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ARTS-BASED RESEARCH IN DESIGN EDUCATION

ABSTRACT

There is an urgent need in terms of changing world conditions to move beyond the dualist paradigm that has traditionally informed design research, education and practice. Rather than attempt to reduce uncertainty, novelty and complexity as is the conventional approach, an argument is presented in this paper that seeks to exploit these qualities through a reconceptualisation of design in creative as well as systematic, rigorous and ethical terms. Arts-based research which 'brings together the systematic and rigorous qualities of inquiry with the creative and imaginative qualities of the arts' is presented as being central to this reconceptualisation. This is exemplified in the application of art-informed inquiry in a research unit for graduating tertiary level interior design students. The application is described in this paper and is shown to rely substantially on the image and its capacity to open up and reveal new possibilities and meaning.

INTRODUCTION

This paper describes a research unit where interior design students at a university Graduate Diploma level use a form of arts-based inquiry in their research. The Graduate Diploma is a one-year full-time or two-year part-time course incorporating design, research, professional studies, and specialised areas such as conservation and set design. Together with the three year undergraduate, the courses satisfy minimum international requirements for professional practice in interior design/interior architecture. While research is seen as an important component of design courses dealing with the built environment, this has been generally from traditional social science and science viewpoints; the latter reflecting the engineering and material aspects of the built environment, and the former that designers are designing for people and their relationships with each other and the environment. The link with these other disciplines is essentially however a substantive one. In terms of the procedural aspect of design, nothing of note has been done to explore the potential of designing as a research methodology or form of inquiry in its own right.

There may be various reasons for this such as: tradition and the continuing acceptance of models of research, education and practice that favour dualist, deterministic models of human interaction and knowledge (Franz, 1994) as well as the belief that designing is a creative activity that defies externalisation and the systematisation and rigour required for it to be considered as 'research'. Indeed, interior design like architecture is a hybrid, being neither science nor art but in some way involving both even though there is a tendency to view these aspects as contradictory and incompatible. Generally, they are understood as being relevant at only specific stages in the activity of designing. The belief that the artistry of design can and indeed should be more rigorous and systematic as well as more innovative underpins the unit described in this paper. As McNiff (1998) wrote: 'The images and processes of artistic creation are always at least one step ahead of the reflecting mind. If we continue to follow the

standard behavioural science methods of establishing what we plan before we do it, we undermine the power of our discipline to offer something distinctly new and useful to research' (p. 27).

CONTEXT

The Impetus and Philosophical Basis for Change

The future being the future is by its very nature unknowable. According to Barnett (2004) however our future will be characterised by different kinds of unknown-ness. Barnett's proposition is that there are four ways in which our world is different to the past: first, old will be replaced by new in a more rapid way; second, the sense of an unknown world will be more vivid than it has been; third, from an anthropological perspective there will no longer exist the sense of order or stability that characterised society until recently; and fourth, the world we are now facing is and will continue to be ontologically different from former worlds (p. 248). For Barnett, these new qualities of the world contribute to a more personal form of uncertainty that recognises that we can never hope to satisfactorily describe the world, 'let alone act with assuredness in it' (p. 250). Learning for this uncertain future has to consider not just different kinds of knowledge and skills but also human qualities and dispositions; 'Learning for an unknown future calls, in short, for an ontological turn' (Barnett, 2004, p. 247).

The research unit which is the focus of this paper acknowledges the call for an ontological turn. Given the existential issues facing society and designers, there is an urgent need to move beyond the dualist paradigm which has traditionally informed design research, education and practice. As an alternative the paper argues for a critically interpretive approach characterised by: the belief that any action or event is explicable only in terms of multiple interacting factors; an acceptance that understanding is influenced by individual systems of meaning; the view that research especially in the social context is about understanding individual cases rather than forming universal laws; and a recognition that inquiry including the framing of research questions is fundamentally value-laden (Candy, 1989, p. 4). Admittedly, methodologies exist in other disciplines under the umbrella of qualitative research which are sensitive to and sympathetic with these views but, as argued previously, these have been used chiefly to inform the content of designing, with the process of designing continuing to reflect many of the qualities of the dualist oriented analysis, synthesis, evaluation model.

