

WHAT STUDENTS' THINK ABOUT AMBIGUITY IN THE VISUAL DOMAIN: FLUID TRANSITIONS IN REAL WORLD LEARNING

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Abstract

This paper provides a snapshot of some initial results from a larger research project about real world learning and identity formation using critically reflective tasks, in tertiary art and design. A dilemma's framework informs the design of the study as much contemporary literature in higher education emphasises equipping students' to work with, cope and become resilient when working with ambiguity and troublesome knowledge. This paper considered utterances from an assemblage of online survey data from students' in the middle of their first semester. Ambiguity, tension and taking risks are familiar concepts in creative practice, yet beginning students' signalled uncertainty and vexation about their learning through use of textual terms such as 'confusion', 'unsure', 'frustration' and 'put down'. Significantly, moments of intensity and nuanced kinds of ambiguity confidence and trust in relation to First Year Art, Design and Media students' experience of coursework and professional contexts were disclosed in this early transitional space. The findings of the research revealed the interdependent relationship between ambiguity and ethical practice as an implicit value requiring further clarification and visibility. Exposing and apprehending ambiguity as an outcome of the research signals the importance of contestation across tangible curriculum assets and in designing fluid learning encounters. The focus is on addressing concerns through learning frameworks that move beyond replication to construct experimental kinds of tension and risk using the concept of disequilibrium. Constructing ways to move feelings of being 'stuck' towards viewing uncertainty and confusion as catalysts for learning; prompts shifts from disequilibrium to learning that is important for students' to encounter early in their professional lives.

Keywords: Ambiguity, Critical Self-Reflection, Real World Learning, Disequilibrium

Introduction

This paper presents an initial snapshot of research in progress from the first phase of a large institutional research project about developing identity and post identity in professional learning contexts. Whilst authors in higher education have signalled the importance of ambiguity in creative practice (Vaughan et al, 2008), pedagogies of ambiguity (Wilson, 2015); and types of ambiguity, specifically in language (Scheffler, 1979) the significance of this research is in identifying an example of ambiguous practice from the perspective of beginning students. The ambiguous practice identified by novice students' in the methodology section of this paper is about dimension of intellectual property (IP) and specifically how it is understood in visual domains. The importance of students' understanding and "interacting with open-ness and uncertainty to enable them on graduation to negotiate the complex and unpredictable demands of the creative industries" (Vaughan et al, 2008, p. 125) is the focus of the research.

Situated within an urban research intensive university faculty of art, design and media the larger research project is externally focused on supporting students emerging professional identities through scaffolding real world learning experiences. Student, academic and industry perspectives on connectedness with the real world beyond the university and professional contexts informed the research design. The research identifies dilemmas of practice as a theoretical framework with which to analyse the complexity of real world learning (Windschitl, 2002; Cherry, 2014). A dilemmas framework or dilemmas space (Fransson & Grannäs, 2013) was selected as a research approach that reflects ongoing negotiation of issues that arise in everyday work with others. In a similar way, critical incidents and ethical dilemmas (Ehrich et al, 2011, p.179), have been identified in pre-service teacher education as a useful way to interrogate and deepen relational spaces. Such frameworks can also be applied to understanding complexity in developing creative professional knowledge as a moral and ethical field of practice.

In Phase One of the project, which is the subject of this paper, identifying dilemmas experienced by First Year students and subsequent checking with Focus Groups allowed for member checking and review to find alignments and disjunctions between novice beginning professionals and those of the expert or graduate student. Further, dilemmas reveal defining moments of intensity which may assist or hinder professional identity formation thus allowing the development of curriculum interventions and assets to address shared concerns. The outcome of Phase One of the project presented scaffolded learning packages designed to equip students, staff and established experts with new personalised learning frameworks.

Phase One of the larger research project employs a multisource approach to research design by utilising online survey data from First and Second year art, design and media students, N=80. The

survey was followed by two focus groups to member check survey responses, comprising postgraduate students, staff and established industry professionals. The aim is to work towards aligning assessment tasks to support real world learning in a large, undergraduate first-year core course. Phase Two of the larger project scaffolds three packages (Student, Academic & Industry) to enhance critically reflective capabilities with self, peers and workplace within a framework of reciprocity, despite time-poor environments.

This paper is focused on analysing the initial online questionnaire responses from students early in their tertiary studies identifying written quotes which highlight student experiences of the most commonly identified dilemmas. The research outlined in this paper seeks to investigate how students recognise and describe ambiguity through one identified dilemma of practice, that relates to (IP) in the development of beginning creative professionals. (IP) emerged as the most often mentioned dilemma from the First Year online survey and this paper unpacks some of the identified dimensions of practice that then relate to academic integrity. Vaughan et al (2008), describe succinctly the issues that emerge around academic expectations, ambiguity and pedagogy within art and design higher education particularly with regard to the “centrality of ‘ambiguity’ in the creative process. However, the fact that this value is implicit rather than explicit in our teaching practices, creates vagueness and insecurity for many of our first year students’ who have expectations based on the concrete and the certain” (p.1). In other words, ambiguity can work to either be limiting or transformative for students’ professional aspirations. Some concluding remarks will reflect on how actively constructing activities and events that privilege clarification and conversations about ambiguity have the potential to impact real world learning in creative fields.

In addition to the conceptual framework of dilemmas we also posit some contemporary applications of the concept of disequilibrium, as proposed by Dewey (1934). Dewey’s visions of enlightened education, art as experience and having “an experience” included the encouragement of experimental intelligence and plurality, offering an analogy of the student as the fluid organism, embedded in an environment of which they are very much a part. As a counterpoint to providing ambiguous learning scenarios and prioritising disequilibrium, Vaughan et al, (2008), propose the need to provide meaningful participatory transitions to address gaps in the ‘educational process and purpose in relation to the world of professional practice” (p.150). Encounters with ambiguity in other words need to be supported, to acknowledge expectations and prioritise experimentation as we “... need to recognise that we have a dual role in facilitating those abilities” (p.150). The dual role is to carefully articulate a pathway that takes account of just enough disequilibrium to privilege the creative process whilst simultaneously ensuring that students have a way to move through ambiguity, with perhaps a

brief equilibrium in order to clarify and resolve confusion. The paper will highlight the significance of Dewey's concept of disequilibrium within a dilemmas context.

