

Bridging Embodied Learning Theory, Place Meaning and the Process of Place Making in Design Studio Pedagogy

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Abstract

Design studio curriculum has great potential in creating a platform for design students develop their design skills, thinking and knowledge that set the groundwork for achieving the graduate attributes required for professional practice. However, for many years, concerns have been raised regarding the scope of design studio models in responding to broader issues of human habitation such as emotional and psychological dimensions of person-place relationships. This paper will report on a 2012 research study in the curriculum design and implementation of a 14 week first year tertiary spatial design studies course based on embodied learning theory where the objective was to address these criticisms.

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Based on our understanding of person place relationships, the environments in which we inhabit have an affect on how we think, feel and behave.

Research suggests that although there has been a major shift in the last fifty years in acknowledging the importance of person-place relationships in design studio pedagogy, much of the pedagogical and practice-based research still predominantly privileges functional, behavioural and economical bases of spatial design, meanwhile qualitative considerations in place making such as emotional and psychological dimensions have remained largely unexplored.

As designers of architectural space, we can contribute to the meaningful relationships between people and place through our spatial designs and, as teachers of design students who will be future designers of space that can influence this relationship, we should be developing new ways in which design studio pedagogy can help broaden students' understanding of the many ways in which spatial design and experience can contribute to this understanding.

This paper explores the implementation of a 2012 tertiary first year design studies course, designed to incorporate the latest research in embodied learning theory as a means of introducing students to new approaches in understanding and empathising with emotional and

psychological dimensions of place meaning and place making in the spatial⁴ design discipline.

Research Context

The last fifty years has seen a growing concern among researchers and academics for an architectural education that supports a stronger focus on designer responsibility to the needs of the contemporary society (Nicol and Pilling 2000; Fisher 2001; Ballantyne 2002; Salama & Wilkinson 2007; Holgate 1992; Dutton 1991, p. 166; Dutton, Koch et al 2002, pp. 4-6; Fisher 2001, pp. 69-70; Boyer & Mitgang 1996). The literature highlights the importance for research, development and implementation of expertise in psychological, social and cultural issues to be considered just as important as technical skills in tertiary design studio pedagogy (Nicol and Pilling 2000; Salama & Wilkinson 2007; Holgate 1992; Findeli 2001). Much research has been established to identify key problems in the practice of architecture relating to design decisions and their response or lack thereof to societal needs. Problems include the prevailing idea of the architect as artist and as architecture as art where self-expression void of societal concerns is still conceived as an accepted component of the design process (Dutton 1991; Rapaport 1994). A secondary problem is a lack of knowledge or the denial of the importance for architects to implement social design considerations in their work (Cuff 1989).

Based on these concerns there has been much research regarding how architecture pedagogy can adapt and improve to address the needs of society (Yanar 2007; Sanoff 1992). In addition to this there has been a growing body of literature on embodiment and the role of the body in how we understand and make sense of the world (Lakoff and Johnson 1999; Clarke 2011; Varela, Thompson and Rosch 1999; Wilson 2002; Dourish 2001; Calvo and Gomilla 2008; O'Loughlin 1998; Thompson 2007; Damasio 1994, 2003, Varela 1999; Pert 1997 and many others). In a pedagogical perspective, the role of embodiment or embodied learning has been characterised by a strong emotional or feeling dimension whereby emotional experience involves a perception of meaningful change in situation, in oneself and in others that is directly related through action in a situation (Gendlin 1962; Cataldi 1993; Merriam, Caffarella, and Baumgartner 2007). The embodied learning paradigm focuses the situational lived experience as the process of knowledge (Maturana and Varela 1992) where knowledge is understood to be a single continuous experiential experience in constant flux and constant ambiguity that is bound to bodies, senses, movement, environment, society, culture, language, self understanding and empathy towards the other (Varela, Thompson and Rosch 1991; Fauconnier and Turner 2002; Beer 1995; Thelen and Smith 1994; Chiel & Beer 1997; De Vega et al 2008).

How a designer of space can gain a greater understanding of person-place meaning through spatial experience is very much inherent in the epistemological commitments of embodied learning theory. This

commitment manifests itself in the view that how we understand the world is encompassed knowledge, which is phenomenologically inclusive, anti-reductive and gained through the lived experience while the learner is experiencing it (Varela, Thompson and Rosch 1991, p. 91; O'Loughlin 1995, 1998).

There have been a variety of key interrelated ideas or considerations that have been suggested to contribute to embodied learning theory through assisting an embodied learning process that endeavours to reveal the relationship between embodiment and embodied meaning in person-place experience.