The analysis, synthesis, evaluation model of design developed through what Jones (1970, 1980) described as 'glass box' research reflects a conception of designing as a rational process involving the breakdown of a problem into component elements articulated as requirements, proposals and an optimum solution. In many respects, this notion is similar to Descartes' attempt to simplify and manage complexity by reducing a problem atomically in order to find its fundamental truth or quality. Applied to design, the approach is premised by the view that a methodical, systematic approach, in itself, would produce better designs. Its introduction in the late 1950s was intended to demystify the design process previously understood in 'black box' terms (Jones, 1970) as an intuitive, chiefly idiosyncratic process. In this respect, a situation developed that saw a systematic approach in design as the polar opposite of a creative approach. Even today, there is a tendency to conceptualise creativity as

a non-rational, almost fanciful way of behaving. But are the two approaches really mutually exclusive? Not according to Schon (1988a) who argued that there is artistry in how scientists carry out their inquiry but that a focus on science as a body of research results prevents this from being apparent. Equally, as this paper argues, there is also 'method' in artistic endeavour representing, in its own way, a systematic form of inquiry. The unit described in this paper, attempts to capitalise on these attributes by incorporating art-informed inquiry into the research curriculum for designers. As the following section will highlight, design is predisposed to this through its role as a creative form of practice.

Design, Research and Art-Informed Inquiry

Through their focus on the environment designers seek to enhance experience of life. It is the experiential, interpretive and relational nature of human experience combined with the fact that designers deal with imagined scenarios and the uncertainty, novelty and complexity associated with this that makes the process of design a creative act. Rather than seeking to reduce this uncertainty, novelty and complexity as is the 'glass box' approach, this paper argues for an alternative where uncertainty, novelty and complexity are exploited in order to open up and reveal possibilities in much the same way that artists do. Dealing with imagined scenarios also means that design by its very nature is speculative and experimental; similar words used in relation to research. The potential connection between designing and researching is even more apparent when research is understood as the conjoining of speculative thought and action (a creative act) in systematic, rigorous and ethical ways (adapted from Kerwin, 1994). In the unit described in this paper this definition of research is used as a basis for developing skills, knowledge and attitudes whereby designing can become not only more rigorous but also more speculative and it is in this respect that art-informed inquiry has a central role to play.

As is expected, arts-informed inquiry typifies research in the arts. It constitutes what Strand (1998) calls 'pragmatic' type research and Wissler (1997) 'phase two' type research. According to Wissler, this type of research by an artist/researcher relies upon such things as:

- an initial statement of a hypothesis or set of issues
- an experimental phase in which these are explored through the art-making process
- creation of an artwork which defines the original position
- display or performance of the artwork in public to establish its reception
- verbal description of the whole process in a report or exegesis.

While this application had merit in informing the development of the interior design research unit, the use of arts-informed inquiry in non-arts areas was also of extreme value. Of particular note is the integration of research and the arts in education emerging from the early work of Eisner (1975, 1977) and developed subsequently through his continuing work (more recent works include: Eisner, 1991, 1997) at various stages incorporating collaborations with other researchers (for example, Barone & Eisner, 1997). Barone, a former student of Eisner, has also been central to the ongoing development and promotion of arts-informed inquiry (see Barone, 1978, 1990, 2000, 2001; Blumenfeld-Jones & Barone, 1997) as well as Cole and Knowles (2000, 2001).