A learning framework and creative knowledge system as set out by Broudy (1988) counteracts linear and causal learning scaffolds typically applied in neo-liberal contemporary curricula (Connell, 2013). These theoretical frames will assist in an analysis of how ambiguity functions in the initial years of tertiary studio education. By suggesting that the design of learning encounters is informed by some of these theoretical layers, fluidity in former secondary students transitioning towards beginning creative professionals can be approached in a coherent and appropriate way (Snepvangers & Bennett, 2015). Informed by changing dilemmas, difficult decisions and the challenge of negotiating an uncertain path this research is interested in "movement, difference, singularity, emergence, and the entanglements of matter and language" (MacLure, 2013, p.171).

Working with ambiguity and troublesome knowledge has been the subject of higher education debates in relation to real-world learning for some time. For example, Boud (2000) has argued assessments ought to do double duty, not assessing for purely summative or formative purposes, but also aiding students to gain an understanding of lifelong assessment and learning in an ambiguous professional future offer an in-depth and holistic experience.

While there is a move towards the keeping of portfolios and records of reflective practice by more sophisticated professional bodies, suspicion sometimes arises that these promote skills of self-portrayal rather than other forms of learning and that the over-formalising of professional activity will lead to a loss of personal investment and a disposition of compliance (Boud and Hager, 2012, p.28).

Self-portrayal within the presentation of student work, without critical reflection, means that students are simply complying with conventions and presenting a boastful account of their practice. By focusing on moment of intensity and dilemmas that arise in practice, some of the ways that personal levels of investment can be understood and have come about can be illuminated. Rather than focusing on representational models and pre-determined templates or drop down menus, a range of perspectives and knowledge systems can be explored (Snepvangers & Bulger, 2016). As an alternative to representing and formalising accounts of practice, this paper's contribution lies in setting out some of the dimensions of (IP) as this area was most frequently (29%) identified by students in the First and Second Year Online Survey as a common dilemma that concerns beginning students in creative practice. A trend for creative educators to draw on that prioritises dilemmas of practice, choice and case study resources, acts as a catalyst for unsettling conversations. Such

dialogue is crucial to understanding ambiguity and identity formation in creative professions when engaged with moving beyond dispositions of compliance.

As Moon (1999) argued in his critically reflective framework, planning curriculum interventions to understand how self-determining choices impact on real world learning in creative fields can either be limiting or transformative for student's professional aspirations. Exposing ambiguity and working in constructive ways moves students' feelings of being 'stuck' towards viewing uncertainty and confusion as catalysts for learning, prompting shifts from disequilibrium to understanding early in students' lives. The selected framework of this research, dilemmas of practice offers a unique 'real world' opportunity for students to reflect beyond their own understanding as they encounter new experiences that act as a catalyst (Mezirow 1990) in enabling transformative learning (Windschitl 2002). Educational dilemmatic space presents an emphasis on the social constructions that result from the institutional conditions and relational aspects of everyday creative practices (Fransson & Grannäs, 2013). Not only do dilemmas support transformative learning but they also act as 'smart assessment' or rather assessments that have more than one purpose. As Boud (2000) has argued "double duty assessments" aid students to gain an understanding of lifelong learning scenarios evident in ambiguous professional ecologies.

For the purposes of this paper, ambiguity in educational contexts, concedes that the "kind of knowledge that art and design deals with is procedural, provisional, socially constructed and ever changing. There are few laws, formulae and tangible content lists that form a visible curriculum. In the creative industries practitioners and consumers construct what is appropriate, new and innovative" (p.126). Ambiguity is also a key term in the literature around creative signature pedagogies (Thomson et al, 2012) and recognised as "a kind of exchange" within the open-ended nature of creative production (Shreeve et al, 2010). In art and design pedagogies, embracing uncertainty and experimental process and engaging in tentative and ambiguous dialogues are linked with the educators' careful articulation of student expectations and diversity (Vaughan et al, 2008). According to Thomson (2001) this is a useful way of learning, particularly if encounters of ambiguity lead through reflection to moments of clarity where the student gains confidence as they proceed in the process and placement of their learning. The purpose is as Thomson (2001) stated, "to bring us full circle back to ourselves, first by turning us away from the world in which we are most immediately immersed, then by turning us back to this world in a more reflexive way" (p.254). Through this means of transformation of self, students reassess their assumptions about their role as a "critically aware practitioner" (Shreeve et al 2010, p.136) within both the higher education system they learn within and ideally, also within the world they apply this learning to outside the university.

Encountering Ambiguity as a Dilemma of Practice

The research for this project begins to explore why dilemmas of practice are significant places to begin to discuss complexities of knowledge across scaffolded learning scenarios early in students' careers. This section of the paper will argue why ambiguity as a dilemma of practice is essential for students to recognise, explore and understand as an empowering encounter and will argue how this can positively impact on student's ability as creative individuals in their future profession. According to Broudy (1988) the use of replicative, applicative, (p.8) associative (p.17) and interpretive (p.19) knowledge systems can be applied to emergent predicaments in educational settings. The "replicative" and "applicative" criteria of use, which may entail following instructions of how to use a creative tool or traditional methods of artistic production attend to whether students can replicate and apply what they have learned and may be important to set out as an educational starting point in creative practice. Applicative knowledge requires students to still consider working within the conventions, rules or procedures but also asks that the student apply the same correctly learned knowledge or skill to another scenario or context. Here the student has the chance to test the application of their knowledge, practice and refine skills such as methods of creative production by applying their knowledge across practices. In the use of replicative and applicative approaches increased familiarity with complex systems, art and design forms, software programs, methods of production and pre-existing applications of knowledge are useful places to start learning. In this early stage of learning emulation is common, students use pre-existing conventions and methods to inform their work. In this knowledge mode information and skills presented by the student may be very similar to an educative model offered by the institutional educator. Practical skills may be purely instructional, requiring teacher demonstration and student emulation that are commonly developed in repetitive tasks where reorganisation of pre-existing content is limited.

