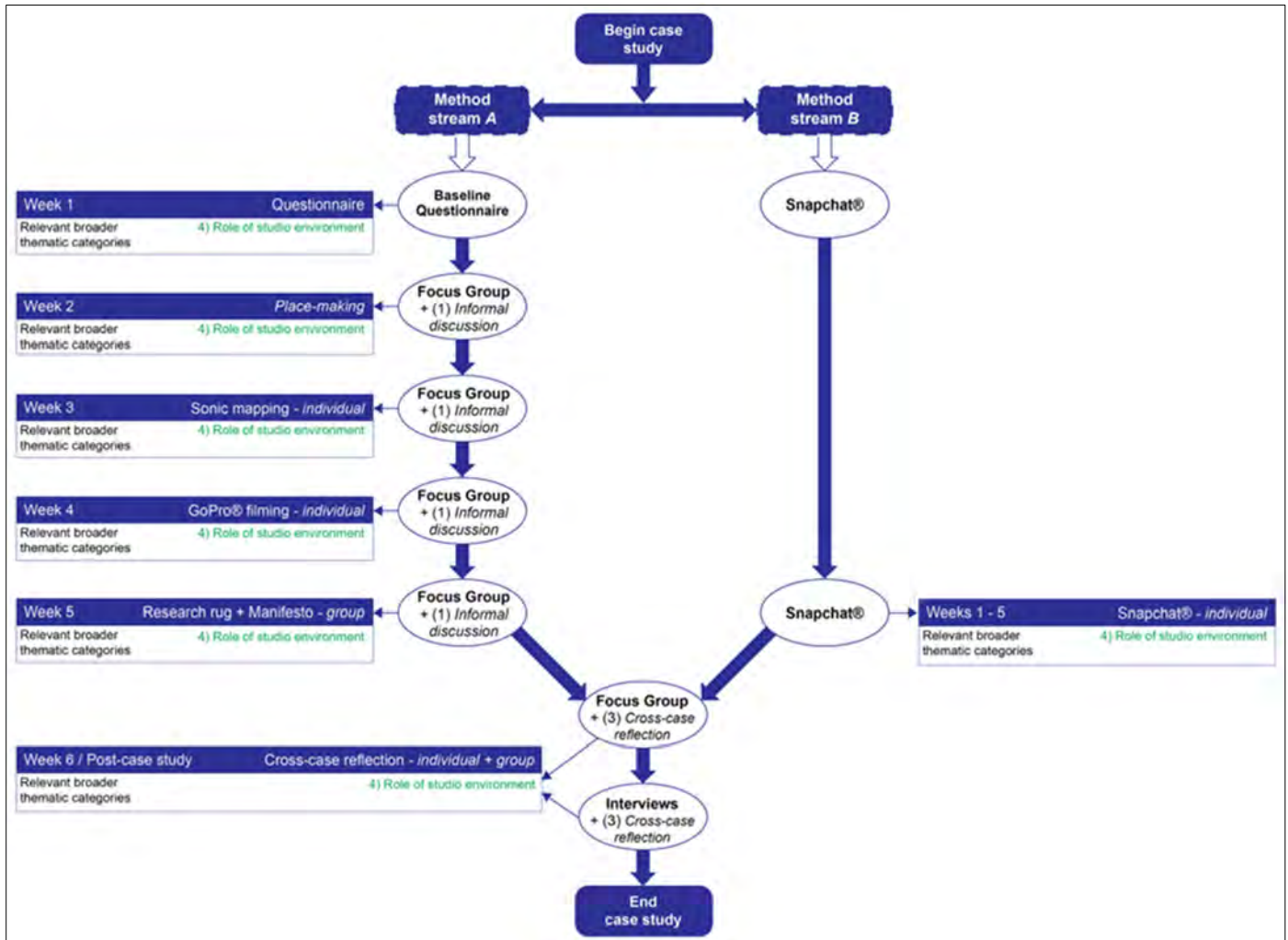


Figure 15. The Methods Process Model (MPM) adjusted to investigate the role of the studio environment within studio learning. ©

methods, such as the Sonic Mapping task, can foster and guide reflection and affection. The participants reflected to understand their studio processes and experiences and took into account their new perspectives of their developing feelings, confidence and actions towards these (Schön 1984). The recommendations for educators and learning space coordinators to implement an ambiguous pedagogy in studio learning are summarized below:

- Facilitate active, experiential pedagogy;
- Facilitate an open-ended fluid curriculum;

- Facilitate the flexible use of formal and informal, group and individual activities;
- Set non-medium specific briefs that are open to the student’s interpretation and creativity;
- Encourage diverse and overlapping interests, supported by events and sub-communities;
- Facilitate more contact between students and educators, formally and informally;
- Educators and institutions should support students to explore their perceptions of studio pedagogy, to adjust and learn together.