Through the efforts of these researchers and others (such as Clandinin & Connelly, 1990, 1994, 2000) arts-informed inquiry has emerged as a useful form of qualitative research not only in education but in an increasing number of other disciplines as well (although, as

previously pointed out, rather surprisingly not in the design areas of interior design and architecture; a situation that the project described here seeks to address). The growing recognition of a form of inquiry not residing or emanating from the sciences or social sciences as legitimate research has not happened without opposition. As recent as 2000, it was under attack interestingly in the area of educational research which as highlighted has behind it about three decades of consistent development, application and evaluation. Responding to the attack by Mayer (2000), Barone (2001) explains this in terms of a persisting predisposition toward certainty arguing that while this will always remain a fundamental human predisposition (perhaps even more so if we accept Barnett's prophesy of a future characterised by a more ontologically destabilising form of uncertainty), there is another fundamental human predisposition often overlooked, that is the predisposition toward inquiry (p. 24). In other words, Barone is not denying a role for traditional science-type research, but rather advocating for the acceptance of an additional form of inquiry that has as its purpose '...the uncovering and expressing of alternate interpretations of the phenomena under scrutiny' (p. 24). According to Barone (2001) and other arts-based researchers, this purpose is best served by activities and forms of representation that are aesthetic in nature; forms that are an integral part of various areas of the arts such as the performing arts, the visual arts and so on.

While a substantial amount of the arts-based research undertaken to date has been literary in nature, there has also been research undertaken that is art and image (rather than text) based. The project described in this paper incorporates both giving primacy however to the image and its role in 'heightening ambiguity' (Barone 2001) and 'lay[ing] bare questions that have been hidden by the answers' (Baldwin 1962 in Barone 2001, p. 25). At a broad level it is arts-based research; at a closer level it is art informed inquiry or what some describe as image-based research. This is not to claim, however, that the images produced represent art in the 'pure' visual arts sense. They may be considered to be art by some and may even have artistic merit but the intention is not to produce art.

On a semantic note it is also of value to distinguish between 'art as inquiry', 'art informed inquiry' and 'Art-informed inquiry'. In this paper, 'art as inquiry' applies particularly to visual artists and to their attempt to "break the boundaries of art" and [to] search for new forms and structures for art' (Bijvoet 1997, p. ix). For many artists this meant crossing not only their own discipline's boundary but also those of other disciplines and is characteristic of early collaborative work in the 1960s involving art and technology and art and the environment (Bijvoet 1997). There is no doubt that this type of activity would have facilitated changes in the way the role and function of art were perceived especially by the other non-arts disciplines revealing for their non-artists the potential of an artistic process and/or attitude to augment inquiry in their disciplines. The project described in this paper is a case in point and contrasts with the situation where Art in the substantive sense contributes to or overlaps with inquiry in another field. An example of this latter situation is the aligning of Art and Philosophy by philosophers, such as among others Maurice Merleau-Ponty and Gilles Deleuze, to help clarify and crystallise the complexities of their philosophical inquiry into the nature of human 'being' or as Deleuze termed it 'becoming'.

It should also be said that art informed inquiry and Art informed inquiry may or may not constitute arts-based research. In this paper art/Art informed inquiry is arts-based research when it conforms to the tenets of rigour for qualitative research. For Kvale (1995), rigour or quality in qualitative research is about craftsmanship and its associated emphasis on checking, questioning and theorising on the nature of the phenomena investigated throughout the various stages of the research process. Supporting this is an emphasis on observation that is

extended to include conversations about the observations as well as an appreciation of knowledge justification in terms of application and whether the process produces useable outcomes. The implementation of Kvale's approach is presented in greater detail in the following section and is shown to reflect similar views by other qualitative researchers such as David Smith who in a previous AQR Conference echoed the call for generalisability, reliability and validity to be replaced by a concern for resonance, integrity and verisimilitude.

