

Issues of teacher professional learning within ‘non-traditional’ classroom environments

Abstract

In response to the demands of the ‘21st century learner’ classroom environments are increasingly moving away from traditional models of a single-teacher isolated in their classroom. There is an advent of ‘non-traditional’ environments that challenge long-held practices in teaching. To support these changes there is a pressing need to create opportunities for professional learning. This paper reports on a study undertaken within three primary schools that had recently adopted ‘non-traditional’ classroom environments. The study aimed to identify how these new spaces were shaping teaching practices and the challenges that they presented for professional learning. This paper presents findings from this study with recommendations for how systems and schools can better manage the opportunities presented by these ‘non-traditional’ environments.

Keywords: teacher practice, professional learning, flexible-learning spaces, teacher leadership

Introduction

There is growing evidence of the changing nature of education and the need for schools, and teachers, to evolve new practices that respond to the dynamics of 21st century learning (Lieberman & Pointer Mace, 2010). The construct of 21st century learning is a contestable idea, however, within the context of this paper this construct has become somewhat synonymous with ideas around technology, innovative pedagogies, and new understandings of the nature of students. In particular teachers are being challenged to increasingly work within more significant teaching-teams and evolve practices of professional learning that are founded in concepts such as professional learning communities (Robinson, 2007). This paper presents a study that was undertaken within three primary schools that were experiencing significant change flowing from a system initiative to create ‘flexible’ and ‘agile’ classroom environments. The study suggests that there are evolving new approaches to understanding teaching and learning and that these are requiring new conceptualisations of professional learning and teacher leadership.

The changing nature of education

The advent of new and ubiquitous technologies are challenging traditional constructs of the classroom, learning and education (Lieberman & Pointer Mace, 2010). This challenge is founded in both how students learn, as well as how teachers continue to evolve their professional practice. There is argument that given the changing nature of work and society, there is a need for schools to become responsive and undertake redesign of approaches to teaching and learning. This extends from the inclusion of diverse technologies as pedagogical tools, to reconceptualising the learning environment and curricula. Value is had in considering Hargreaves (1994:x), who asserts:

Our basic structures of schooling and teaching were established for other purposes at other times. Many of our schools and teachers are still geared to the age of heavy mechanical industry with isolated teachers processing batches of children in classes or standards, in age-based cohorts. While society moves into a postindustrial, postmodern age, our schools and teachers continue to cling to crumbling edifices of bureaucracy and modernity; to rigid hierarchies, isolated classrooms, segregated departments and outdated career structures.

The change required within schools is not occurring in a vacuum separate from the changing political and societal expectations and pressures in education and schools. As Woolner, McCarter, Wall and Higgins (2012:46) argue:

The particular school environment is part of a wider, dynamic web of cultural and social aspects within which the environment needs to be appropriate to the intended teaching and learning undertaken in the setting.

Within the Australian context, as in other countries such as the United Kingdom and United States, education is being shaped by agendas of national testing programs, such as NAPLAN in Australia, discourses of teacher accountability and quality and greater expectations from employers and economic rationalist perspectives that aim for employment relevance within education. Much school change and development is being driven in response to the increasing quanta of data and measures of elements such as teacher quality, effectiveness and learner improvement (Hardy & Boyle, 2011). Therefore the idealised notions of the 21st century learner, capable of shaping a new world within the ever changing landscape of technology, must be considered through a lens of increasing levels of accountability and a culture of measurement, data and the quantification of education. As concluded by Larson and Miller (2011:123):

The world is changing rapidly, and educators must respond by preparing their students for the society in which they will work and live. Teaching 21st century skills is imperative and cannot be ignored or taken lightly. With the increased pressure of No Child Left Behind (2002) and an emphasis on common core standards, it is particularly important that teachers do not view 21st century skills as an additional “subject,” but rather as skills to be integrated across all curricula. The future is already here, and it is up to all teachers to reshape instruction.

The above quote highlights the pressure of the US initiative of ‘No Child Left Behind’. However, the same pressures exerted via this program are evident within the current Australian government agenda of national testing regimes and the My School website, as with other similar agendas worldwide. These agendas are narrowing the measures of a successful school and placing increased pressure on schools to demonstrate improvements within the areas being measured and publicised within these mediums; namely an over emphasis on literacy and numeracy. A proper critique of the impact of these changes on education is beyond the scope of this paper, but these external agendas greatly shape the affordances of the school environment to reach the desired goals of an implemented change process.