Associative and interpretive knowledge systems challenge students' to analyse and evaluate content rather than simply recall it. These encounters stimulate complex and effective critical thinking and problem solving capacities where students' express ideas in text or image creation. Principles of association include resemblance, frequency, contiguity, vividness and satisfaction which are acquired idiosyncratically over time. The interpretive use of knowledge necessitates understanding patterns of inquiry, which may be tacit and form a type of conceptual mapping focused on organisational networks. Both associative and interpretive forms of knowing depend on previously adequate replicative and applicative knowledge acquisition. Furthermore, understanding principles, meanings and associations implicit in exemplars and instances of tacit knowing are indicators of an educated mind.

By applying knowledge systems such as Broudy's (1988) replicative, applicative, interpretive and associative uses of schooling we can see how familiarity and industry engagement can be scaffolded throughout a creative program at a university level to create windows into professional contexts. In order to further develop student understanding of their future professions, successfully scaffolded educational experiences foster professional identity in students and the 'associative' and 'interpretive' uses of knowledge are most valuable to introduce sequentially after the replicative and applicative processes of learning have been established. These more involved associative and interpretive learning criteria of the educational framework as set out by Broudy (1988) can be linked to students understanding of the complexity of the visual domain. Including learning opportunities such as; building a repertoire of skills, self-confidence and opportunities to explore innovative approaches towards creative practice, an increased awareness of independent research and problem solving, and increasing confidence in their own abilities to move beyond emulation, associative and interpretive experiences are important to students professional identity formation. As with any form of learning it is important to have a place to start, a platform from which to build upon, as well as a regular access to real world learning opportunities. Knowledge systems which require an 'allusionary base' (Broudy, 1988, p.21) of information, understanding, and values, derive from the field of expertise that inform experience with ideas that help each person represent predicament and problems symbolically. The allusionary base is constructed from associative resources provided by student's prior learning, as well as knowledge of a field accessed through the interpretive repertoire of concepts and imagery inherent to a strong familiarity of the visual domain. Broudy (1988) pointed out that aesthetic studies inherent within arts education provide the student with associative and interpretive experiences crucial to the development of the allusionary base and develop the capacities for interpretation and informed criticism, as well as a richer vocabulary for self-expression. However, ambiguity and confusion may signal a moment for a student to actively seek clarification from their environment. This might be supported by asking questions, seeking out new knowledge or identifying specific areas of uncertainty. Incomplete information offers students' encounters of ambiguity.

Rosen's (2000) research is also useful in analysing the relationship between ambiguity and professional identity highlighting the skills set needed by individuals to perform with confidence. Through an analysis of business cultures and leaders, Rosen (2000) argues that successful professionals recognize that it is essential to be able to act competently in ambiguous situations. By being exposed to unpredictable encounters such as those experienced in real world learning scenarios, students have the opportunity to learn to deal with ambiguity, which in turn can promote creative thinking. This is an essential attribute employers require for people working in a creative professional practice. Rosen (2000) views 'business literacy' as suspending "our beliefs about what is true because

the facts of life alter daily. From simplicity to complexity, from clarity to ambiguity, from certainty to unpredictability, the chaos navigator quickly develops an entirely new mind set for change” (p.137). When students therefore identify ambiguity in their learning, this may signal an opportunity to explore the uncertainty of professional identity and practice. According to Oblinger and Verville (1998), many faculties “wish their students had a higher tolerance for ambiguity. Few would not admit to being frustrated by questions about “Will this be on the test?” or “How long does this paper have to be?” (p.130). Arguing that not many “professionals have well-defined job descriptions. Employees are asked to step outside a narrow position description and do whatever is necessary to fix a problem or satisfy a customer’s need” (p.130).

Fransson & Grannäs (2013) offer a connected and relational approach to understanding the role of identity and dilemmas in educational environments. They propose that dilemmatic spaces are continuously embedded, fluid and evolving in professional contexts, impacted by the changes in society; including political, economic and hegemonic powers such as those shifts experienced in our current digital age. If we consider dilemmas as fluid transitions in people’s social living, educational, digital and professional spaces these, constructions and negotiations are ever present requiring individuals to position themselves in relation to others. The conceptual frame of dilemmatic space offers students and researchers ways of connecting the ongoing formation of professional identity to a context of dilemmas.

Thus, negotiations, construction and the deconstruction and reconstruction of both professional and personal identities occur in relation to dilemmatic spaces. As such, the concept of dilemmatic space offers a way of connecting the ongoing formation of identity among individuals in relation to a dilemma. Both individual identities and professional identities are constructed in these relations, albeit to different extents depending on which sphere of life – private or professional – the dilemmatic space addresses (Fransson & Grannäs, 2013, p 8).