ARTS-BASED RESEARCH CURRICULUM FOR INTERIOR DESIGN

The Pedagogic Rationale Underpinning Curriculum Development in the Graduate Diploma

In substantive terms, the Graduate Diploma program is designed to enable students to further develop 'knowledge' of people, environments, the interface between the two and the broader physical, social, temporal and existential context. The program is also designed for students to appreciate: that people respond to situations in qualitatively different ways; that part of their focus as designers should be on opening up possibilities and potential; and that through design they are orientating the user to various aspects of life. Added to this, students are encouraged to develop an ability and predisposition to not only investigate what could be but also what should be. This is seen to depend upon an understanding of wider issues concerning social responsibility, cultural identity, gender, place and power as well as on various procedural and attitudinal qualities.

With respect to procedural knowledge, this is defined as being able to: enter into a dialogue with the situation through iterative action involving imagining, representing and testing (Zeisel, 1984); adopt a holistic approach characterised by attempts to find, develop or preserve the relationship of things to each other and a greater whole; shift orientation to and within a situation allowing certain elements to come to the fore and others to recede; and explicitly and critically reflect on and in this action. In developing curricula and teaching approaches for the program, it is recognised that these procedural skills depend in turn on specific attitudinal qualities such as the desire to arrive at an in-depth understanding and outcome, concern for honesty and openness, willingness to embrace uncertainty, complexity and novelty, and a commitment to the well-being of the profession and society. Many of these outcomes are in fact 'generic attributes'. In the Graduate Diploma, generic attributes are not seen as separate to the discipline content, rather they are regarded as a significant component of it and of being able to act professionally in a rapidly changing world.

In terms of the research unit, this has an integral role to play in the development of these graduate abilities through a reconceptualisation of creative practice as research and an understanding of research as not only addressing existing issues but allowing in a methodologically rigorous way new questions to emerge and new possibilities to be revealed.

Research Project Structure

The interior research project was developed to align with an upcoming conference focusing on the relationship between interior design and landscape architecture. The connection to the conference was important for several reasons. For one thing, it allowed for the development of an appreciation of the world as multidimensional and dynamic and of the response through interdisciplinary, multidisciplinary and transdisciplinary practice and research.

Correspondingly it also allowed for a dual link to be made to arts-based research: in one

respect as an area of inquiry understood to be important in enhancing design in an increasingly unknowable world; and in another respect as support and impetus for considering strategies developed outside the students' discipline. In addition, the conference provided students with the opportunity to disseminate the outcome of their research beyond the learning environment introducing them in the process to the relationship between research and dissemination through publication and conference participation. Overall, the unit aimed to provide opportunities for students to: retrieve, review and disseminate information at an advanced level; develop systematic, rigorous and ethical procedures for sourcing, retrieving and using information; and develop sound appreciation of and skills in using art-informed inquiry to explore issues of relevance to interior design and design in general.

The project undertaken over a thirteen week semester involved the interior design students in exploring the phenomenon of landscape. Pedagogically, the project is considered a central aspect of the learning environment in design courses. For the research unit, it represents the most effective way of highlighting the significance of research in interior design process/practice and the role of theory in informing practice. In practice, the project is the designer's work space. It is a praxis situation involving the integration of theory and practice. Similarly, learning to design demands an experiential approach and the integration of the act and content of learning. Projects constitute conceptual 'wholes' giving students the opportunity to develop skills in working iteratively and heuristically; in conversing reflectively with the materials of the situation (Schon, 1988b, p. 43). Projects connect with and to practice, the profession and the community enabling students to play the role of the professional designer and, through this role playing, to become more familiar with the contextual aspects of their discipline. Projects also encourage a holistic appreciation of design education by giving continuity and cohesion to a learning program undertaken over several units, across time, and in various settings. In addition, they provide for different modes of teaching and learning including group work which highlights the social nature of designing as well as learning.

The first part of the project required the students to search for and review research as well as any general literature on explorations of the meaning of landscape. They were asked to source the information from various discipline (for example, landscape architecture and cultural geography) and non-discipline (such as philosophy, art, design) sources presented in a variety of forms including monograph, journal articles, conference articles, exhibitions and so on. They were to include in this any articles that used arts-based research and art-informed inquiry. This achieved two things: first it enabled exemplification and illustration of content covered in weekly lectures and seminars (content covering the nature of research, qualitative research, and arts-based research); and second, it provided a context for the students' first person study of landscape undertaken in the second part of the project. This first part was formalised by the students as a written paper.

