DON’T SHOOT ME, I’M ONLY THE ARCHITECT: EXPLORING THE COMPLEX INTERACTIONS BETWEEN DESIGN, PEDAGOGY AND SCHOOL CULTURE

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ABSTRACT
Architects and school leaders are integral to the process of procuring, designing, constructing and using innovative learning environments (ILE’s). However, the following questions arise: How much do they know of each other’s professions? What can both groups potentially contribute to the development of ILE’s? Is it only luck that results in a successful ILE project?

There is a groundswell of support for schools to move towards the development of student-centric pedagogies and many schools and educational organisations are procuring new, flexible environments to support and enable this change. However, as schools become aware that the construction of a space is not necessarily the key factor in modifying teaching and learning practice, the focus is shifting towards the analysis of complex non-design factors that impact the successful inhabitation of the space.

There are critical moments in the school procurement process during which architects and educators could work more closely with each other. Early engagement enables the architect to develop a deeper understanding of the pedagogical vision to inform the architectural brief and schematic design. Concurrently, while working with the architect the school community becomes more aware of how space and pedagogy are interlinked. A relative blind spot in current research is an understanding of the complex cultural and organisational factors that have an impact on the end-use effectiveness of physical spaces.

Using a recently completed single school project and drawing on professional experience and a critical review of current literature, this paper proposes an early outline for a PhD thesis investigating the complex relationship between the key stakeholders that contribute to the design of both the physical and social factors that shape new learning environments.

KEYWORDS: ARCHITECT, SCHOOL LEADER, DESIGN, PEDAGOGY, SCHOOL CULTURE, REFORM, LEADERSHIP, CHANGE MANAGEMENT.

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INTRODUCTION

This paper is based on observations from private professional architectural practice work within the primary and secondary school sector. The paper provides a review of relevant literature and sets out a possible methodology for the author’s own research into the topic. Still at an early stage of research (Year 2 of a 6 year part time PhD), this paper asks more questions than it answers.

THE ISSUE

According to the Australian Bureau of Statistics, approximately A$4 billion dollars of construction work is completed in the combined private and public education sectors each year in Australia (ABS, 2016). With the current focus on the development of flexible, student-centric teaching and learning spaces, it is reasonable to expect that such investments are intended to support current teaching and learning practices and outcomes. Anecdotal evidence, and observations by the researcher, suggest a possible mismatch between the anticipated and real outcomes in the utilisation of innovative learning spaces, and that this discrepancy may stem less from the physical environment and more from the cultural and organisational one in which a project is commissioned and delivered.

The proposed research is intended to inform and help determine strategies to assist school leaders and architects in improving newly constructed teaching and learning environments so they may be successfully utilised, in keeping with the way they were briefed and designed.

ARCHITECTS AND SCHOOL LEADERS – THE KNOWLEDGE CROSSOVER

In what amounts to an extraordinary, unquestioned leap of faith, the design of new teaching and learning environments relies upon architects who may have little or no understanding of the pedagogical underpinnings of the environments which they are designing – and concomitantly being briefed by school leaders, who may have little or no understanding about the impact of building design upon the pedagogies they are promoting.

Consequently, it is somewhat common for a project’s educational framework to be ‘unstated, or unknown to, or unshared’ by those for whom it is being designed (Jamieson, Fisher, Gilding, Taylor, & Trevitt, 2000). If the effectiveness of ILEs appears to be more successful when aligned with pedagogy (Cleveland, 2011) and if learning activities in a learning space need to be underpinned by pedagogy to be effective (Ling & Fraser 2014), is it critical that the pedagogical intention forms the fundamental basis of learning and teaching space design? Are the roles of the two most critical members of the process of creating new learning environments clearly understood and defined? And if not, then why?

The way in which educational projects are procured plays into this dilemma. Acknowledging that in a system made complex by funding frameworks and restrictions, delivery pressures, educational expectations and pedagogical divergence, the most fundamental decisions that affect project outcomes are made during the briefing stage (Blyth & Worthington, 2010). Organisational and cultural factors within a school community may also have an impact on project outcomes and reinforce a transition from a teacher-centric to constructivist student-centric pedagogy.