Resulting from structural conditions and relational aspects in everyday practices, this theory also recognises that although dilemmatic spaces can construct the subject, each subject views that dilemma differently and may indeed be unchallenged by the same problematic encounter. Depending on values, priorities, knowledge or identity the subject will have their own interpretation of the potential challenge and therefore what constitutes a dilemma of practice may vary accordingly. Having an understanding of one’s own unique position, environment and perception of themselves as professionals, this approach can be useful to understanding the complexity, salience and dynamics of ambiguity and challenges experienced by real world learning. A focus on dilemmas also has potential to elucidate and deepen the understanding of the complexity of educational context

Disequilibrium and Ambiguity

Being able to decide what to do next in a moment of tension or ambiguity may require an individual to draw upon previous experiences of similar concern, facilitating a self-reflection important forming a professional identity. In this way, feelings of discord help us to recognise disequilibrium and also supply us with the motivation to recover a new harmony, a restoration of a new form of equilibrium. The motivation to facilitate this shift may be reliant on the learner's support system, determination, resilience, confidence and unique identity. This relational theory highlights the educative power of encounters, of dilemmatic spaces and is reliant on reflection and self-reflection after the encounter (or event) has occurred. In this context it is important for the encounter to have occurred and been completed within the educational ecosystem to have the capacity to offer opportunities for transformation. As has been argued by Rourke and Snepvangers (2015) "The significance of individual ecologies to the mechanics of an ecosystem provides a transformative space for reflection in which to consider a developing sense of self as a professional person" (p.71).

Dewey (1934), took an "organismic" (Mortola, 2001) view of educational development and likened the human subject to a living organism again highlighting the significance of the ecological and relational theory of the student as part of an ecosystem. Dewey (1934) argued that development takes place not only in an environment, but also as part of an environment. Therefore, the human constantly negotiates the relationship between themselves and their environment. Resourceful approaches towards responding to moments whereby the human is not provided with everything they require forces the 'organism' to search for tools for survival. Primacy in Dewey's (1934) reconstruction of ethics belongs to inquiry, the intelligent choosing between incompatible ends, therefore the power of disequilibrium is the reconstructive activity required to reach a state of equilibrium enhanced by attention to learning within and through what we do and what happens to us.

At every moment, the living creature is exposed to dangers from its surroundings, and at every moment, it must draw upon something in its surroundings to satisfy its needs. The career and destiny of a living being are bound up with its interchanges with its environment, not externally but in the most intimate way (Dewey, 1934, p.13). In developing a repertoire of interpretations the process of having an experience has been extensively described and analysed by Dewey to reflect how an individual becomes more sophisticated in their learning. Dewey firstly distinguishes between different kinds of experience. For example, fragmentary, transitory, unresolved or otherwise incomplete experiences are not "an experience". For experience to qualify as "an experience" there are certain conditions that must be met including: each successive part flowing freely as an event that is seamless; the experience goes from something to something, indicating direction, dynamics and a

sense of completion. Dewey (1934) compares such qualities to those of an artwork, which is made of multiple parts, each distinct yet unified contributing to the effect of the whole without losing their component character. An experience therefore must be unified and consummated to enable successful resolution and the capacity to look back over the phase of the experience and interpret it, gaining meaning and significance from its unfolding. Painful mistakes and negative experiences all contribute to the usefulness of the experience and complete experiences build into an organic network of interpretations. Recognition of prior unsuccessful encounters builds on and engage, with each other to set up successful conclusions at a later date. Singular significance, problematics, irritations, fascinations and curiosities enable a learning focus and significantly when things are uncomfortable the individual's attention is piqued as they undergo the experience physically and materially in order to overcome the emotional intensity and disequilibrium. Dewey's call to move beyond everyday experience suggests that emotional intensity associated with moot points and tension become a motivating force for learning as a process of interpreting events and uncovering connections invites reflection. Undergoing the experience and overcoming the problem fosters analogous experiences in active and discovery learning and the significance of these ideas for this paper lies in the importance of an educator setting up learning situations which qualify as "an experience". For example, having complete experiences that are able to be reflected upon over time are likely to facilitate meaningful learning experiences and this may include overcoming dilemmas early in students' careers.

As an example of the power of dilemmatic space, Cherry (2014) discusses the experience of professionals working within highly volatile environments and how a dilemmas framework assists in understanding the development of ethical judgement. She sets out that the practices of life and work are complex and presents a detailed analysis of the work and training of Australian police officers. Policing, whilst different to the contexts of schooling, is an authoritarian profession which often engages with minors and diverse individuals, exposing power relations. Policing as a vocation differs from many others in society as it is fraught with encounters of tension and situations in which officers have to make a difficult choice quickly. For this reason, Cherry's paper is useful in unravelling the concept of dilemmas of professional practice and argues that in many situations there are no clear end points and often outcomes cannot be classified as right or wrong. This complexity presents itself in the practice of individuals who must make constant trade-offs between conflicting goals and values. Cherry's (2014) research unravels participant statements and enquires as to the ways in which police officers engage with dilemmas. The interest in identity formation acknowledges the role of the self, world and practice in the process. Cherry (2014) also discusses the dynamics of workplace learning

on identity formations, as well as the dynamics of occupational cultures. In this paper, like Cherry we argue that the role of the university is to prepare the student and beginning professional to enter a world in which they will be contested. It is the responsibility of universities and organisations to create safe spaces in which complexity can be presented openly. Learning to become a part of a profession initiates newcomers into a community of practice or relevant field of expertise. The paper also notes and emphasises the significance of preparing people to cope with ambiguity by exposing and discussing dilemmas instead of hiding them.

Learning in higher education as proposed by Barnett (2012) ought to focus on a learning in-and-with uncertainty. Although the creative fields may not require professionals to make split second decisions which may affect the safety of other individuals in their environment, the work they undertake may present opportunities for themselves as professionals to make complex choices. Practice dilemmas are relevant to situations where information is incomplete or confusing and individuals are compelled to make challenging choices.

The objectives of the research project discussed in this paper, highlight key dilemmas connected to tertiary creative study, as they emerge through transitional moments in students' early experiences of a profession. The research project also approaches the topic of professional identity formation by focusing on student identified dilemmas of practice captured from an online questionnaire conducted early on in students' tertiary studies. The analysis of such is presented, drawing upon a selection of student written quotes will be disclosed, which highlight relevant experiences of the most commonly identified dilemmas and also positions the student as partner in the research project.