The decision to involve the students as participants in the study reflects and was intended to convey an understanding of qualitative research as 'a situated activity that locates the observer in the world' and that involves 'the studied use and collection of a variety of empirical materials' including among others: personal experience; introspection; visual texts and so on (Denzin & Lincoln, 2000, p. 3). This was considered an integral step towards the development of design as a legitimate research activity and of reinforcing the need for the students as researchers to be aware of the limitations as well as the potential of what they bring to the research context. The significance of this was reinforced at the beginning of the project when the students were asked to externalise and represent their conceptions of landscape as a

drawing as well as in writing (Figure 1). The activity also provided a basis from which we could gauge the development of their understanding over the duration of the project. In addition, it provided data for a collaborative study with one of my PhD students on the rhetoric of discipline discourse.

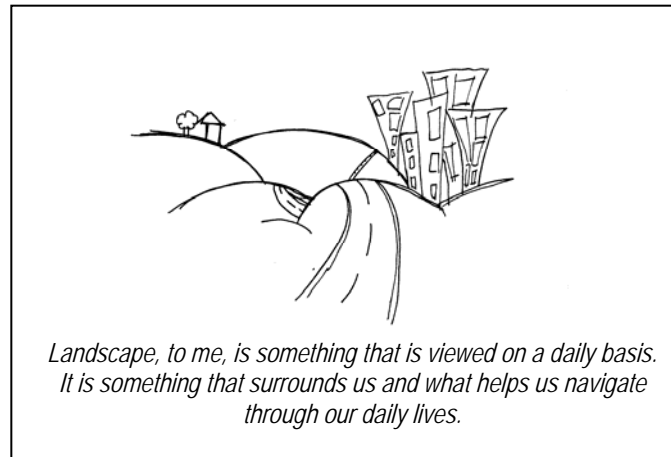


Figure 1: Externalisation by a student of personally held conceptions of landscape.

In the empirical second part of the project students used painting, multimedia and installation art as sites and vehicles for (a) revealing and exploring their everyday understanding of landscape (Figure 2), (b) challenging and more fully appreciating the conceptions of landscape revealed in literature and other artefacts, and (c) opening up the possibility for new understandings of landscape. They used an A3 sketch book to facilitate and record the process through both text and image and provide a basis along with the art work for producing an illustrated A4 paper. This part of the project was supported through in-class and weekly exercises focussing on each of the art related activities. The decision for the students to use a variety of media in a triangulated fashion was prompted by the belief that each medium would provide a specific frame of reference bringing to the fore certain elements that may be obscured in another medium. The overlay and integration of the different media would help build and consolidate the outcomes of the explorative process. As previously highlighted, this multidimensional approach was extended through the incorporation of literature from various disciplines (the formal academic/expert voice) to an array of non-academic (the everyday/novice voice) in a process described by Richardson as 'crystallization' where such incorporation recognises the need to look at things from different perspectives in order to develop 'a deepened, complex, thoroughly partial understanding of the topic' (Richardson in Janesick, 2000, p. 392). While the data collected in the literature survey and review process were essentially text based, the focus in the second stage was visual representation or, more appropriately, its image.

