Mediating contemporary learning through spatial change: An account of ‘library-as-experimental-space’

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Changing a school from traditional to contemporary learning is challenging. This paper presents an empirically researched account of how one primary school, struggling to bring about a more contemporary learning environment, ‘reimagined the geography of learning’ (Mulcahy, 2015) through redesigning the library as an experimental learning space. Altering the image of schooling by creating a visible, alternative learning space served to rehearse the more radical transformation to come. The purpose of this paper is twofold. Firstly it explores the network effects and power relations (Leander, Phillips, & Taylor, 2010; McGregor, 2004) that generated the library-as-experimental-space and the role it played in the larger story of transformation at the school. Secondly it foregrounds the potential of poststructural, sociomaterial research approaches (Fenwick, Edwards, & Sawchuk, 2011; Latour, 2005; Law, 2002) for revealing detailed and nuanced data that may be missed in traditional evaluation methodologies.

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Caroline has been working in primary education for twenty-six years, the last seven years as a principal. Caroline is a current PhD candidate at MGSE researching the innovative learning environments and pedagogic practices that emerged through the Building the Education Revolution. Caroline’s research takes the form of a policy study - policy-as-practice rather than policy as implementation. Methodologically it is an ethnographic case study using photographic and interview data collected in Catholic primary schools with reputations for innovative design and contemporary pedagogy. Using a socio-material approach she seeks to give attention to the materiality of the learning environment - people, furnishings, objects, space and technologies.
Publications making a connection between pedagogies and learning space design, although not new, have grown markedly over the past decade and influenced changes in many schools and other places of learning in Australia and worldwide (Cleveland, 2015). But, as Mary Featherstone reminds us, ‘transforming a school from traditional to ‘contemporary’ learning is challenging’ (Featherstone, 2012, p. 93). How do schools set about transforming the learning environment spatially and pedagogically? What influences their reforms? This paper presents an account of one school’s journey to create a more contemporary learning environment. Through reconfiguring the library, a space of tension and experimentation grew up affording alternatives to prevailing school practices.

A sociomaterial analytic

Theoretically, this paper challenges the sometimes taken-for-granted assumption that material things such as learning spaces simply frame and support human activity but are not taken seriously as active participants in learning. In contrast, the sociomaterial sensibility foregrounds the understanding that educational change is a matter of complex social AND material relations shifting and performing everyday knowledge-building practices. Advancing the idea that the social, material and textual are inherently inseparable and co-constitutive, this paper posits the possibility that unanticipated entities may emerge as agents or mediators of change. Informed by Deleuze and Guattari’s assemblage theory (Deleuze & Guattari, 1988) and Actor Network Theory (Latour, 2005; Law, 2009), the assumption carried into the study is that an object of analysis such as a ‘new generation learning environment’ is not naturally given in advance but emerges with and is enacted in practice. The sociomaterial approach understands that any focus on objects is located in extended spatial and temporal relations and research must attend to the boundary work through which entities become defined (Orlikowski & Scott, 2008).

Many mediators can remain invisible when research begins with standard categories of analysis and human-centred framings. However, through a sociomaterial approach, the understanding of learning environment is one that is continually enacted in a constitutive entanglement of technologies, policies, pedagogies, teachers, learners, furniture, resources etc. It does not presume the existence of independent entities prior to practice (Faulkner & Runde, 2012).

In what follows, first I briefly explain the policy theorizing environment influencing new learning environments in schools. I outline three moves of policy theorizing – policy implementation, policy enactment, and a sociomaterial rendering of policy enactment – and articulate how policy can be understood as mobilized and enacted in school settings. Next I examine the research school setting and outline the methods I used to collect the data. The empirical data is then worked using an assemblage analytic as I present a closeup account of the work of ‘library-as-experimental-space’ as a mediator of change, bringing to light the materiality that is often invisible in both policy and practice. I conclude by indicating the material, physical and discursive work that the library-as-experimental-space does at the research school. This paper seeks also to raise questions about the contribution that sociomaterial approaches can make to educational research.

Policy theorizing

In Australia, as in many other countries, school reforms that seek to change from traditional classrooms to new generation learning environments are underway. Policy documents both internationally (DfES, 2002, 2003; OECD,
2006) and in Australia (MCEETYA, 2008) identify new spatial designs and structures as critical for transforming schooling. In the Catholic Education Office, Melbourne, policy documents (CEOM, 2009a, 2009b) denote well-designed, flexible spaces as essential for contemporary learning which is characterized as collaborative, learner-centred and connected through digital technologies. Such policy discourses strive to set a direction by stating preferred pedagogical and spatial practices for schools. These discourses state a clear connection between the quality of the built environment and learning outcomes; for instance that a 21st Century learning environment supports the development of 21st Century skills such as collaboration, communication and critical thinking (see for example, CEOM, 2009b). However, when Blackmore, Aranda, Bateman, Loughlin, and O’Mara (2011) undertook a review of over 700 documents, they found that the connection was unsubstantiated in empirically researched studies.