CONTEMPORARY LEARNING ENVIRONMENTS – THE CHALLENGE

If the space that enables constructivist pedagogies is flexible, future-proofed, bold, creative, supportive and enterprising (JISC, 2006), then the question arises – to what purpose? Who, or what, is at fault if spaces designed for these attributes are manipulated by teachers to re-create familiar single cell classroom environments i.e. all doors / screens closed, furniture arranged in rows, teacher at the front.
etc? The spatial design? The teachers? The pedagogy? The school? Or is it more complex than that? Is it beyond the claim that it is old pedagogies being played out in new spaces? What role might architects and school leaders play in the success or failure of such projects?

If, as Elmore (2016) states, ‘learning has already left the classroom’ as a consequence of ubiquitous student access to mobile technology, and if Zhao’s (2015) assertions about the requirement for a fundamental paradigm shift in education are true, then schools and their teachers have an enormously complex change management task to manage. They need to respond to global shifts in skills requirements and employment opportunities, to technology that can both enable great learning and simultaneously obfuscate and distract from it, and recognize that teachers must become both guide and learner in a new arrangement of school hierarchy.

When teachers have to adapt to new, untested, unrehearsed ILE requirements, it may not be surprising that it is not always embraced and often instils fear and resentment even among the highly principled professionals in our society.

**IS HISTORY REPEATING ITSELF?**


The schools developed at the time with the Plowden principles are now widely considered to be failures (Adelman & Walker, 1974). Critical hindsight revealed that there was misguided focus on physical space as the generator of educational reform, and deficient focus on the changes required by the people within the system. Furthermore, Plowden’s expectations that the vision espoused in the report would be taken up widely was similarly unwarranted, as it was based upon a small number of innovative teachers’ observations in a small number of schools (Brogden, 2007).

Shining contemporary examples of schools exist in our region where spatial affordances and pedagogical reforms are fundamentally aligned (e.g., Northern Beaches Christian School, Sydney NSW; Stonefields School, Auckland NZ), and form the inspirational focus of many learning/space design conferences.

However, my observations, supported by dialogues with school leaders across Australia and New Zealand, leads me to believe that there are more failures than successes, and it is my assertion that failure, at its core, is due to a lack of focus on the human aspect of educational reform – reflecting the Open Plan movement to the 1960-70s.

Historical interpretation of events within educational research is critical in ‘a paradigm that argues about the social construction of knowledge’ (Popkewitz, 1998, p. 339). Furthermore, ‘swings in the pendulum’ of educational reform (Sherman, 2009) and ‘innovative panaceas, often unrecognized for their similarities to past reforms...’ (p.44) should be heeded and responded to proactively.

It would be a great pity if current educational reforms falter because of fast-tracked capital development programmes that are completely out of step with those for whom they are instigated.
What then are the possible factors outside the spatial design that may impact on the successful occupation and inhabitation of an ILE? My observations have led me to three areas that I believe require further research to determine what role they may play in the successful occupation and inhabitation of an ILE:

- Cultural and organisational change
- Leadership
- Teachers’ professional development

**CULTURAL AND ORGANISATIONAL CHANGE:**

The constructionist principle of the appreciative inquiry philosophy states that “human knowledge and organisational destiny are interwoven” (Cooperrider & Whitney, 2001, p. 416). To be effective as executives, leaders, change agents etc., we must be “adept in the art of understanding, reading, and analyzing organizations as living, human constructions” (Cooperrider & Whitney, 2001, p. 416). The reason that this seems applicable to educational reform lies in its acknowledgement of the ‘human’ in organisational change. Appreciative inquiry suggests (amongst other things) that reality is socially created, change can start with questioning the status quo, and that human systems move in directions of their images of the future. How then can sustained and positive reform within schools be supported?