Extending from this reasoning it can be argued that there is a need within education for the greater incorporation of technology. A reinvention of the way that classrooms and schools are constructed (at both the physical and relational levels) that respond to the necessary 21st century skills. The changing nature of technology

(moving from static tools for information delivery to dynamic, user developed tools of co-creation and sharing) provides a hint as to what these 21st century skills may be. Central to these changing practices with technologies is the evolution of a reliance upon being able to work in teams, collaborating with others, drawing on fluid uses of technology and being self directed. These constructs oppose the traditional model of learning that tends to favour individualistic achievement and work, expressed through low technology mediums.

Rethinking teacher learning and practice within ‘non-traditional’ learning environments

Inherent in the ‘non-traditional’ learning environment are new pedagogical approaches and teacher and student relationships. There is, therefore, an increasing reliance upon teachers’ ability to evolve collegial and collaborative work teams, both with fellow staff and students. Through a review of literature around creativity and teaching practice Jindal-Snape et al. (2013) proposes that there was significant relationships between elements of the physical and pedagogical environments and improved student learning outcomes. They conclude, with reference to earlier studies, that ‘structuring of the physical environment had an impact on learners’, further that ‘learners should be given some control over their learning and supported to take risks’ (Jindal-Snape, et al., 2013:23-24). Such practices have not been overly evident within teaching and therefore require new learning and supports that are very much shaped by the affordances of the emerging classroom environments.

‘Flexible’ classrooms, in which multiple teachers work and collaborate within a classroom environment challenge existing frameworks of practice. Though the correlation and relationship between educational architecture and pedagogy is yet to be fully proven, there is suggestion that classroom instructional environments do influence student learning processes (Abell, Jung, & Taylor, 2011). McGregor (2003:358) asserts that

The role of the physical environment as a context for teachers’ work has received little attention, despite surveys of workplace conditions suggesting its importance. Studies rarely go beyond suggesting the need for more decent space in order to improve motivation and enhance teachers’ ability to work effectively.

There is therefore opportunity for more significant study of the relationship between learning environments and pedagogical practices. Within this study the greatest change evident in the physical environment was the ‘removal’ of classroom walls to create large open classrooms. In each site this was part of the design and build of the school, therefore technically the walls were not removed. However, often teachers spoke of the active nature of this change implying that in comparison between what they were used to and the current environment, the walls were absent. In ‘traditional’ environments teacher practice was often isolated within the four-walls of the separated classroom. Teachers were able to engage with students and conduct themselves without the direct scrutiny of other teachers within ‘their space’. However, once walls are ‘removed’ in schools, individual teacher practice became exposed to the witness and critique of others in the teaching group. In this shared space new cultures of practice emerged that came to see teaching as a shared practice.

A movement towards the ‘de-privatisation’ of practice presented as a fundamental motivation in changing the physical classroom environment. It was argued that the removal of physical barriers would lead to teaching practice being

more exposed and visible, thereby teachers within the space would have to work with each other, sharing ideas, skills and practice. Through these ongoing interactions there would emerge professional learning communities that would no longer have barriers to the open discussion of teaching practice. This position was founded in a range of literature (cf. Elmore, 2004; Fullan, Hill, & Crévola, 2006; Lieberman & Pointer Mace, 2010; Robinson, 2007) that advocates for the 'de-privatisation' of practice as a pathway towards open sharing, collegiality and the replacement of formal professional development models with learning communities. This change, it is claimed, facilitates the ability of other teachers to observe and learn from the experience of others, co-constructing new learnings and knowledge (Robinson, 2007).

Flexible classrooms, within professional learning communities, afford the opportunities which support teachers in a:

... need to continually rediscover who they are and what they stand for through their dialogue and collaboration with peers, through ongoing and consistent study, and through deep reflection about their craft. (Nieto, 2003:125)

The sharing of practice provides rich learning opportunities that can better shape and enhance student learning. As argued by Lieberman and Pointer Mace (2010:86):

When professional development opportunities start with other people's ideas *first*, they deny what teachers know. Starting with teachers' practice invites teachers into the conversation and opens them up to critique, to learning, and to expanding their repertoire.

Such an approach to professional learning shifts the emphasis to the teacher as the driver of their own learning (Koster, Dengerink, Korthagen, & Lunenberg, 2008). In this way professional development is understood as:

the largely private, unaided learning from experience through which most teachers learn to survive, become competent and develop in classrooms and schools; as well as informal development opportunities in schools and the more formal 'accelerated' learning opportunities available through internally and externally generated in-service education and training activities (Day, 1999:2-3)

In theory, such change provides to early-career teachers the opportunity to observe more experienced teachers and mimic and appropriate practices, as well as for experienced teachers to observe new and innovative practices within the new teacher, in a collaborative and supportive environment. Consideration, though, of this proposition needs to be within the political and social nuances of the practice setting of the school. As Woolner, et al (2012:57) conclude from their examination of changing education spaces, 'apparent resistance to change can be understood as arising from unexamined, unchallenged cultural assumptions held by members of a school community. The challenge of a de-privatisation of practice in a non-traditional learning space is ensuring that the existing cultural norms are challenged and disrupted to produce new forms of practice. Whilst each teacher may observe and consider the practices of others within this classroom, this does not necessarily, and automatically, lead to the evolution of collegial learning communities. There is a need to ensure deliberate support for a process of change in creating new spaces for learning and teaching (Woolner, et al., 2012).