Much policy making and policy research takes a techno-rational approach based on well-established and replicable methods intended to problematize and solve education problems (Webb & Gulson, 2012, 2015). A common outcome of the techno-rational policy approach is a kind of schism between terms such as ‘old’ and ‘new’, ‘traditional’ and ‘contemporary’ or ‘innovative’, and ‘classroom’ and ‘learning environment’ (DEECD, 2009; DfES, 2002; MCEETYA, 2008; OECD, 2006). Another outcome is the portrayal of learning spaces as static, preexisting surroundings or containers for social actors to inhabit but they are not seen as playing any constitutive role in learning or other institutional activity (Mulcahy, 2014). Moving beyond the techno-rational policy approach, an emerging shift in policy research is enactment theorizing (Ball, Maguire, & Braun, 2012; Mulcahy, 2014). Enactment theorizing ‘resists the tendency of policy science to abstract problems from their relational settings by insisting that the problem can only be understood in the complexity of those relations’ (Grace, 1995, p. 3). However, an enacting approach that views policy as interpreted and translated by policy actors maintains a separation between policy text and policy actor and places policy outside of, and preeminent to, practice (Mulcahy, 2014).

A sociomaterial rendering of policy enactment challenges the separation of text and actor by theorizing policy as ‘constantly changing; indeed, constantly emerging’ (Webb & Gulson, 2015, p. 169) in heterogeneous practices, rather than already articulated in texts to be interpreted by social actors (Mulcahy, 2014). Such a rendering of policy is ‘fully performative’ – that is performed again and again. Policy emerges in indeterminate ways with the many diverse actions of social and material mediators. Emergence is a significant aspect of sociomaterial approaches to policy analysis in which ‘any changes we might describe as policy – new ideas, innovations, changes in behavior, transformations – emerge through the effects of relational interactions ...’ (Fenwick & Edwards, 2011, p. 712). In a fully performative rendering of policy, spaces [and time] are fluid and ephemeral, formed and deformed with the ebb and flow of each pedagogical move. Mulcahy (2014) finds that an assemblage rendering of learning environments acknowledges that they are not spatially set and singular, but always ‘in the making’ (Op cit, 2015, p. 511). Like McGregor (2004) who takes spatiality to be a tool for tracing sociomaterial ‘relations and patterns of power and agency’ (McGregor, 2004, p. 351), this paper theorizes space as enacted at the tension between materiality and sociality.

The data being worked in this paper were collected as part of the qualitative case study for a thesis titled: ‘The promise of policy: Assembling new generation learning environments in Victorian schools’2. The study takes a broad look at policies in relation to contemporary learning environments (to be referred to as NGLEs in this paper). It asks questions about how policies influence the architectural design and pedagogic practices in

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2 This project began as a Master of Philosophy which was converted and confirmed as a PhD study in May 2015.

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NGLEs in Victorian schools, and how such NGLEs can be understood as policy artefacts. The study’s significance derives from its potential to provide better understandings of the take-up of policy in relation to NGLEs, which are both under-researched and under-theorized (Blackmore et al., 2011; Fisher, 2000). To date, there are few empirical studies into how these policies are taken up (or not) in practice in these newly built learning environments and, given the recent substantial Australian Federal government investment in school architecture and redesign (the Building the Education Revolution scheme 2009-2012 – BER), such research is timely.

Figure 1 shows three ‘intra-connecting’ entities which are the focus of the thesis: policy-pedagogy space3. I propose that the NGLE assemblage emerges through complex intra-connecting relations between multiple social and material actors or mediators. A sociomaterial sensibility places the focus on the materiality of the learning environment, without privileging human actors (Fenwick, Nerland, & Jensen, 2012; Fox, 2011).