The first consideration includes the necessity for mindful awareness in the present lived experience. This understanding is opposed to the constructivist view of reflective thinking/post experience as in the embodied epistemological belief, the phenomenological experience gives significance to the learners' meanings (intuitive and felt thought) that influence them before they are even aware of their formative value (van Manen 1994, p. 26; Rugg 1963). This requires being fully present with attuned senses and perceptions to engage with the lived experience to gain a greater awareness of qualities in experience (Eisner 2002, p. 231).

Another characteristic of an embodied learning process that could contribute to the learners' understanding of person-place relationships is that there is a strong emotional or felt dimension in embodied learning (O'Loughlin 1998; 1995; Lakoff and Johnson 1999; Damasio 1994, 2003, Varela 1999; Pert 1997; Dirx 2008). It has been suggested that

embodied meaning and therefore learning is influenced by embodied emotions in the form of physical memories and feelings (Damasio 1994). These physical memories and feelings when evoked from lived experiences have a strong influence on meaning which leads to action (Gendlin 1962; Jarvis 2006; Cataldi 1993; Merriam, Caffarella, and Baumgartner 2007; Solomon 2007).

A further characteristic of an embodied learning process, that relates strongly to a pedagogical approach that involves increasing students' awareness to the qualitative considerations in person-place experience, is that sensorially enriched aesthetic experiences are linked with embodied emotion and embodied meaning (Lakoff and Johnson 1999; Damasio 1994, 2003; Varela 1999; Bransford, Brown and Cocking 1999; Langer 1992). This sensorial experience occurs when the person attunes their perceptions to the sensorial values and qualities in the world around them. When the nervous system reaches a critical point and a process is felt, this can occur through an aesthetic experience where sensory perception and feeling metamorphosise and meaning occurs (Langer 1992, p. 9) prompting awareness and thought (Csikzenentiminally 1996; Eisner 2002; Goodman 1984). By the very nature of understanding the deeper knowledge that arises through embodiment there is an opening for many interpretations of knowing (Varela, Thompson and Rosch 1991, p.9). This understanding opens to another interrelated factor in embodied learning in design studio pedagogy and embodied empathy.

The interrelated nature of the lived experience and the intuitive felt sense of emotional embodiment opens to an empathetic understanding of embodied meaning in person-place relationships (Hamington 2004, p. 62, Epstein 2003; Finaly 2009) This understanding has a direct relationship with pedagogical processes of understanding the relationship between person-place experience and spatial designing because embodied meanings reside in our body, in our relations with others, in the things in our world and in our very actions.

It has been suggested that in understanding the world through embodied empathy we can open to a heightened sense of the other through a connected way of knowing (Blenksky and Stanton 2000). Embodied empathy can also increase one's understanding of interconnective embeddedness in a constant flux between time and place where we are effected by and causing affect simultaneously and perpetually (Gordon 2007). It has also been suggested that through a combination of embodied sense perception, emotional feeling and cognitive inference through the lived experience, one experiences the other through a unified whole (Cloke & Jones 2003). A final insight is that increased empathy has been linked with mindful awareness of present experience and to increased occurrence of ethical care and action in relation to environmental, societal and practice-based concerns (Seigal 2006; Burgoon & Langer 1995; Langer 1992, 2000; Cloke & Jones 2003; Epstein 2003).

There is an inherent relationship between embodied meaning, imagination and creativity that can be implemented through a design process that can broaden students' understanding of the meaning gained through spatial experience (Gidley 2010, 2005, 1998; Payne 2010, Nielsen 2004, Dirkx 2006; Rugg 1963; Watkins 2000; Nielsen 2004; Greene 2001).

Imagination has been linked to emotional engagement with the world (Watkins 2000; Dirkx 2006) whereby it is the faculty that is directly related to the mediation between emotions and feelings that are animated by particular images or fantasy evoked through our experiences (Dirkx 2006 p. 31). It has been suggested that by allowing the senses, perceptions and sensibilities to manifest through imagination, there is the possibility of increasing one's understanding of the embodied other (Payne 2010; Gordon 2007). Inherent in this understanding is the belief that imagination has the capabilities of transferring thought processes beyond categorisations and assumptions (Nielsen 2004; Greene 2001). These findings suggest that there is an inherent relationship between imagination and creative processes whereby embodied understanding opens to a multitude of ways in which the meaning can be received from lived experiences to inform thinking, feeling and action beyond assumptions and categorisations.