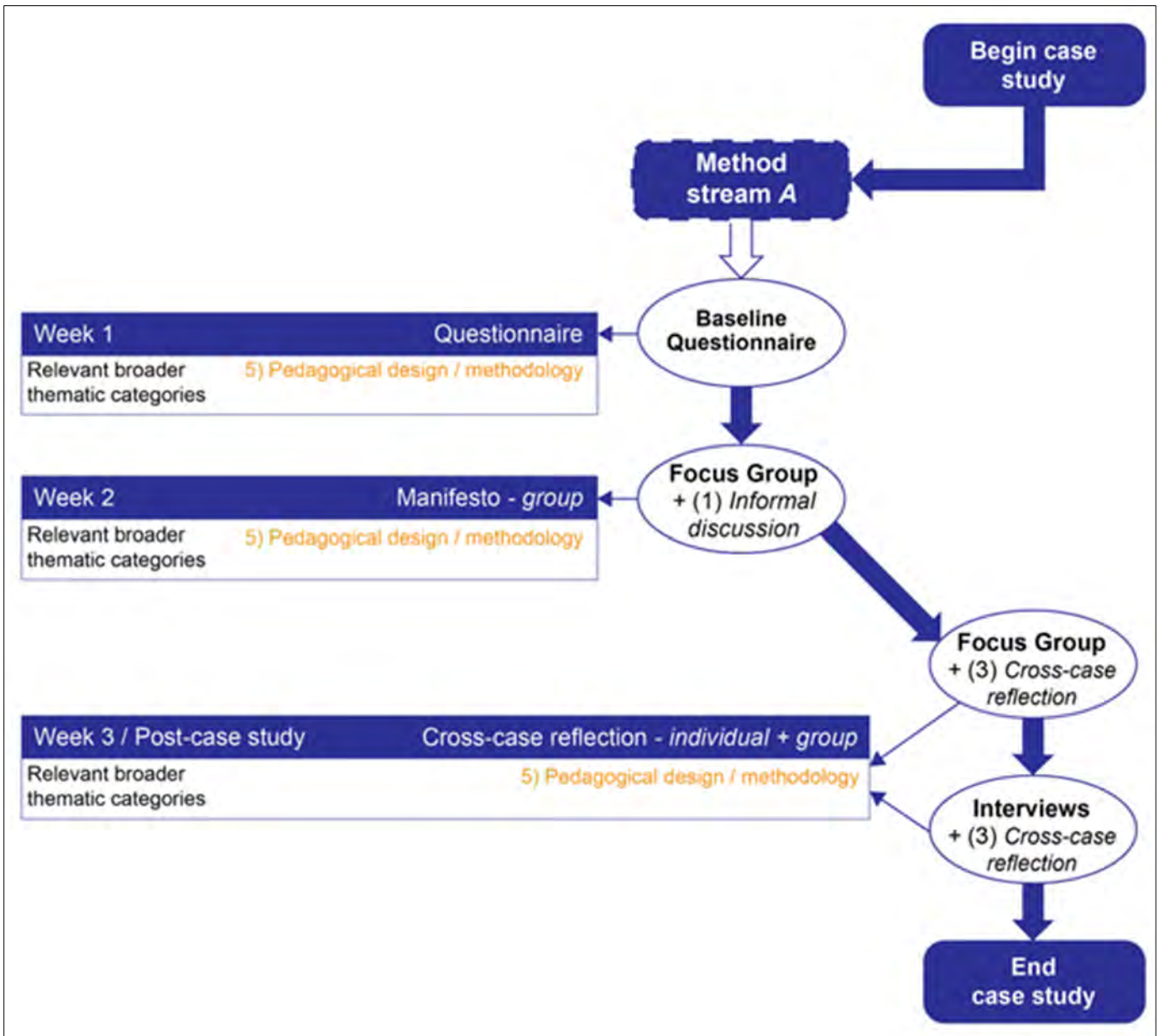


Figure 16. The Methods Process Model (MPM) adjusted to investigate pedagogical design and methodologies used within studio learning. ©