Research Methodology

The larger qualitative research project uses a mixed research methodology utilising online surveys, focus groups, member checks, research interviews alongside NVivo data analysis of survey and transcriptions. The data instrument used in Phase One of the research project utilises an initial online survey of First and Second year students in a large tertiary art and design school in Sydney, Australia. The number of respondents for the survey was $n = 80$. Ten questions, (see Appendix), were designed for the online survey and these addressed questions of belonging, critical incidents, assessment and ethical issues and concerns. Emotional intensity was also of relevance to the Deweyan concept of disequilibrium and ambiguity and two questions, Question 9 & 10 engaged directly with ethical dilemmas and emotion.

9. Describe one ethical issue that has emerged during your study within this program.

10. Describe a moment where you have experienced a dilemma in a professional context (within the area you are currently studying or working within). For example – has there been a moment where you were confused, felt passionate or challenged by something? Briefly describe the emotion and recount what happened.

The questionnaire was designed to capture student experiences of professional dilemmas early on in their tertiary education and make links between the ethical encounters they had experienced. These questions were sent to students through an online portal and constitute one part of a larger research project. Participation in the study was voluntary and students were sourced through the art and design first and second year cohorts. Subsequent student responses provided the data from which further research events were developed, engaging staff and industry professionals in focus group discussions and assessment conversations.

Initially, the researchers identified common themes and terms using the survey tool analysis function to generate key words that were repeated in the transcripts. This initial data analysis was limited, yet yielded some initial clues as to the prevalence of uncertainty and vexation in student learning in First and Second year through the use of textual terms such as ‘confusion’, ‘unsure’, ‘frustration’ and ‘put down’. When analysing the whole textual transcripts that contained far more nuanced narratives than could be reported in this paper, it was decided to focus on just the final two questions (Question 9 & 10) in the online survey.

The research analysis phase built on MacLure’s (2013) acknowledgement of:

... uncomfortable affects that swarm among our supposedly rational arguments – moments of nausea, complacency, disgust, embarrassment, guilt, fear and fascination, that threaten to undo our certainty and our self-certainty by again, allowing our bodily intensities to surge up into thought and decision-making. These gut feelings point to the existence of embodied connections with other people, things and thoughts, that are far more complex than static connections of coding (MacLure, 2013, p.172).

The explanatory framework of dilemmas and MacLure’s unsettling perspective meant that the next phase of data analysis focus on “moments of disconcertion” (p.172) where students were conflicted about available choices and ethically demanding activities. The research methodology links to MacLure’s (2013) post-structural critique of the practice of coding, categorisation and stable bodies of knowledge. The project team was intent on highlighting commonly identified dilemmas and

interpreting the complexity of these issues, the emotional intensity of the concerns identified by students, and refusal of quick judgements by researchers in analysing qualitative data.

Data Analysis

The online questionnaire responses revealed complexities of student experience and the research team identified seven categories or common themes. Narratives supplied by students as short written responses highlight ethical issues which students have experienced, not just personally in their educational experiences, but through the information they have gathered through university life such as; peer to peer interactions, experiences of industry and information gleaned as a result of communication with staff, course content and classes undertaken. Typical utterances such as “not knowing”, being “unsure” or experiencing “difficult” learning encounters were also identified within the statements made across all seven categories. These initial responses hint at the creative students’ sense of vagueness, uncertainty and ambiguous learning encountered in their First and Second Year of university. In addition to statements which communicated student’s lack of clarity within the knowledge field, many statements answered the question with another question. Other statements describe hesitation in making an ethical decision within the categories outlined. These patterns were identified by the research team as representing ethical experiences of across multiple categories. Student insights have revealed a developing understanding and considerations of the industry, which they had chosen to be a part of. The online responses analysis was the first stage in building a “Bank of Dilemmas” as an outcome of this initial project seed data. These seven categories set out below provided a typology from which to quantify data from most commonly identified dilemma at number one and so on, starting at (IP) at the top as the most commonly identified dilemma of practice. From Question 9, the identified dilemmas were:

1. Intellectual Property – 25%
2. Diversity /Privilege/Censorship /Voice/Political correctness – 20%
3. Ambiguity /Group work/Communication – 12%
4. Financial constraints /Cost of materials / Materials & sustainability - 12 %
5. Professionalism of tutors/Curriculum /Feedback and critique - 12 %
6. Loss of skills/Student expectations not met/Access to space/resources. - 12 %
7. Group critique / Communication methods - 10 %

Although students identified ambiguity as the third most common dilemma experienced, elements of disequilibrium, tension and frustration underpin encounters of each category outlined. Although ambiguity falls short of halfway at number three in the emergent data the qualities of tension inherent

within ambiguity present students with a range of ethical choices across each category. These dilemmas were analysed in relation to identified frequency, scope and relevance, highlighting ethical implications for students and industry.

The notion of a Bank of Dilemmas has been developed as a framework to be initially trialled with academic staff in assessment conversations to plan learning encounters to guide students in the beginning stages of their degree program to provide a fluid, diverse and interpretive base as they start a career as a creative professional. It is envisaged that a key outcome of the project will be this conceptual map or bank of dilemmas so that students are exposed to a range of associative possibilities, beyond replication and application as meaningful experience. The Bank of Dilemmas underpins a social constructivist approach in the development of frameworks to build a robust repository of evidence based on contemporary professional dilemmas. Windschitl (2002) theorises that a constructivist frame of reference incorporates conceptual, pedagogical, cultural and political frames, with each frame evolving from the last to incorporate increased numbers of stakeholders. For this project the pedagogical frame is replaced with professional practice including aspects that build towards a professional identity and a creative community. A dilemmas framework was ideal to engage a diverse range of student understandings of practice across specialised disciplinary contexts. Member checking the bank of dilemmas in focus groups has tested the efficacy of each dilemma to inform workshops and conversations with academic staff. A bank of dilemmas will also be used by the larger research project to develop case studies and asset resources to support students' real world learning.