Exploring 'non-traditional' learning environments

This paper reports on ethnographic research undertaken within three primary schools that were recently built, or renovated, around concepts of 'non-traditional' learning spaces. The study was conducted in 2011, and concerned the ways in which teaching and learning, both for staff and students, are impacted upon by the introduction of 'non-traditional' learning spaces. These schools were located within a school system that had adopted a widespread initiative to move towards 'non-traditional' learning environments across all schools within the system. The concept of the 'non-traditional' was expressed within labels such as 'agile' and 'flexible' learning spaces. Further to these physical changes there were also new approaches to teacher professional learning through the introduction of professional learning communities and the 'de-privatisation' of practice (Elmore, 2004; Fullan, Hill, & Crévola, 2006). The study's purpose was neither to compare nor to evaluate the use of the spaces in these schools, but rather to gain insights into the ways that their use occurs at different phases of implementation, and within different types of school contexts.

The researchers were engaged by the school system to undertake this study as part of a larger initiative to better understand the professional learning needs of teachers within these new spaces. The three sites of the study were nominated by the school system, with the sites being located in different socio-economic and demographic areas within the Diocese. Broadly, they were reflective of the nature of schools across the system and presented a range of other variables, such as socio-economic conditions and school size. The Australian Catholic University Human Research Ethics Committee approved the research¹.

The study took the form of a collaborative ethnography, in which 'two or more ethnographers coordinate their fieldwork efforts to gather data from a single setting' (May & Pattillo-McCoy, 2000:66). The four-person research team observed teaching and learning activities across a range of age groups and 'key learning areas' (KLAs) of the formal curriculum. The observations were conducted across a three-day period within each school to provide opportunity for the researchers to observe a range of practices and contexts. Classroom observations, and informal interviews with staff during observations, were digitally recorded using LiveScribe Echo digital note taking pens. To triangulate the classroom observations, semi-structured interviews were conducted with principals and teachers (Marshall & Rossman, 2006). Interviews with teachers were conducted individually or in groups, depending on teacher preference, and pertained to their experiences of teaching, collaboration and professional learning in relation to using agile learning spaces. Principals were interviewed individually, with interview questions pertaining to leadership strategies for supporting teacher professional learning. Interviews were transcribed using a professional transcription service, and transcripts subsequently de-identified with the use of pseudonyms for participating individuals and schools.

The analysis of the data was undertaken in two phases. Firstly, the researchers would meet immediately following daily observations and interviews to debrief and discuss salient points of observations. These meetings would allow for the researchers to identify themes across the different observations and formulate foci and questions for the following day of observations and interviews. Notes were taken during these meetings for use in future analysis. The second phase of analysis occurred following the completion of all interviews and observations.

¹ University HREC approval number N2010_24

Utilising the notes taken during the earlier discussion, as well as other personal reflections, as starting points the researchers met for two days to review and discuss all gathered data. Individual researchers reviewed interviews and then emergent themes were discussed for clarity. The process employed an iterative approach as suggested by Creswell (2007), in which the researchers looked for emergent themes and through a process of review came to a common understanding and application of these. The researchers employed a sequence of individual review and group reflection to ensure that all possible interpretations could be present in discussion of themes and outcomes. The researchers met on two following occasions after undertaking individual review of the data to clarify any new or emerging themes and interpretations. Such a process has therefore produced an analysis that is shared across the four researchers, yet is diverse and interrogative.

Study sites

The three schools that formed the sites of this study were each unique with varying student demographics, locations and interactions with other nearby schools. **St Mary's (SM)** *should we change this name?* is a small single-stream Kindergarten-Year 6² (K-6) primary school, with a long history, located in a geographical area with mixed demographics. A significant number of students came from recent migrant and/or refugee families, whilst there was also representation within the school of an increasing representation of children from middle class families. St Mary's had recently been completely re-built with the new facility providing for a learning environment that encapsulated the entire school population into one large open area. The re-build was significantly informed by the teaching staff and aimed to reflect long term development of practices around team teaching and group learning models. The learning area was divided using shelves, cupboards and some partitions into smaller sections in which students were grouped in learning stages (i.e. Early Stage 1 (Kindergarten), Stage 1 (Yr 1&2), Stage 2 (Yr 3&4) and Stage 3 (Yr5&6)). Each learning stage was allocated two teachers with a number of 'floating' teacher aides and specialist teachers working across the entire school.