Empirical setting and data collection methods

The school where the data was collected is a Catholic primary school in suburban Melbourne. Built in 1936 as a 2-storey brick building with long corridors and closed classrooms, it had seen few structural changes since that time apart from updating desks to tables and purchasing learning resources. Until the leaders began to research contemporary pedagogies in 2006, teacher practices were still fairly traditional and the physical resources and classrooms were quite dilapidated. It was built at a time when school buildings were taken-for-granted, container-like structures reflecting what some call the ‘imagined geography’ of schooling (Leander et al., 2010, p. 329). But by the early 2000s, new discourses were emerging in education and making their way into schools through publications and professional learning programs committed to (re)engaging students in learning (Hill et al., 2002), using contemporary tools, and creating learning communities (CEOM, 2009a). Such discursive changes can be seen as providing a platform for transformational change inasmuch as schools like this one were being drawn into global, national and systemic projects of radical reform (Whyte & Cardellino, 2010).

Phase 1 data collection from which the data for this paper emerged involved researching in two Catholic primary schools that have a reputation for innovative architectural designs and contemporary practices. My interest is in exploring the processes through which the schools brought about changed practices. I visited the schools and spent two hours taking photographs and field notes, noting the movements of students and teachers in one learning area. These observations were followed up by paired interviews with two leaders, two teachers and two students. The data presented below is taken from the interview with two school leaders at one of the schools.

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The school leaders trace the start of their journey of change to a wide-ranging school review which showed that their students were:

... motivated to learn, but the learning was not engaging for them ...

They applied to become a research school for the Catholic Education Office of Melbourne’s Contemporary Learning Research Project (CLRP). As this leader expressed:

So we signed up to that, and we were far from being a contemporary learning environment ...

This leader recalls the tension between the discourses around contemporary learning and the state of the learning environment at the school. Their task seemed enormous as this question asked by one of the school leaders reveals:

... well how can we do this in such a dilapidated school?

School reform policies do not simply travel from policy makers to school contexts but are mutually constitutive in complex sociomaterial relationships. Nespor (2002) highlights the difficulty of conceiving ‘reform’ and ‘context’ as separate spheres working to support, or even to undermine, one another. Rather, reforms and contexts mutually constitute one another as their discourses shift across multiple networks of ‘advocacy and practice’ (Nespor, 2002, p. 365). Reforms such as the contemporary learning discourses and contexts such as the school are not separate arenas but constitute ‘circulating entities’

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3 Inspired by Karen Barad’s notion of ‘intra-action’ (Barad, 2003) which captures the social and material entanglement of reality, I use ‘intra-connecting’ to indicate that entities, such as pedagogy, space and policy are not pre-givens but are ‘intra-active with’ each other, simultaneously constituting and being constituted in practice.
(Latour, 2005, p. 233) producing a pre-conscious space that both strategically and politically works for some, perhaps unformed, policy outcomes (Webb & Gulson, 2012). Webb and Gulson (2012) describe this pre-conscious space as the space between policy sensing and policy enactment.

Taking note of how identities are inscribed and enacted reveals patterns of power relations as entities act on each other, seeking to enroll each other as mediators into networks of practices (Fenwick & Edwards, 2010). School leaders become policy mediators, links in a chain of associations and potential sources of innovation and change. The interview data brings to the fore patterns of power as school leaders work to enroll mediators by disrupting prevailing material, social and discursive practices and challenging accepted patterns of behavior of the school. However, the data also reveal the contrasting power of teaching practices at the school which had become durable and static continually inscribing and re-inscribing teacher identities, and indeed student identities as this leader recalls the effect of bringing back new ideas from their research:

So we went along and did a lot of research and brought that back, but it was met with a lot of resistance …

The research school set out to change the learning environment through reconfiguring the physical space. But rather than starting with the classrooms, the library was chosen as a public space through which a visible alternative environment could be created for teachers and students to trial and showcase contemporary pedagogical practices. However, reconfiguring the library produced further tensions and resistances when it involved throwing out old resources. As this leader recalls they were:

“… really throwing out a lot of the resources, which was really heartbreaking for a lot of staff who’d been here a long time, but they couldn’t see the reason we were doing it was that we needed to make it a contemporary environment where the children could have access to relevant information, and that included embracing ICT … ”

Removing resources that had for so long been part of the materiality of the school makes visible the hidden network of material relationships between the teacher and learning resources. McGregor (2004) drew on her own research of the materiality of schooling, and that of Lawn and Grosvenor’s (2001) study of stored school resources that had long fallen into disuse, to explore the network of teacher-resources. McGregor states: ‘… material technologies … are inextricably linked with the pedagogic practices that constitute it, and the prevailing view of what counts as knowledge’ (McGregor, 2004, p. 248-249). In the research school the older teaching resources stored in the library evoke a time when teachers produced their own tools for learning, when material resources were few and the school had little funding for new technologies (Lawn & Grosvenor, 2001). Now in the 21st Century world where digital technologies are changing the way we live, work and learn (OECD, 2006) once valued artefacts had become clutter.