Disequilibrium as a symptom of ambiguity

Learning can be perceived as a transition from an initial disequilibrium (confusion, doubt) toward equilibrium (satisfaction, knowledge). The learner is an active participant in the dilemmatic space and engages with their own learning processes depending upon how they respond to encounters and experiences. In this way the practitioner/teacher perspective and key events exemplify a bigger picture/idea. In the same way that symptoms are indicative of a larger problem in forming a medical diagnosis, profiled sections of fieldwork data used in the study are symptomatic of a larger issue in professional practice. The initial analysis of data from the student cohort revealed a large selection of different examples of unease. Selected quotes are included which were typical of the key themes. A snapshot of the emergent student data in the quotes below reveal rich complexity of how a state of may present itself as a symptom of ambiguity.

I'm not professional and I won't ever be (Transcript, p 35, Response 23).

The quote above refers to students' limitations in accessing their own beliefs in themselves as professionals. The student quote above also demonstrates a lack of self-confidence and places the young creative within predetermined frameworks of knowledge including Broudy's (1988) replicative and applicative learning systems. Identity at this early stage is far from 'professional' and reveals a feeling of disequilibrium and uncertainty in what was expected of them and a resistance in imagining themselves as an expert.

I have felt very confused at times during this course so far. For example, when addressing one assessment task I was unsure of what the actual aim was, and what the marker was looking for. In that time, I felt very anxious and very confused (Transcript, p 35, Response 29).

In this phase of identity development, the student is fearful of making mistakes and is instead concerned about emulating something the marker (or teacher) is looking for. In the visual domain assessable tasks are often open ended and allow students to go beyond the replicative learning model, towards an outcome which may offer risk taking, experimentation, conceptual deconstruction, interpretation and a multiplicity of analysis. Divergent opinions, happiness as well as frustration about a task may also be relevant in assessments associated with learning in the visual domain.

It has been my experience so far that my highest moments of passion and happiness often were the things that also caused my moments of confusion and frustration (Transcript, p 35, Response 35).

When I felt humiliation in front of one of my classes as my idea was disregarded by the lecturer. I felt upset and not worthy. I turned that situation into a positive and created an empowering work for myself and anyone who ever feels like that when it seems they are being put down by higher forces (Transcript, p 37, Response 63).

In the two quotes above we begin to understand how an encounter may function as a transformative learning tool. In applying Broudy's (1988) terms we begin to see a shift away from the replicative and applicative towards an interpretive approach to learning. The student recognises a dilemma but moves beyond being "stuck" applying deeper levels of engagement to learning through the difficult encounter. Critical reflection is crucial for these students to become empowered by their experiences of disequilibrium. Critical reflection on moments of disequilibrium highlights how students' can be encouraged to actively embrace a dilemma as a way to move beyond compliance and meet experimental creative outcomes. Self-portrayal without critical reflection within the creative arts means that students are simply complying with conventions and could simply be presenting a boastful

account of their practice (Boud & Hager, 2012). Compliance in this domain might be relevant early on in the student's early learning scenarios, however as students move towards the interpretive and associative knowing, (Broudy, 1988) compliance becomes less significant to innovative practice. These student statements enable the analysis of learning spaces "which are often places of transition, and sometimes transformation where the individual experiences some kind of shift or reorientation in their life world" (Savin-Baden, 2007, p.3). Barnett (2004) discusses the role of complex systems of knowledge in the uncertainty of learning for an unknown future. The student quotes reveal layers of complexity referring to the student's sense of themselves and of their relationship to ambiguous learning encounters. Ecologies of knowledge underpin encounters of ambiguity and challenge student's "understanding (knowledge), acting (skills) and being (self)" (Barnett, 2004, p.253). In identifying the value of ambiguity in troublesome hidden learning spaces the student might also experience a feeling of being 'stuck'. As we can see in the quotes, uncertainty however can become a catalyst which might prompt movement (Savin-Baden, 2007, p.3), from disequilibrium to understanding. In these scenarios we can see the key role of an educator in exposing the power of ambiguity needs to be balanced alongside a clearly articulated structure making the role of passion, confusion, and frustration visible and explicit in professional learning. At the same time, it is the educator's responsibility to provide case study examples and opportunities to ensure that the student is not so far into a state of disequilibrium that they cannot operate or find it difficult to negotiate a pathway through complexity. In such as dilemmas framework the emphasis of professional education shifts to enable the learner to pose questions, making assumptions explicit and allowing interrogation of one's own practice and the practices of others, therefore enabling the tertiary classroom to become site a for enquiry (Windschitl, 2002). Rather than offering an exhaustive explanation of how each category represents an example of dilemmatic space within the visual domain, the authors will next focus on analysing the data in the key theme identified as (IP).

Looking closely at one dilemma

In the online survey responses, the one most commonly identified dilemma that students discussed was around their disquiet and uncertainty with the notion of (IP). For the purposes of this paper, we have selected the largest dilemma as a focus to illustrate new dimensions of concern in the visual domain, as 29% of students surveyed responded that (IP) was of concern to their professional creative practice. The reason (IP) has also been identified here is that the Focus groups, comprising postgraduate students, academics and established industry professionals indicated that (IP) was not a high a priority for professional practice. This created a paradoxical relationship as the other identified categories (Diversity, Ambiguity/Group work/Communication, Financial constraints, Loss of skills)

all had high agreement in the Focus Group Member checks. High agreement was between the First and Second Year Online Survey Dilemmas and those Dilemmas ranked in importance by the Focus Groups. For this reason, (IP) has been selected for discussion as visual dimensions of plagiarism are also rarely discussed on higher education websites regarding (IP).

The six dimensions of (IP) that emerged from the research were identified as:

1. Plagiarism – 46%
2. Creative collaboration/Crediting assistants – working in teams – 15%
3. Cultural sensitivities – 15%
4. Mass production and the creative workshop – 8%
5. Ambiguity including what constitutes intellectual property rights/the copyright laws – 8%
6. Respecting people's privacy – 8%

(IP) as a dilemma highlights that for early creative skills development, knowing what can be ethically shared, borrowed or emulated in creative practice might be tricky to negotiate and therefore valuable to discuss in educational contexts. In examining the data from the First and Second year art and design online data, the research has revealed a multiplicity of layers and experiences of the visual domain. For the purposes of this research paper we will focus on one dimension of (IP): plagiarism in the context of visual appropriation.