St Jude's (SJ) is a larger three-stream K-6 school located in a working class area, with larger semi-rural properties nearby. Its student population generally comes from a lower socio-economic background, though with less significant representation by recent migrant families. Each year group is located within their own collective area, with the general floor plan being for three 'work areas' to be constructed off a central shared area. Within each space were three teachers and approximately 75 students. To extend the number of teachers in the space teacher aides would often enter and leave the classroom to work with targeted students with learning needs. For specialist lessons, such as music, a team of specialist teachers would replace the year group teachers, who use this time to undertake lesson and curriculum planning. St Jude's had some spaces that were custom built, but other areas in which recent renovations had removed boundary walls. The school had only been engaged in group-learning models and flexible classrooms for approximately 2 years.

The third site, Holy Innocents (HI), is a K-6 school co-located with a secondary (7-12) school. Holy Innocents is a new and growing school with significant building projects having occurred on site since the school opening, 8 years earlier. The school is a composite of different classroom layouts with older rooms

² Kindergarten refers to the commencing school year, with students typically being aged 5 and 6 years of age. Year 6 is the conclusion of primary education in these settings with students typically being around 11-12 years of age.

being built before the Diocesan initiative and therefore designed in a traditional manner, whilst newer classrooms experimenting with design principles around noise and student management. Year groups range between two and four streams, with the desired school size being a four-streamed school. Holy Innocents is still evolving their identity and practices with a number of significant changes (more so than the other sites) to the school having occurred since its inception (such as building, restructuring of leadership, expansion and the introduction of flexible learning environments). Given the layout of the school and building works the school was effectively operating in smaller groups with some year groups not having daily contact with the rest of the school.

This paper considers these three sites and the challenges and issues that were evident to professional learning within these spaces. Presented here are two examples of the elements that emerged through this research. These examples are used to highlight the unique challenges, and opportunities, that these spaces provide to teacher practice and learning. The first element, 'managing groups', presented as a consistent issue that extended across both students and teachers, realised in how students were able to effectively work and learn as part of a group, and also the challenges of teachers working in collaborative environments. This is presented as a learning challenge that teachers encountered. The second challenge presented focuses on the idea of teacher leadership, extending from the issues of working within collaborative environments there emerged an increasing role for teachers to become leaders (in the broadest understanding of the term), across the various levels of the school. This presented a series of consequential challenges to principals, and formally recognised leaders, in being able to reshape the leadership models of the school to become responsive to these changing dynamics. This second element considers more acutely the changing nature of professional learning. These two elements interact and extend each other, but it was within these that the most significant challenges for new forms of professional learning (grounded in de-privatised practice and supported through collaborative learning communities) was evident.

Managing groups in 'non-traditional' environments

The concept of managing groups in 'non-traditional' learning environments can be understood from two perspectives, both impacting significantly upon teaching and learning experiences. Firstly, in non-traditional classrooms with between 40 and 70 students, the management of large and small groups of students becomes a significant issue. Commonly, non-traditional classrooms involve student-centred small group learning experiences, fluid and transitory learning groups, and whole-class group interaction. Each of these student groupings requires teaching strategies and skills to achieve successful learning experiences. Secondly, in non-traditional classrooms where multiple teachers are present, the management of professional relationships within teaching groups is required. Often the intersections between both these conceptualizations—teaching to student groups, and teaching in teaching teams—had a direct impact on the quality of the learning that was evident within the classrooms.

In the non-traditional learning classrooms explored in the study, tables, computers and chairs were characteristically arranged into workstation groupings. Lessons overwhelmingly utilised these workstations. When working in small groups at the workstations, student dialogue, collaboration and autonomy were emphasised. This is consistent with flexible-learning teaching philosophies whereby group-work is framed as desirable (Martinho and Silvia, 2008). Many teachers interviewed identified group-work strategies as a central facet of their teaching pedagogies in

non-traditional spaces. Similarly, the three principals interviewed each highlighted group-work as central to the flexible-learning philosophy.

While autonomous student-centered group work is framed as a desirable practice within non-traditional classrooms, problems in teaching and learning can arise during group work activities. Particularly, students who will not stay on-task during group activities can subvert and undermine learning opportunities. There are diverse reasons why a student does not engage in classroom activities, and these pertain to issues such as the marginalisation of student subjectivities within the classroom (Saltmarsh & Youdell, 2004) and the perceived irrelevance of activities to students' personal lives (Signal & Swann, 2009). However, in the context of autonomous learning in the non-traditional learning environment, the potential for disengagement must be considered in relation to issues of accountability of students in small groups. Accountability in groups is a long-standing tenant of successful small-group pedagogies. Notably, Johnson and Johnson's (1992) positive interdependence model of group work asks students to take on roles such as 'reporter', 'checker', 'recorder' and 'researcher' in order to ensure each student has specific responsibilities within group activities.