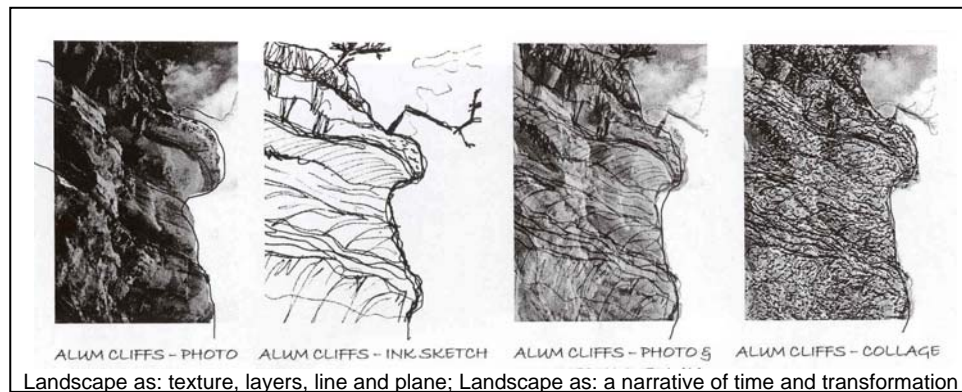


Figure 2: The use of various media to explore personally held conceptions of landscape.

The image was central to this stage for a number of reasons. Designers generally manage information and explore scenarios visually and, as such, the design students were, with some exceptions in the initial stage, quite comfortable responding to the image-based approach. Because of this, they were also more able to see the relevance of art-informed inquiry and to more fully appreciate the aesthetic aspect of design and designing. In addition, the image because of its metaphoric and symbolic value was regarded as the most effective way of opening up the potential for new meaning. 'Images are essential to human sense-making: We see and think and communicate using images' (Weber, p. 2). In the project, students were encouraged to use images in conjunction with words in different ways: to question; to imagine; to critique; to theorise; to narrate; to explain; to represent; to express emotion and experience (Adapted from Weber, p. 2). The different qualities of images contribute to the opening up of possibility through their various manifestations such as: visual form; a mental phenomenon; a sign; an icon; a symbol (Weber, p. 2). In the qualitative research context of this project, images were used as data, they were used to elicit data; and they were used as a mode of interpretation and representation (Weber, p. 3). Informed by Weber's experience of image-based research, the students used the following questions as a basis for analysing the images: What stories do the images tell? What does the image say about the phenomenon of landscape? What is it about these images that are contributing to meaning? What is your emotional reaction to the images? How do other people react to them? What might these reactions signify? What is the main message conveyed by the image? Are there any hidden messages? (Weber, pp. 6-7).

Just as important as the image was the act of making the image. The process of drawing or manipulating Photoshop software or twisting wire in an installation were considered crucial for transporting the student researcher to a state and a site where they could heuristically move between the part and the whole in an iterative explorative process of imagining, representing and questioning; where they could carry on as Schon (1983) described it: a dialogue with the materials of the situation incorporating reflection-in-action-on-action (Figure 3). Another way of understanding this is as a soliloquy where instead of through

writing alone a more internal, private, reflective and contemplative voice is accessed; where an acting 'I' engages with a reflective 'Me' (Prendergast, 2003, pp. 1-3) and 'the divide between art as a primarily perceptual field and aesthetics as a primarily cognitive concern' begins to break down and dissolve (Davey, 1999, p. 13).

To provide a theoretical context and help strengthen the methodological quality of this process, the students were also introduced to phenomenology and phenomenography. Phenomenology including hermeneutic phenomenology was considered significant through its concern with the essential quality of a phenomenon and its appreciation of the contextual quality of meaning, and phenomenography through its concern with the qualitatively different ways in which people experience the same phenomenon. The overt consideration to these frames of reference reflects the unit's premise that research like design can and should be creative as well as systematic, rigorous and ethical.

Landscape has many meanings which vary for each individual. Through this process of exploration inviting art and literature to assist in developing my own understanding of landscape, I have discovered that even one's own perceptions are diverse and versatile (Student statement introducing her final report).