Sociomateriality posits that change involves a ‘complex interplay of social and material relations’ (Fenwick et al., 2011, p. 172) in which social and material mediators emerge and seek to enroll other entities as mediators in the change network.

The data reveal how school leaders seek to materialize policy through reconfiguring the learning environment, disrupting established, taken-for-granted beliefs about school and taken-for-granted teaching practices. As this leader describes:

“We put in sliding doors that opened out onto a lovely little courtyard area … so really embracing the outdoors as well as the indoors as learning environments. We ripped out the old librarian’s office and we turned that into a large ICT area. So the room was made up of a gathering space, a beautiful corner, you know with nice furniture, contemporary, bright, we painted it white, uncluttered, we opened the blinds up, we let the light come in and all of a sudden … it was met with a lot of resistance from staff, but all of a sudden the kids were dragging staff in – can we go back in there? Can we go back in there?”

Figure 2 shows some of the intra-connecting mediators, human and non-human, that participate in the library-as-experimental-space assemblage. Latour (2005) explains that every mediator along a chain “makes other mediators do things” (Op cit, 2005, p. 217). The old library, acted upon and made to act by social and material mediators, emerges as a ‘library-as-experimental-space’. Some mediators which had been invisible aspects of the learning environment are made visible; these include the blinds, the light, the outdoors, comfort
and the kids. Other once powerful entities are challenged and silenced; these are the Library, old resources, the librarian and teacher resistance. The changed space of the library-as-experimental-space ‘provokes disequilibrium’ (Willis, Bland, Hughes, & Burns, 2013, p. 5) and necessitates thinking. It creates resistances by challenging the accepted order of things and opens up a space for new ways of understanding learning environments.

The library-as-experimental-space creates a space for different teaching practices to reinscribe teacher identities by marking a move away from individual practices to practices that are collectively planned, shared and continually produced in processes of flow. In Deleuzean philosophy the library-as-experimental-space presents as lines of flight – undetermined movements of multiple material entities rather than a single solution. Lines of flight are processes of continual becoming along lines which already exist and which continue through processes of flowing and fleeing in the de-re-territorialisation of the library-as-experimental-space assemblage (Deleuze & Guattari, 1988).

Spatial metaphors of threshold and liminality emerge with the library-as-experimental space. The threshold opens up as a portal to other worlds bringing multiplicity and troubling beliefs, but it has no function until it is connected to other spaces (Jackson & Mazzei, 2012). Intra-connecting with other data, other places, texts, materials and people, the threshold opens as a liminal space – a place of resistance and change. Stepping across the threshold is encountering the liminal, in-between space of tension and continual change permitting new and previously inaccessible ways of thinking and becoming (Land, Rattray, & Vivian, 2014). The liminal emerges with the library-as-experimental-space, unsettling conventional ways of thinking and transforming meanings and identities.
Conclusion

The library-as-experimental-space emerged as a mediator of change at the research school. It worked in three ways. It worked discursively to dissolve and redefine meanings. It worked physically to make visible alternatives possible. And it worked socially to reinscribe teacher and student identities. Experimenting in education is messy, unpredictable work. It is uncertain, non-linear and undetermined. But it allows teachers and students to trial and enact different material and pedagogical practices. Perhaps more importantly, it places the everyday practices of teachers and students at the centre of pedagogical and spatial change.

When I visited the school in 2014 to collect data for the research, I was taken on a tour by the leaders. The whole school has been physically and pedagogically changed from the way it was described to me in the interview. Learning environments are more learner-centred, relationships between teachers and students are changing, students have choices about where resources are distributed around the school and how they work, spaces are now bright and light, and resources once stored in the library are distributed around the school.

The BER scheme funded the whole school physical transformation that works to create the contemporary learning environments that can be seen in these photos.

This paper and the PhD study contributes to learning environment research through its deployment of a sociomaterial research approach. Such an approach de-centres human intentions and human purposes from processes of change allowing other mediators to emerge as change agents. This approach is open to multiple possibilities – researchers are aware that data reveals as much as it silences. Such research opens a space to reveal complexity and counter-narratives in the micro-politics of change processes in schools.

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The photos were taken as part of the data collected at the research school. Ethics approval for the project was gained from both The University of Melbourne and the Catholic Education Office of Melbourne. Students’ parents and teachers depicted signed permission forms.
References


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