Student Quotes

Seeing someone else's work on social media and wanting to make something similar (Transcript, p 32, Response 36).

Is it ethical to use part of another artist's previous work in your current artwork? (Transcript, p 32, Response 39).

These quote reveals the complexity of understanding the need to look at a range of artists' works, perhaps attend exhibitions and be aware of trends in social media. The students' here are revealing how they know they can use parts of another person's work, yet it is not clear how much nor what kind of borrowing is acceptable within the competing demands of contemporary art and the institutional and ethical realms of plagiarism. Social media is also mentioned in the quote revealing perhaps a concern with the simulacra of sharing, re-tweeting and anonymity provided by much social digital information. Due to convolutions of culture and production, (IP) is challenging to clarify as much early learning in visual creative fields may occur through emulation and imitation. Broudy (1988) offers us an understanding of the values of scaffolding understanding of a complex issue such

as this, in the replicative mode of knowledge construction; emulation is an accepted successful approach to learning, especially within creative practice and in many local and International studio atelier traditions. In an interpretive learning context, we may begin to view the development of professional identity through the introduction of professional judgement, yet exactly how that occurs and in what contexts requires clarification and visibility in learning scenarios. According to Trede (2012), “Professional identity formation means becoming aware of what matters most in practice, what values and interests shape decision-making. Being, thinking and acting as a professional are underpinned by professionalism and a sense of professional identity” (p.163).

The next set of student quotes highlight the significance of this category in light of how artists and designers work, revealing disjunctions between what may be legitimately copied, borrowed, reinvented or transformed across beginning and established professionals.

Student quotes:

An ethical issue that emerged for me during my study would be to be honest with my work and not to steal credit from someone else as the risks in doing so are fairly high. I haven't as yet plagiarized someone's work and don't plan on doing so in the future, however being honest with my work helped me to become an honest worker (Transcript, p 31, Response 15).

An ethical issue I have found in this field would be the issue of research. I see other people are not citing sources or citing influences; or using other people's material and claiming them as their own (Transcript, p 32, Response 52).

Plagiarism. Not necessarily blatant, but some people's works can be uncomfortable similar to ones seen elsewhere/give basically the same message/use the same technique (Transcript, p 32, Response 55).

When doing videos and things it's hard to determine what information is copyrighted and what things are and aren't people's intellectual property and as a result must be referenced (Transcript, p 32, Response 34).

There are really good ideas I want to manipulate but I guess it is still a way of taking other's ideas? (Transcript, p 33, Response 61).

Each of the quotes reveal an important dimension of visual (IP) in professional real world learning. The first quote indicates a lack of knowledge about when to acknowledge the source of another's

ideas particular with regard to crediting the work of others, yet indicates that being honest is a highly valued state. Research in the visual domain is also highlighted as students are perceived to not acknowledge the work of others. Building or re-searching using acceptable standards of practice, cultural protocols, policies, gallery and art industry practices are a necessary component of research methodologies, yet the student is indicating that research is poorly understood and articulated. The question of using the same technique is also raised highlighting confusion over the acceptability changing this aspect of artmaking or design practice. Seeing something “uncomfortably” similar also highlights the role of similarity, sameness and difference in the creation of works. (IP) is also referred to as being confusing, even when a more formal aspect of copyright is involved and the difficulties of referencing visual ideas are also put forward. Video is specifically mentioned as a difficult medium to provide systems of acknowledgement. Finally, the issue of manipulating another’s ideas highlight the quandary or dilemmas that are echoed in contemporary art. In the learning literature it argues that students may recognize that copyright needs protecting in written domains, yet they are confused about what exactly is and is not permissible (Gasaway, 2002; Averill, 2003; Halme & Somervuori, 2012). It is therefore important to consider ways that students can explore the complexity of this issue in light of the visual domain by investigating case studies, participating in discussions, and accessing industry recommendations to build confidence and a strong allusionary base.

Disequilibrium as learning scenario or how can learning materials be scaffolded to assist transformative learning in (IP)?

Plagiarism is outlined as using the words or ideas of others and passing them off as your own, is a type of intellectual theft relevant within a university context. Plagiarism is typically understood through tasks associated with learning using a written language. In many cases it is described as a punitive process with academic misconduct rules. Based upon a pre-set system of ideas and legislative frameworks including institutional codes of conduct this dilemma is of increasing concern for students and staff at university level learning. Plagiarism can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Consequently, whenever we use the words or ideas of another person in our work, we must acknowledge where they came from. In the visual domain this can be a complex issue referring to copying someone else’s methods, style or imagery. In the last of this series of quotes the student poses a question, highlighting differing degrees of appropriation within legal and ethical frameworks. Plagiarism, which has a negative connotation, might be understood as a dilemma of practice or be examined through a positive framework by investigating postmodern or intertextual worlds. Herein lies the sense of ambiguity

experienced by many students in art, design and media as they struggle to meet the tripartite demands of research in creative practice, institutional requirements and contemporary theory.

Post-structural theorists such as Jameson outlined a view of postmodernism (1984). Jameson poses questions around the frontier between high culture, economics, so-called mass or commercial culture, and the emergence of new kinds of postmodern forms which superficially reference populism consisting of the familiar icons of kitsch, advertising, fashion, mass production and entertainment. Jameson's discussion of postmodernism as "a new depthlessness" (1984, p.58) attending to reproducibility or simulacrum (different to that of production) potentially feeds into the same normalisation and canonisation of knowledge which it purports to deconstruct. "Warhol's work in fact turns centrally around commodification, and the great billboard images of the Coca-Cola bottle or the Campbell's Soup Can, which explicitly foreground the commodity fetishism of a transition to late capital, ought to be powerful and critical political statements" (Jameson, 1984, p.60). This theoretical position contests the effectiveness of politically charged postmodern artistic production which utilise the appropriated commodification of objects and familiar mass produced imagery to make a statement. Jameson identifies that the more interesting postmodernist works restore a positive conception of relationship and difference which transforms the viewer's perception towards a new mode of thinking making informed artistic connections between ideas and objects in an original and authentic way.