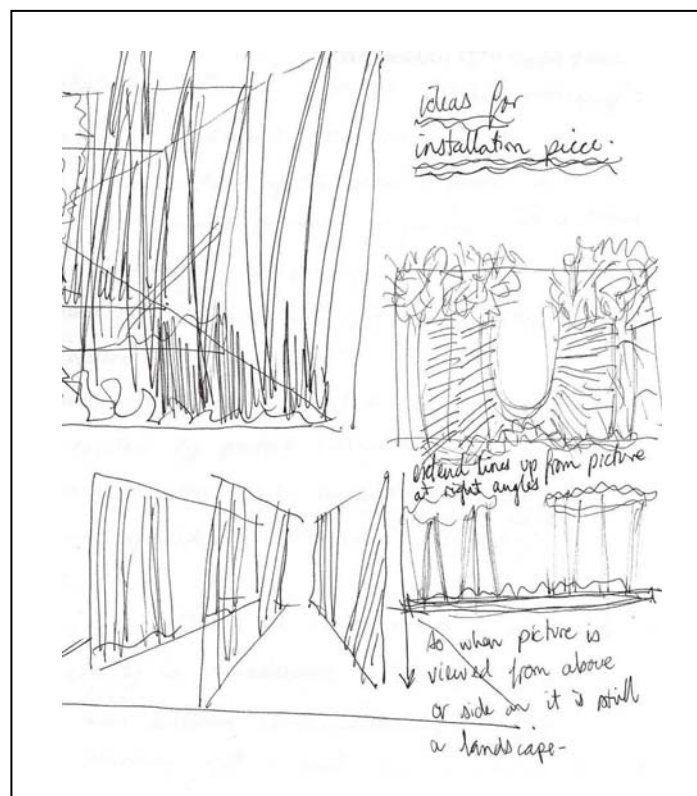


Figure 3: Student use of image and text to reflect-in-action-on action.

In the context of this research unit, 'creative' was defined as exploring and exploiting the meaning of landscape through a dialogic process with the materials of the art making as well as with the art itself. This also entailed: exploration from different perspectives and points of reference; action that provided for serendipitous occurrences; exploitation of idiosyncratic features; flexibility and adaptability; heuristic interaction; and critical reflection. Systematic action was described in relation to how students organised the process so as to open up the

potential and possibility of understanding landscape in new ways. In part, this involved the students in tentatively mapping out an approach recognising that down the track they had to be prepared to change it in response to new opportunities or obstacles that arose from the course of their action and from evaluation of the extent to which the plan constrains 'meaningful' action. Being systematic is 'being methodical concerning the certainty of uncertainties [so as] not deny the isolation of the cognitive possibility' (Freire, 1989, p. 31). As well as being systematic, students were also required to be rigorous in how they organised and managed the process. Rigour was described in terms of the qualities of: diligence; persistence; consistency; thoroughness; constructive scepticism; and a willingness to imagine, represent, and 'test' in a detailed, extensive and critical way; to question underlying values; and to understand how elements are connected to each other. In terms of ethical behaviour, this was defined as: integrity; humility; empathy and sensitivity to the rights of others; honesty; the degree to which the process was made transparent and accessible to others; and recognition of intellectual property and moral rights.

The last part of the project provided the opportunity for the students to bring their process and outcome together in a way suitable for publication and presentation at the conference which provided the theme for the project. Students had the choice of undertaking this as a hypothetical or real activity. Two out the class of eight students submitted abstracts to the conference editorial committee and were successful in being invited to submit full papers for refereeing. At the time of writing this paper, the refereeing process had not been completed.

The decision to use publication as a context and framework for this final part of the project was made for several reasons. Publication highlighted the significance of dissemination as a part of the research process providing the opportunity for wider critique and constructive feedback and reinforcing in the process an appreciation of research as an ongoing, evolutionary process. It presented students with a challenge not only in terms of how to write up the research but also how they could maintain through the writing process the richness of the work much of which was visual (graphic) in nature. In turn, this provided the in-road for discussions at the heart of qualitative research in relation to the norms used for communicating and 'judging' its value. A concerted effort was also made to present writing as a creative space where the research could be continued and the qualities of the narrative exploited.

Outcome

All students felt they had developed a new appreciation of research, design and design as research as a result of the project and it was evident through their submissions that they had achieved, albeit at slightly different levels, the main objectives of the unit. They also revealed a heightened appreciation of landscape with their exploration of landscape meaning contributing in an innovative way to current research in the area.