One principal interviewed for the study highlighted the issue of student engagement during group work lessons. The principal labels students who attempt to subvert the group work process by disengaging during group lessons as 'passengers'. She highlights the need for explicit cooperative learning strategies within non-traditional classrooms:

And we know that [identifying 'passengers' is] something that you have to keep on top of. We're very aware of it and the children actually know the language too. We say to them, "We don't want passengers." We use a lot of cooperative learning strategies so that they have to take ownership for their work and they have to take ownership within those groups and roles so that the other children can say, "Well, this is what I did but I really think this person here did [not do what] they should have done." So they often report in small groups and they have to talk about what they actually did. So the cooperative learning strategies are really good for that. I think the fact that there are possibly more people within the area sometimes, that they can keep tabs on those sorts of children. You can also pull those children out - and you know who they are - everyone knows who they are - into small groups to meet with them, to see what they're up to, see how they're going just to keep them on track. But it's certainly something that you've got to be aware of as you would in any learning situation. [Principal, [HI](#)] [Matthew, this is the interview with the acting assistant principal at SM](#)

Given that group work is framed as a desirable practice in non-traditional learning spaces, a discursive shift in desirable pedagogical strategies follows. As this principal highlights, cooperative learning strategies become increasingly important in non-traditional learning environments. Likewise, he emphasises the ways teaching teams—another key characteristic of non-traditional learning spaces—can be used as a form of surveillance of students to ensure students stay on-task. He notes that teachers should "keep tabs on" children who are identified as subversive of the learning process. Accountability and surveillance can thus become framed as desirable professional practices within non-traditional spaces.

Concomitant to the requirement for management of student groups is the requirement for management of groups of teachers. Team teaching was considered by principals to be a desirable teaching practice within the non-traditional learning

spaces. Principals expended significant time and effort in striving towards the creation of environments in which teaching teams would be successful. However, principals and teachers came across significant obstacles in their pursuit of success in teaching teams. Foremost to these difficulties was personality clashes within teaching teams. Principals and teachers consistently struggled with finding professional learning strategies to address personality clashes, with mixed results. The three principals unanimously highlighted that successful teaching teams generally do not occur instantaneously and without explicit dialogue. As one states,

I really think you only start small, you can't expect teachers to just go and suddenly, and I know with some schools that that's what they were asked to do, they were virtually told "Okay Monday morning when you go over to that space, you're all going to be working together" you know that just doesn't work. [Principal, SM]

Solutions presented by principals were twofold. One principal highlighted the importance that teachers focus on a common goal: that of student learning needs. She indicates that she stresses to her teachers that the students' learning needs are always to be at the centre of the relationship. Secondly, she emphasises the importance of frank and open dialogue. Communication, she argues, is the best way in which teachers can address disagreements. However, she, like many of the teachers interviewed, is resigned to the belief that some teaching teams will inevitably not work well together regardless of professional development. As one teacher states:

I know this is really hard but you've got to go and you've really got to know the people that you're working with. If you don't gel with the people that you're working with, it's all going to fall apart. [Teacher 2, SJ]

The difficult work involved in achieving success in teaching teams was commonly framed by teachers and principals as a frustrating and ongoing struggle. **This was discussed as a planning issue for principals, with the principal at St. Jude's noting that in cases where a team didn't work well together, it was very difficult to change people into different teams until the following year. [Principal, SJ] In some cases, this had led to significant break-downs in collegial relationships, as difficult situations between colleagues were both played out publicly, and remained in place for longer than might otherwise have been the case.** The explicit naming of well-researched strategies, however, was rare. Models of teamwork that were offered by teachers when discussing student group work, such as accountability and positive interdependence (Johnson & Johnson, 1992), were broadly unmentioned during discussions about their own group work in teaching teams. While we do not advocate any one model of professional development for teaching teams, we advocate that teachers reflexively consider how strategies for group work that they implement for their students might also be of use in their own professional group work and professional relationships.