Here we begin to observe the significance of understanding how theoretical frameworks, which exist in learning scenarios, might be of value in assisting student's development of a deep level of appreciation of theoretical knowledge. For example, many post structural creative practices use techniques of reproduction to challenge the conception of originality underlying traditional conceptions of art. Contemporary artists borrow freely from popular culture, reimagine culturally rich iconography and reinvent existing imagery. Many notable Pop artists such as Andy Warhol and Richard Hamilton have paved the way for contemporary artists to borrow freely from popular culture, reimagine culturally rich iconography and reinvent existing imagery. In this sense intertextuality is recognised as acceptable and routine in creative practice (Read, 1959, p.287) and differs from plagiarism which is typically defined as a deliberate borrowing of another's ideas without acknowledgment. In this system, (IP) issues can be applied to the development of understanding of what constitutes original and creative thought, authentic processes and new methods of production. The engagement with content is reliant on both the two previous processes of learning (applicative and replicative) yet allows the student to move closer to professional processes and situations.

Multiple perspectives highlight that dilemmas are complex and require negotiation of conceptual and cultural considerations and that a dilemmas framework can be effective for engaging students in the reflective process and enabling opportunities for learners to encounter transformative learning experiences. This study has revealed that from a student perspective there is a need to experience professional encounters, including dilemmas, early on in creative careers. Yet, the Deweyan concept of disequilibrium does not always take place in a supportive manner and the degree to which educators design activities that invoke students' experiencing tension, problematics and disequilibrium requires careful articulation and scaffolding across a degree program. The crucial tension experienced in what we are calling a "Professional Encounter" may require the individual to adapt or modify their approach or actions to go beyond their current level of knowing or understanding. Professional encounters might be the first time one was asked to do something difficult whereby the individual may have had to modify their approach or perhaps adapt a previous response or skill to suit a new environment. Professional encounters require an individual to call upon reflective approaches, utilising interpretive and associative levels of understanding which are crucial as they allow the individual to draw upon deeper notions of knowledge systems (such as theoretical frameworks) as well as using replicative skills that may be critical to their field of expertise.

Phase Three of the project encompasses the design of a range of learning objects, that can form the basis of "Assessment Conversations" with individual academic staff. Changing some assessment tasks in large core first year courses to provide examples of 'dilemmas of practice' can signal moments of intensity for a student to actively seek clarification from their environment. This might be supported by asking questions, seeking out new knowledge or identifying specific areas of uncertainty. Incomplete information can offer students encounters of ambiguity where learning can take place to reduce confusion and frustration. The premise will be that Case Studies of (IP) that showcase a particular suite of examples including a range of responses to the same example or issue, allow the student to see a range of possible professional encounters. Making animations of these written responses from the student perspective provides a visual catalyst for conversation, as a starting point for a discussion of convergences of plagiarism and poststructural forms of appropriation is planned.

Educators, students and professionals might enter into a discussion with learners about dilemmas of practice for example (IP), plagiarism and intertextuality. Importantly, for the next stages of the larger research project consideration of professional encounters and industry identified dilemmas of practice will need to be given to assessment conversations with academics. The discussions that emerged from the survey data suggests that there is a need to develop in students a deeper level of understanding about the complexities and ambiguity around professional practice and that there is also a need for

them to learn more about the ethical implications of respecting another's (IP). Jordan and Meara (1990) argue that in professional practice, "the focus on dilemmas and their solutions has resulted in a decided emphasis on the application of ethical principles" (p.24), which in this study emerged as a high concern for understanding the ethical implications around the notion of (IP).

The dimensions of (IP) that we have found in Phase One of the project reveal important tacit understandings of visual borrowing that are as yet unclear to student. Disequilibrium and a dilemmas framework is an appropriate learning framework to develop resources for visual plagiarism and dimensions of (IP) as identified in this research from a student perspective. The disjunction between novice experiences of (IP) and established professionals indicates that (IP) may not be something that academics or established professionals feel they need to discuss, yet the results of Phase One work reveal the necessity of actively planning visible resources in this area. Ambiguity in the learning process can be used as a thought-provoking irritant to encourage students to move on in their understanding, particularly as in creative fields to promote experimentation and multiplicity of approaches. Future research will examine the data categorised from the student surveys and compare this to data collection from focus groups, which will be member checked and compiled into a robust Bank of Dilemmas. This bank will be an innovative approach to making tacit knowledge visible in professional practice, beyond everyday experiences. Planned assessment conversations with staff, will encourage participants to provide feedback and highlight areas of the early stage student dilemmas that resonate with their experience and expertise. This data will offer further layers of analysis to inform an expanded conception of the significance of disequilibrium as a professional learning encounter. The findings of the research also reveal that ambiguity is often experienced around students' perceptions and expectations of learning such as assessable tasks, including a multiplicity of interpretations of a given task. In creative disciplines such as fine arts, digital, media arts and design, ambiguity may also be evident in moments of independent choices made by students. This choice making relates to the questioning of the efficacy of career paths, course selection and interpretive creative endeavours. Encounters of ambiguity also provided students with resolution and clarification opportunities after the event has been experienced offering enlightened experiences of worth and a transformed state of equilibrium. The outcomes of the research will provide further recommendations encouraging tertiary art, design and media staff, courses and programs to enhance interconnectedness and extend social networks with creative industry experts enabling further discussion around fluid and shifting sites of inquiry.

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What students think about ambiguity in the visual domain: fluid transitions in real world learning

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