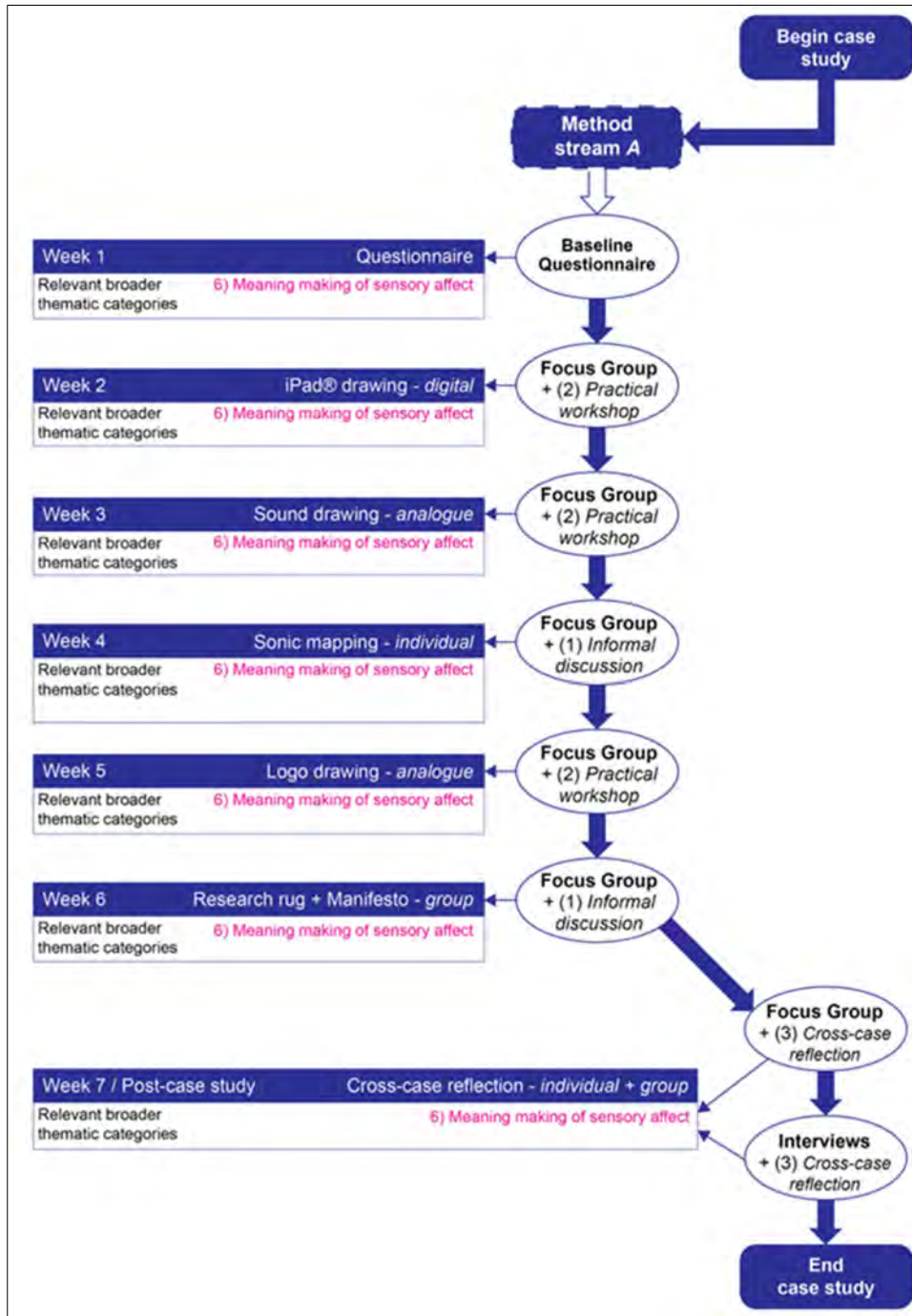


Figure 17. The Methods Process Model (MPM) adjusted to investigate meaning making of sensory affect within studio learning. ©

MPM 6: Meaning making of sensory affect

The participants across both case studies have developed their awareness, insight, and evaluation as they make meaning of sensory affect via mainly practical workshops. Therefore, the modified Methods Process Model (MPM),

shown in Figure 17, emphasizes the importance of co-creating a repertoire of artefacts, tools, and practice-led techniques with the participants to support their externalization of meaning. The impact of sensory affect contributed to the participants’ ease or unease within

learning spaces as noise levels rose, visual interruptions occurred, thermal comfort, maintained warmth, or natural lighting flooded the studio. A set of recommendations for educators and learning space coordinators to support meaning making of sensory affect within studio learning include:

- Reduce visual interruptions; incorporate dividers and partitions to reduce ocular distractions;
- Provide natural lighting;
- Manage sound levels; incorporate temporary and permanent sound-proofing or sound-reducing measures and strategies, depending on the learning environment and number of student's present;
- Facilitate communal spaces for eating and have access to food and drink outlets;
- Maintain a level of pleasant smell; reduce the odours from refuse bins, smoking shelters and nearby cafes;
- Allow space for creative mess on personal workstations and communal work areas; students should be encouraged to take responsibility for these areas;
- Have creative tools and resources readily accessible;
- Maintain a level of thermal comfort;
- Reduce grime and dirt.

Conclusion

In conclusion, educators and institutions can support and develop Communication Design education in light of the changing shape of the studio/classroom model today. The pedagogical gap that exists between higher education and specialized Communication Design education, and in the wide repertoire of learning spaces currently facilitating studio learning within art schools, colleges of art and design departments today should be reconsidered. Educators, educational managers and institutions should work toward an ambiguous form of creative pedagogy and facilitate a curriculum that embraces a progressive, student-centred approach to discipline-specific approaches such as using digital and analogue, offline and online tools and methods in an experiential and experimental way. This will lead to students developing confidence, agency, and an increasingly reflective awareness in specialized studio learning and generic classroom learning spaces. The Participatory Design (PD) tools used in several iterations of the Methods Process Model (MPM) allow educators and learning space coordinators to support these practice-led processes and offer opportunities for meta-cognitive learning strategies to develop through the Participatory Action Research (PAR) approach. The transferable and flexible nature of the MPM allows other Communication Design educators and

institutions to work with students to develop their experiential, environmental, and functional working relationships with Communication Design pedagogy, practice and their place in the community in studio learning spaces today.

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