New forms of teacher leadership in 'non-traditional' environments

Consistent with similar settings internationally, the building and classroom design of the schools in our study reflect a particular vision for educational delivery (Leiringer & Cardellino, 2011) of which team-teaching approaches such as those described in the previous section are part. In addition to the challenges of managing groups in non-traditional environments, we observed that teaching in team settings also involves reshaping existing notions of teacher leadership. Teacher leadership is not presented here as the formal leadership roles located within the structures of

schools, but as a broader concept of teachers as pedagogical leaders. In this sense teacher leadership is understood as that which 'facilitates principled action to achieve whole success' (Crowther, Kaagan, Ferguson, & Hann, 2002:10). Crowther et al.'s (2002) framework of teacher leadership extends to consider teachers as having a leadership role beyond the classroom, extending into the community. A focus on their framework highlights three characteristics that translate into the experience of teachers in the settings studied in this research. Namely, Crowther et al. (2002) claim that teacher leaders confront barriers, translate ideas into action and nurture a culture of success; each of these being aspirations of the teachers in this study. While approaches to leadership within teaching teams varied across schools and student cohorts, and amongst members of specific teams, teachers in our study commented particularly on the dominance of distributed leadership and the necessary ability to work, and lead, within teams of teachers as being new experiences within the agile learning spaces.

Leadership within teaching teams, in the schools we observed, was generally negotiated amongst members of the team, rather than delegated by the school executive. While it was generally the case that more experienced teachers, or those who had been employed at the school for longer periods of time, took responsibility for the overall functioning of the team, less experienced teachers in cohesive teams were also given opportunities for leadership roles. A number of teachers described team approaches that provided opportunities for individual teachers to take on leadership roles in programming for preferred subject areas and leading specific learning activities in the classroom. For example a teacher from Holy Innocents describes the relationship between her and her partner teacher where she enjoys teaching sport, yet her colleague enjoys creative activities.

I can just get up and lead any fitness session or take the kids out to do that as a reward or that kind of thing, one of my grade partners hates sport and would rather sit there and do more creative things and there's the opportunity to do that whereas last year you just had to do everything on your own.
[Teacher, HI]

It was important in this relationship, though, that there was challenge to move teachers outside their comfort zones to ensure that they did not simply become experts in a particular field without developing skills across the whole spectrum of teaching practice. Within each school there was a structured professional learning plan, usually centered around professional practice discussions as part of the weekly staff meetings, that created the necessary disruptions for learning to occur. The observation of different practice in the classroom was complimented by reflective conversations and discussions in the staff meeting. In this way, beginning and early career teachers were able to develop areas of expertise and develop leadership skills in ways that reflected their knowledge and interests.

The complex relationship between the members of teaching team and how, through engagement in a common teaching space, they come to learn from each other is most clearly seen within a closer examination of a teaching team, comprised of three members, at St Jude's. This team was comprised of three kindergarten teachers with varying skills, interests and length of experience. One teacher had been teaching a long time and just completed her masters [Teacher 3], whilst another member was in her first year of teaching [Teacher 1]. One teaching team interviewed, for example, described how "we as a team worked out who's doing what or who's running the day" [Teacher 1, SJ] for example, explaining how their team:

...allocated different subjects so we all take turns, so one term we do Maths, one term we do English, one term we do ... and one term we do the other subject so we all had to have our programs prepared before the start of term...so that was nice to be able to share that load but then we sort of take control of what subject areas we've programmed for. [Teacher 1, SJ]

For a number of teachers, sharing teaching and administrative responsibilities in this way was seen as a significant advantage over more traditional classroom settings. Rather than working in isolation from others in a single classroom environment, working together provided opportunities to observe how more experienced teachers or those with different approaches handled various situations:

I think it's important professionally and like for professional development to be able to watch other teachers and learn off them. And that's what I've been able to do within the agile learning space and within my team. I've just gotten so much out of it. [Teacher 2, SJ]

I think professionally I love it – I love the constant, whether it's from a first year teacher, a second year teacher you know we've all got a different range of experience. But we all bring different ideas in the – what we are, is that open enough to go “Oh okay didn't think of that, yep we'll try that”. [Teacher 3, SJ] **Matthew, this kindergarten teacher was Stanhope Gardens – have we got the acronyms/descriptions right?**

For teachers in this group, the sharing of ideas and willingness to try new things contributed to the group's positive feelings about team teaching within a non-traditional space. But importantly, their approach also required each member of the team to take responsibility for their designated tasks, including the leadership activities that they had negotiated amongst themselves:

Especially in kindergarten when you're constantly full on, full on, full on, full on. And if you're planning as well and making up your own resources because the other members of the team are going “Well it's not my week for planning so you'll need to do this”. Yeah I think that really works, the teacher that's doing the planning teaches the whole group if it's a whole group activity. The other teachers are there for behaviour but to also have input as well. So we all know what's going on but one teacher sort of takes charge and the other teachers are allowed to sort of have that... For the week in terms of whole group activities anyway. [Teacher 3, SJ] **Matthew, these kindergarten teachers were also Stanhope Gardens – as per above, just checking that the acronyms are right**

For this group, effective teamwork involved both supporting one another *and* maintaining an expectation that each would do their part. Members of this particular team also discussed an impending change, as their experiences of working well together had led to suggestions some members of the team be moved into different teams in the upcoming school year. As the most senior teacher in the team commented:

And I think what – from here what we need to do is that like as an experienced teacher, yes I learn things from the girls but my learning is different. I want to go and work with other teachers, I want to go and see other spaces – we don't really know when that would happen. [Teacher 3, SJ]

While members of this team reported a high level of satisfaction with their current team arrangement, there was also acknowledgement of their responsibility to both share with and learn from other teachers and team situations that might be put in place in subsequent years. In this way, teacher leadership was being developed and distributed amongst members of a particular team, as well as distributed across the teaching staff in the whole school context. These experiences were also evident across the various settings and teams that were part of this study, though the broader school arrangements did vary in supporting these practices.

While many of the teachers we interviewed spoke positively about their experiences of team teaching, some also commented that leadership within a team could sometimes be shaped in unhelpful ways by the expectations of others. This was particularly the case in teams where one teacher was seen by students, parents, or staff members outside the team as having more experience or knowledge than others in the team. This can be seen particularly in the example above, where the teacher with experience and having recently completed further study felt a burden on being the 'go to' person for ideas and leadership. As she commented:

I think sometimes it just happens that, one person seems to be the one that most people go to, so it's a bit more pressure on that person, through no fault of their own or anyone else's, it's just. And if they've been teaching on that [year group] for a while, they're like; well she's the one to go to, to see about that. So it's very difficult I think that's a big challenge. The team, the team is good, but it's also bad. [Teacher 3, SJ]

A teacher from Holy Innocents elaborated further, commenting that the same conditions that are advantageous in some cases can also create significant challenges for teacher leadership:

The main advantage is the team, the team of teachers, and the communication and you don't feel alone, and you can share out your program. So we share our program, it's fantastic, so you don't have – and we do it with our Year 6, for Maths for instance, 5 and 6 program together... So that's a big advantage, working in a team, the big challenge is again working in a team, if you've got someone who's pretty slack and a lot of the time one person has to carry the load. And that person becomes the leader of the grade whether they're the leader or not, I think that's a big challenge and that people go to that person all the time, rather than go to the other people, I think that's a big challenge with agile learning and working as a team. [Teacher, HI]

The potential for workload to be unevenly distributed amongst team members, particularly in cases where teams find it necessary to compensate for an under-performing team member, creates particular leadership challenges. As described above, teacher leadership can be developed and distributed through sharing of ideas and a collaborative team ethos. However, it can also come about through necessity, in which case many of the potential benefits may be lost or overlooked as a consequence of overwork or ill feeling within a team. More importantly, though, the change to open and flexible learning spaces removed the physical barriers and exposed all teachers' practices. There was a very strong sense of no longer being alone. In some teachers, as in the quote above, this was seen as a positive where workload and ideas could be more easily shared. However, with others the de-privatisation of practice challenged long-held beliefs and understandings of privacy in teaching. Balancing these competing responses was instrumental in the success of teaching teams.

Implications and conclusions

Emerging from this study are some key considerations for ongoing issues of professional learning as classrooms and learning environments are reshaped in response to the changing demands of the 21st century learner. The findings of this study challenge traditional learning models employed to support teacher development. The new 'non-traditional' learning environments present an array of opportunities for innovative and exciting approaches to the building of a school-wide learning community inclusive of both staff and students. The flexible classrooms provided a clear incentive for group-based learning pedagogies, but required from teachers, and students, new skills in working as part of a team. In particular, there were demands on teachers to adopt new forms of leadership and collaboration both amongst the students that they were working with, as well as their colleagues. The flexible learning spaces disrupted traditional approaches to teaching requiring from teachers a wider appreciation and empathy for others practicing in the space.

The change to non-traditional learning spaces across this schooling system was dramatically accelerated as a result of suddenly available government funding for new buildings and renovations. Due to the speed of the implementation of the change to 'non-traditional' learning environments there is a lag in the delivery of the needed professional learning support and mechanisms required to realise this potential in some settings. St Mary's had been engaged in the evolution of practice in teaching in non-traditional spaces for much longer than the other two school sites. Therefore some of the struggles experienced by the other schools in changing practice have been overcome already and 'new' practices have begun to become embedded in the everyday. However, the experience of Holy Innocents and St Jude's was considerably different to that of St Mary's, but both were struggling to fully appreciate the opportunities and affordances of the new spaces. Time and investment in properly managing change are highlighted in this study as two critical elements in successful transition of pedagogies and teacher practice to best utilise agile and flexible learning spaces.