Within the educational reform literature there is considerable support for the encouragement of change in teacher practice at the core of reform efforts (Woodbury & Gess-Newsome, 2002). There is also recognition of several barriers to that change:

- Failure to recognise need for change (Greenberg & Barron, 2000);
- Previous unsuccessful efforts & fear of the unknown (Greenberg & Barron, 2000);
- Threats to expertise (Greenberg & Barron 2000; Fullan, 2001);
- Threats to social and power relationships and resource allocations (Robbins, 2000)

These are not easy barriers to overcome. In a school where there is a known appetite at the executive level for pedagogical change, these barriers can become entrenched within the teacher cohort unless each one is comprehensively addressed. To do so requires that systems and structures be put in place to “enable staff at all levels to collaboratively and continuously learn and put new learnings to use” (Silins, Mulford, & Zarins, 2002, p. 616), as well as to recognize that reformers’ main challenge must be viewed as structural reorganization, not of stable tasks with a stable purpose, but of redefinition of purpose within a changing environment (Argyris & Schon, as cited in Mulford, 2005).

This research suggests that fostering a culture of change within a school may impact the success of a new ILE project. If that is the case, then what is the evidence for the above mentioned assertion? And can an architect validly play a role in the process of the school seeking to use a new building project to transition to a contemporary pedagogical model? What might that look like, given the perception of the architect’s role within the process?

**LEADERSHIP**

Whilst there are concerns that discussions around leadership with a focus on individual sovereignty marginalises relevant contextual conditions (Wilkinson & Kemmis, 2015), there is considerable evidence to suggest that individual leadership has a significant impact on a school’s pedagogical trajectory.
Fullan’s (2002) concept of the Cultural Change Principal suggests what is necessary from a school leader if cultural transformation is to occur. Fullan proposes that school leaders need to be sophisticated conceptual thinkers attuned to the big picture, collaborative and people-focused. He notes that charismatic leaders are unlikely to foster sustainable change and fostering great teachers is at the core of enabling a pipeline of positive future leadership. Hallinger (2003) also supports this idea and posits that school Principals that exhibit ‘transformational’ rather than ‘instructional’ leadership are more likely to positively encourage changes in people rather than promote specific instructional practices.

If, as has been discussed previously, pedagogy must be the driver for change within a school, and if new building projects are commissioned because of their perceived ability to enable pedagogical transition, then pedagogical leadership could be the key to cultural change because it is pedagogy that “peels back the veneer of teaching methodology to expose the conscious and unconscious” and enables teachers to become “agents of enculturation” (MacNeill, Cavanagh, & Silcox, 2003, p.4).

But, what sort of change is required to successfully transition from traditional to contemporary teaching and learning models, and what sort of leadership best equips a school community to make the transition? Good school leaders that articulate an organisation’s moral purpose, provide a level of managerial support and create an appropriate sense of collaborative effort towards a shared goal are one thing. But what occurs when ‘second order change’ is being instigated that is “disruptive and…chaotic, fraught with uncertainty and ambiguity” (Knuth & Banks, 2006, p. 14)? Does such change require leaders that can address barriers to change through their ability to calm fears and inspire trust in the teacher cohort?

Based on such assumptions, the proposed research aims to:

- Investigate what role school leaders should play in shaping the success of ILE projects;
- Determine whether any definable leadership styles are more effective than others; and
- Explore the impact of the roles and relationships between school leaders and architects on the success of ILE projects.

PROFESSIONAL DEVELOPMENT

Teachers are at the coalface of the shift towards contemporary student-centric pedagogy. In a school making this transition with the aid of new learning spaces, high expectations are often placed upon them by school leadership teams.

Teachers may be required to move from traditional teaching spaces, where they have typically employed previously learned teaching practices, into often more open and flexible spaces. Frequently this is accompanied by an expectation that their practices will change simply because they are in a changed environment.

Architects are not usually involved in the discussion around teaching practice and professional development. In fact, many educators might consider it completely inappropriate that architects take an interest in what is a professional activity that is outside their typical sphere of influence. If however, as posited earlier in this paper, the success of a particular design is dependent upon factors other than simply the physical environment, then it is suggested that such factors must be considered within the context of any project’s early design thinking.