My own process using art and literature to discover what landscape means to me has clarified why I perceive things the way I do and has made me study my landscape in a new light taking me on a journey of new discoveries. My future experiences moving through new landscapes will always now make me look closer.

*Closer at the way I feel when I am inside looking out.
Closer at myself and the effects new landscapes have on me.*

Closer at the intricate details which work together in harmony to create unique and ever changing landscapes.

Closer into the dreams that I drift away into when I gaze into a landscape.

Closer at the artist's impression so to try to appreciate their meaning.

Closer at the triggers to memories which instantly forge emotional connections to new landscapes.

I will be experiencing.....closer (Student's concluding report statement).

The implementation of art activities in the project not only gave the students strategies that they could implement to enhance the creative and speculative potential designing, it also revealed for them the artistry of design and designing. The project's location in a qualitative research context, particularly arts-based research, provided insights into the close relationship between researching and designing and how designing could be enhanced systematically, rigorously and ethically, and how users and clients could be reconceptualised as researchers involved in continued speculation and experimentation with and within the built environment. The need for a 'research' attitude and consideration of other discipline designers as co-researchers was reinforced through the project's cross-disciplinary theme. Further study is planned to explore more extensively the transfer of these attitudes, knowledge and skills to the process and practice of design.

The conceptualisation of the research unit as a context of research in its own right also provided for other more tangible outcomes and along with it the possibilities for capitalising on what it has achieved so far. As already mentioned, the project has informed a collaborative project and paper by one of my PhD students. It has also provided data for this and another paper I have completed on the potential of the window in 'framing' landscape meaning. And, hopefully, it will lead to two of the students presenting at the conference.

In its formal evaluation undertaken independently by the university, the unit scored 4.9 out of 5 both for teaching and curriculum development and while this is very encouraging its long-term benefits rely on a similar attitude and approach at all levels of a student's education and across as many learning environments as possible.

CONCLUSION

This paper has illustrated in the context of a research unit for interior designers how arts-based research 'brings together the systematic and rigorous qualities of [traditional] inquiry with the creative and imaginative qualities of the arts. Such inquiry processes are organic and fluid and the research representations move beyond unidimensional, text-based discourse. In so doing the process of researching becomes creative and responsive and the representational forms for communication reflect the multi-dimensional qualities of lives through multimedia forms' (Cole & McIntyre, 2003, page not known). As pointed out previously, arts-based research involving art-informed inquiry shares as well as reinforces many of the qualities of designing providing opportunities for designing to be regarded as research in its own right. These opportunities relate to an approach that:

- embodies lived experience through its first person narrative
- provides for an open-ended stream of consciousness and spontaneity
- invites serendipity and innovation
- operates at a symbolic, metaphoric level the ambiguity of which invites multiple potential readings

- is a form of making involving an iterative process of imagining, representing and ‘testing’
- links mind and body, conception and emotion, the actual and the virtual
- orientates the researcher in different ways to the object of awareness and vice versa
- is a space for describing, exploring, interpreting, awakening, challenging, confronting and so on (Informed in part from David Smith’s presentation at the Sydney AQR Conference, 2003).

An emphasis on these qualities is not to deny however the significant role played and that should continue to be played by methodologies outside the design discipline; a case in point being the consideration of phenomenology and phenomenography in the project described in this paper.

In conclusion, this paper contributes to qualitative research and arts-informed research through its exemplification and its location within a context where all aspects are interrelated in a way that is consistent with an interpretive paradigm of knowing and being. The application of arts-informed research in a specific discipline provides possibilities for viewing it and qualitative research in alternative ways. Its location within an educational context reflects a belief in the need to incorporate it into the education of students preferably at all stages of their academic development. In this respect, the paper advocates a widening of its application beyond research to the development of professionals and their ability to work creatively and rigorously in an increasing un-knowable world.

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