Another consideration of an embodied learning process that has surfaced through pedagogical research includes the link between embodied learning and transformative learning (Louchakova 2005;

Mezirow et al 2000; Boyd and Myers 1988; O'Sullivan 1999; Cranton 2006). Embodied learning presents a process that privileges a holistic understanding of learning and knowing (Merriam, Baumgarten and Careffa 2007; Brooks and Clark 2001; Chapman 1998) whereby it has been recognised that students can receive an increased awareness of self, self identity and self attitudes through a heightened awareness of their interrelated embodied relationships (Mezirow et al 2000; Boyd and Myers 1988; O'Sullivan 1999; Cranton 2006).

Furthermore, there have been many theoretical advances in promoting the potential learning ramifications of an embodied learning approach in design studio pedagogy for understanding the relationship between person-place experiences that could bring to surface some of these ineffable qualities of lived experience that bring meaning to people's lives (O'Neill 2001; Manzo 2005; Cooper Marcus 1978; Downing 2003; Starr-Glass 2002; Simms 2008; Bose, Pennypackers and Yagner 2006). These perspectives include: a focus on the spontaneous and sensual experience of the learner where there is an increased focus on haptic ways of knowing place that is bound to autobiographical experiences of people (O'Neill 2001; Manzo 2005); the increased understanding of meaningful architectural experiences from memory then translating them to understand existing architectural values and beliefs in pedagogy (Cooper Marcus 1978; Downing 2003; Starr-Glass 2002; Simms 2008; Bose, Pennypackers and Yagner 2006); the increased possibilities for examination and clarification of human situations, events, meaning and

experiences as they are known in everyday life but typically unnoticed
beneath the level of conscious awareness (Norberg-Shultz 1981, Relph
1976, 1993); and increased understanding of the emotional connection of
sensorial qualities of place aesthetics as experienced through the senses
and body (Gosling and Wilson 2010; Webster 2001; O'Neill 2001).

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Methodology

The research methodology used in this study was an action research approach in curriculum design and implementation using mixed methods. The course was designed for a 14 week first year tertiary spatial design studies class for 120 students (mixed male and females, average age 19 years old) The course included a weekly 1 hour lecture with a 2 hour tutorial.

The course (outline, content, aims, objectives, graduate attributes, projects, learning outcomes, learning processes, teaching strategies, lectures, readings, tutorials, assessment criteria and feedback strategies) was devised using an action research approach using mixed methods with different sources of information (embodied cognition research, pedagogical case studies in phenomenological and embodied learning approaches, teaching methods research, learning theory research, learning processes research, curriculum building theory, researcher experience and insights and more) in its development, analysis and

validation. From this, the resulting structure course included three projects that build upon and referenced each other: embodying self; embodying site; and embodying design.

Project 1: Embodying Self (4 Week Project)

The process of developing the students' awareness to embodied meaning in spatial experiences begins with exercises of bring to the surface spatial meaning from their autobiographical experiences (memory, experiencing UNSW and experiencing the city). These experiences make positive and negative spatial reference to fundamental human needs (as referenced from Maslow) of: safety/ security; belonging; consideration/engagement/encounter; and emotional connection/well-being. Students engage with the spatial analysis tool book (designed specifically for this course) to assist in determining spatial meaning from their experiences and in peer discussion to gain different perspectives on how they might think about their meaningful spatial experiences.

Project 2: Embodying Site (4 Week Project)

The process of developing students' skills of perception is unfolded through the 4 phase process of the Goethean Scientific Approach, adapted from Goethe's methodology for observing the phenomena of plants by philosopher and landscape architect Isis Brook (1998). Brook developed this to implement a process learning about reading landscapes. It was developed further to include the built environment in the schooling of students' perception particularly through 'mindfulness'. Students' use mapping techniques to explore and visualise their perceptions of place;

engage with the spatial analysis tool book to determine spatial meaning from their experiences; and engage in peer discussion to gain different perspectives on how they think about the embodied language in place.

Project 3: Embodying Design (6 Week Project)

The process of developing students' awareness begins with identifying project objectives by engaging with people to discuss their societal needs (based off the site they have chosen) to develop criteria for a spatial design proposal. The students then engage in a 1:1 marking of site to discuss with peers (including the people that were initially engaged to discuss their initial designed experience of the space). Students then engage in an iterative design process (developing the principles inherent in the constructivist learning approach) to develop their design proposal. These iterative stages include sketch modeling the space followed by sketch plan and section. The final iterative stage involves reflection where there have been additions to the practical basis of the constructivist principles. The changes to this approach include students' engagement with peer review, the spatial analysis tool book, reoccurring site visits, findings from their first project on their understanding of human needs and spatial experience and their findings from the second project regarding place reading as means to reflect on their design and to make further iterations. From a minimum of ten iterations students then progress to make a schematic design, which includes a final model and a visual and verbal presentation.