Critical to success in reshaping teaching practice, especially with regards such a significant disruption, is to support the gradual integration of the change supported through professional conversations, distributed leadership amongst teachers, and an acceptance of failure as opportunity for learning. The last of these elements, that is the acceptance of failure, was significantly compromised in this study through the implementation of national testing programs that challenged risk-taking, creativity and innovation. The evolution of informal professional learning communities amongst teachers within schools has begun to, somewhat, compensate for the availability and focus of traditional workshop-based professional development. Simultaneously the external pressures that are being exerted on schools through government agendas, such as national testing programs, are limiting the ability for the risk-taking required to fully test the boundaries of these new environments. Evident in this study, and not unexpectedly, is the complex relationships between desired pedagogies and teaching practice, and a range of other educational agendas and issues. Therefore, the support of change within teaching practice needs to properly account for this complexity of which no one solution will be the 'panacea to all ills'.

This research indicates that there is a new and evolving environment of learning within schools that responds to the changing demands of the 21st century learner. This disruption is creating affordances around working more collaboratively

in creating learning opportunities for both staff and students. There is scope, and need, for further investigation about the mechanisms that are required to better support this change process and realisation of the full affordances of these spaces. Further research is required that considers the support necessary for sustained change to embedded teaching practice as environments change.

References

- Abell, M., Jung, E., & Taylor, M. (2011). Students' perceptions of classroom instructional environments in the context of 'Universal Design for Learning'. *Learning Environments Research*, 14(2), 171-185.
- Creswell, J. (2007). *Qualitative Inquiry and Research Design* (2nd ed.). Thousand Oaks: Sage Publications Inc.
- Crowther, F., Kaagan, S., Ferguson, M., & Hann, L. (2002). *Developing teacher leaders: How teacher leadership enhances school success*. Thousand Oaks: Corwin Press.
- Day, C. (1999). *Developing teachers: The challenges of lifelong learning*. London: Falmer.
- Elmore, R. (2004). *School reform from the inside out*. Cambridge, MA: Harvard University Press.
- Fullan, M., Hill, P., & Crévola, C. (2006). *Breakthrough*. Thousand Oaks: Corwin Press.
- Hardy, I., & Boyle, C. (2011). My School? Critiquing the abstraction and quantification of Education. *Asia-Pacific Journal of Teacher Education*, 39(3), 211-222.
- Hargreaves, A. (1994). *Changing teachers, changing times: Teachers' work and culture in the postmodern age*. London: Cassell.
- Jindal-Snape, D., Davies, D., Collier, C., Howe, A., Digby, R., & Hay, P. (2013). The impact of creative learning environments on learners: A systematic literature review. *Improving Schools*, 16(1), 21-31.
- Johnson, D., & Johnson, R. (1992). Positive interdependence: key to effective cooperation. In R. Hertz-Lazarowitz & N. Miller (Eds.), *Interaction in cooperative groups: the theoretical anatomy of group learning*. New York: Cambridge University Press.
- Koster, B., Dengerink, J., Korthagen, F., & Lunenberg, M. (2008). Teacher educators working on their own professional development: goals, activities and outcomes of a project for the professional development of teacher educators. *Teachers and Teaching: Theory and Practice*, 14(5-6), 567-587.
- Larson, L. C., & Miller, T. N. (2011). 21st Century Skills: Prepare Students for the Future. *Kappa Delta Pi Record*, 47(3), 121-123.
- Leiringer, R., & Cardellino, P. (2011). Schools for the twenty-first century: school design and educational transformation. *British Educational Research Journal*, 37(6), 915-934.
- Lieberman, A., & Pointer Mace, D. (2010). Making practice public: Teacher learning in the 21st Century. *Journal of Teacher Education*, 61(1-2), 77-88.
- Marshall, C., & Rossman, G. (2006). *Designing Qualitative Research* (4th ed.). Thousand Oaks: Sage Publications Inc.
- May, R., & Pattillo-McCoy, M. (2000). Do you see what I see? Examining a collaborative ethnography. *Qualitative Inquiry*, 6(1), 65-87.
- McGregor, J. (2003). Making spaces: Teacher workplace topologies. *Pedagogy, Culture & Society*, 12(3), 353-377.
- Nieto, S. (2003). *What keeps teachers going?* New York: Teachers College Press.
- Robinson, V. (2007). *William Walker oration: School leadership and student outcomes – identifying what works and why*. Paper presented at the Australian Council of Educational Leaders Conference.

- Saltmarsh, S. U. E., & Youdell, D. (2004). 'Special sport' for misfits and losers: educational triage and the constitution of schooled subjectivities. *International Journal of Inclusive Education*, 8(4), 353-371.
- Woolner, P., McCarter, S., Wall, K., & Higgins, S. (2012). Changed learning through changed space: When can a participatory approach to the learning environment challenge preconceptions and alter practice? *Improving Schools*, 15(1), 45-60.