Again, reflecting upon the Open Plan movement, one of the factors contributing to the demise of the Plowden ideals was the project’s enforcement by local education departments upon Principals and teachers with little or no attention to professional educational training (Brogden, 2007).
As Little (1993) argues, teachers are crucial to any major reform process, as it is through their engagement that the “broader consideration of the educational enterprise” (p.17) can be developed within a school’s organisational structure and culture. If that is the case, efforts to support, encourage and alter teacher practice within an atmosphere of change is likely to have a positive impact the success of an ILE project. However, professional development (PD) needs to be more than simply a vehicle for reforms. It must become a reform in and of itself to ensure that it becomes an integral part of both teachers’ work and the school culture; that is, it must become part of an organisational learning effort (Scribner, 1999). Only when this situation exists can teachers create optimal conditions for students’ learning (Ontario Royal Commission on Learning, as cited in Mulford, 2005).

The Victorian Department of Education (2005) set out seven principles of highly effective professional learning:

- Focused on student outcomes (not just individual teacher needs);
- Focused on and embedded in teacher practice (not disconnected from the school);
- Informed by the best available research on effective learning and teaching (not just limited to what they currently know);
- Collaborative, involving reflection and feedback (not just individual inquiry);
- Evidence based and data driven (not anecdotal) to guide improvement and to measure impact;
- Ongoing, supported and fully integrated into the culture and operations of the system – schools, networks, regions and the centre (not episodic and fragmented); and
- An individual and collective responsibility at all levels of the system (not just the school level) and it is not optional.

The idea of effective professional learning as being open, integrated and immersive is also reflected in the principles espoused in the Australian Institute for Teaching and School Leadership’s analysis of global trends in professional learning (2014).

There is consensus on what constitutes good professional learning for teachers and the consequent benefits of appropriately targeted learning opportunities and techniques in assisting reform efforts. However, there appears to be a gap, both in the research literature’s consideration of and professional learning opportunities available for, actual practices required to adapt from traditional to contemporary teaching practices.

Practically, how can teachers learn to move from the front of a classroom to confidently curate a class of collaborative group work? How do teachers accustomed to technology in static ways learn to embed technology in the co-creation of knowledge? How do teachers learn about the changes in their ‘emotional geographies’ (Hargreaves, 2001) to enable the careful transformation of often strongly held pedagogical philosophies?

From my perspective these are fundamental questions that are at the heart of contemporary pedagogical reform efforts. Analysis of their impact on a new ILE as first occupied and then inhabited must form part of the consideration of a holistic approach to contemporary educational building design.

PROPOSED RESEARCH QUESTION

The following question forms the basis of the proposed research:

What role do architects play in the complex interaction between design and non-design parameters in the development, occupation and inhabitation of successful ILEs?
In this light, the proposed research will seek to:

1. Review the availability and focus of existing PD courses / activities;
2. Investigate whether integrated and well-planned professional development (PD) strategies can have a positive impact on teachers’ ability/willingness to change their pedagogical practices in ILEs;
3. Investigate the extent of exposure provided to educating students about contemporary pedagogical theory and practice as part of teacher PD strategies; and
4. Collate evidence for the most effective PD strategies/activities, including assessment of their impact on changes to teacher practice.

PROPOSED METHODOLOGY

A regional independent K-12 school has recently completed a large senior school building project, designed by the author’s practice. Observation of its occupation and inhabitation reflected some of the issues discussed above. This school is anticipated to provide an opportunity for investigating the issues at the core of this research project. The Principal who commissioned the project left to take up another position after one term of the building’s inhabitation. An experienced Principal took up the role of temporary school leader for three terms until a permanent Principal could be recruited. The new Principal is scheduled to take up the position at the start of the 2017 school year.

The proposed research will employ qualitative research and adopt an ethnographic methodology involving field-based data collection in a single case study school (as identified above). The participants are expected to be three school leaders and a group of teaching staff. The changes in school leadership – mentioned above – offered a unique opportunity to consider the project and its position within the school’s organizational structures from three different perspectives, enabling a range of considerations to be investigated at different temporal moments in the process of procuring, designing, constructing and using the ILE’s at the school. At each moment the following key issues will be explored and thoroughly interrogated: design, leadership, learning theory and teaching practice.
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