Discussion

In reflecting on the design of the embodied learning course, the positive outcomes were that it opened new pathways for students (and for tutors) to understand many ways (qualitative and quantitative) in which spatial design can influence: person-place meaning through subjective autobiographical embodied experiences; engage with a phenomenologically based approach to site analysis and be implemented in an iterative design process that is at a minimum responsive to the user needs of safety/security, belonging, consideration/inclusivity, empowerment and emotionally uplifting.

There were certain challenges that embodied learning theory and this course faced in design studio pedagogy, one being that although a greater understanding of the benefits of embodied learning in practice has been highly published (Epstein 2003), there have been minimal studies in which embodied learning has been referenced in spatial design education and therefore it proved difficult to engage with a pre-existing framework for cross analysis of the positive and negative ramifications of this course design. Feedback that surfaced from student evaluations of the course were that more time would have been beneficial to engage more consciously in the embodied learning processes therefore allowing a greater opportunity to reflect on more qualities of person-place

relationships and additional ways in which these findings could become manifest spatially through the design making process. Further feedback included that some students highlighted the challenges that came from engaging in an embodied learning process in first year when they were grappling with fundamental design skills, techniques and processes meanwhile adapting to university education.

Further difficulties arose when placing an embodied learning approach into a marking criteria required for all academic learning and assessment. Primarily, this is because it is an approach that is fundamentally qualitative (van Manen and Adams 2010, p. 450). For some tutors that were unfamiliar with embodied learning approaches, this resulted in modified marking criteria that were quantitatively reductive and limiting in exploring the true nature and pedagogical value of the course. A final outcome from this challenge was that in the interest of transformative learning approaches, it has been highlighted that pre-conscious experiential learning is often recognised by the learner long after the experience has occurred (Jarvis 2006, p. 50). This coupled with the pedagogical tendencies to bracket learning under a cognitive or behavioural paradigm (ibid) could result in embodied learning to occur but not be registered under available quantitative testing methodologies.

In further discussion of this point, what could provide valuable information regarding the pedagogical and practice-based implications of an embodied learning approach to understanding and empathizing with the social and psychological needs in designing for person-place

relationships would be to conduct a longitudinal study of students in post 1
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university design practice.

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Bridging Embodied Learning Theory, Place Meaning and the Process of Place Making in Design Studio Pedagogy. Design studio curriculum has great potential in creating a platform for design students develop their design skills, thinking and knowledge that set the groundwork for achieving the graduate attributes required for professional practice. more. Design studio curriculum has great potential in creating a platform for design students develop their design skills, thinking and knowledge that set the groundwork for achieving the graduate attributes required for professional practice. Pedagogy has deep roots into philosophy. Descartes (1596â€”1650) laid the foundations of the mind-body dichotomy in the Discours de La MÃ©thode (Descartes, 1637).Â A first attempt to integrate the body in learning L2 was made in the Total Physical Response (TPR) developed by Asher in the 1960s (Asher, 1969 , 1977). In the TPR, the teacher gave commands in L2. Learners listened, comprehended and executed the commands.Â Having in mind the considerations above and the research that has taken place in the last 20 years, it is obvious that words can no longer be understood as abstract symbols of the mind. Instead, neuroscientific research has proven that words are experience-related sensorimotor representations in our brains (PulvermÃ¼ller, 2005 ; PulvermÃ¼ller et al., 2005). Embodied aesthetic pedagogic design is a means of approaching teaching that intentionally attends to holistic embodied aesthetic considerations, reconceptualizes and destabilizes the teacher role, and develops complicit learning environments.Â This artful design process is the same process for designing engaging curricula. In this chapter, I introduce embodied aesthetic pedagogic design, a means of approaching teaching that (1) intentionally attends to holistic embodied aesthetic considerations, (2) reconceptualizes and destabilizes the teacher role, and (3) develops complicit learning environments. Worldwide, different countries and their governments have considerably dissimilar views on what constitutes creative thought and how creativity is to be studied (Sternberg, 2006). In recent times a learning theory called embodied learning has gained much appreciation for its unique approach in helping students to acquire a language. I am pretty sure youâ€™ve been using some of its techniques ever without knowing about embodied learning. What is Embodied Learning?Â Let us have a look at the strategies or activities help make embodied learning an integral part of an ESL classroom. Follow this link to learn more about the correlation between the body and the mind in learning. 1. Lego building. Legos are a set of plastic construction toys that are assembled to build constructions, vehicles, working robots, etc. This is one of the best ways of stimulating vision and patience in students while fostering their creativity and cooperative play.